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THE ILLUSTRATED
JOURNAL OF AGRICULTURE.

Vol. I, from May 1879 to May 1880,

CONTAINING 136 ENGRAVINGS.

PUBLISHED BY THE DEPARTMENT OF AGRICULTURE AND PUBLIC WORKS FOR THE
PROVINCE OF QUEREC.

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THE ILLUSTRATED JOURNAL OF AGRICULTURE

PUBLISHED BY THE DEPARTMENT OF AGRICULTURE FOR THE PROVINCE OF QUEBEC.

Vol. I.

MONTREAL, MAY 1879.

No. 1.

INTRODUCTORY.

It is not without a certain degree of anxiety that we now enter, as it were, through our journal, into thousands of the best managed country homes in this Province. Often, whilst travelling through the various English settlements of this country, we have had occasion to admire farms as well laid out, farm roads as well kept, homesteads fully as comfortable, and even mansions as attractive, although, generally, a great deal more modest looking, as those on which it has been our good fortune to rest our eyes in Great Britain and in the richest agricultural districts on the continent of Europe. We say it advisedly, we could name, in the Province of Quebec, as good breeders of short horned cattle, of Ayrshires and of Jerseys, as can be found anywhere. Stock, as valuable and as productive as in the most renowned European countries, can be seen here on many farms. Our Province possesses hundreds of farmers who have had a thorough practical training in the best managed farms in England, Ireland or Scotland. Many of our own Canadian farmers may also be reckoned amongst the most successful and thorough agriculturists.

To all these it has become our duty to pay a monthly visit. We may have now and then to tender them advice; we shall, however, come to them oftener for counsel and for aid than with advice.

We have been intrusted with the picturing, as it were, of the distinguishing features in each department of our best managed farms, by which we mean the most productive, and especially, the most profitable in every sense.

In our official position, as Director of Agriculture, it is our duty to work earnestly in order to aid every willing farmer and to secure for him the best experience from practical farmers who have succeeded in this country. Whether our readers be rich or poor makes no difference, for what makes the poor man rich will make the rich man still richer; what will double the returns on one farm will generally secure the same results on all farms similarly situated.

It is therefore for the interest of the poorest as well as of the richest Canadian farmer to read with attention this paper, which is essentially his own agricultural journal.

The Department of Agriculture for this Province has received from our Provincial Legislature a special mission, which is to encourage, through the Journal of Agriculture, every intelligent farmer in this Province to leave nothing undone which may make his farming more profitable, his home more attractive, his profession of agriculturist more honored. This journal has been more particularly intrusted to our care. We feel greatly honored, but we also feel how arduous the task, and how unprepared we still are always to give useful advice, even after 22 years of constant farming, with the most earnest study. We therefore beg of every one of our readers, at any time, to remember that this is the journal of every farmer in this Province, that it is written for the benefit of all, and that any good advice, any successful practice made known through these columns, must prove of some benefit to many amongst us.

We hope, therefore, to receive now and then short notes, from every good farmer or gardener who reads this paper, giving us every one's experience, and even correcting us whenever it is necessary to do so.

We have been most fortunate in securing the generous and entirely disinterested assistance of many eminent agriculturists amongst us, who for years have been known as the true friends of the Canadian farmer. Dr. McEachran, to whose unremitting exertions the success of our really excellent Provincial Veterinary Schools, both French and English, is unquestionably due, takes the entire charge of our Veterinary column. He offers his advice, free of charge, to every one of our readers and will answer any question respecting diseases or any other subject, pertaining to his profession, which might prove of interest to the general reader, provided it be not detrimental to other members of the same profession. The Horticultural Society of Montreal and Pomological Society for the Province of Quebec has promised us its best support. The Fruit as well as the Report committees of this excellent Society will superintend the special columns devoted to horticulture and arboriculture, and many other valuable correspondents have been secured. We now earnestly invite every practical farmer and gardener of this Province, who may possess information of value to others, to assist us in making this paper what it should be, viz: an agricultural journal which will prove truly useful to every one who takes an interest in the agriculture of Canada.

Dairying in the Province of Quebec.

The Province of Quebec possesses, in common with the Maritime Provinces of the Dominion, in the pursuit of dairy farming, advantages which are certainly unsurpassed, and perhaps unequalled, in any other parts of North America. The temperature, all through the summer months, is cooler than in the west of this continent; the rainfall is also more; the proximity to the sea and to such large bodies of water as the St. Lawrence, the Saguenay, the St. Maurice and to the innumerable lakes and streams which cover a large portion of the Province makes the climate moister, and greatly assists in securing excellent meadows and the best of pastures. Then also the rich bottom lands, so general along the St. Lawrence, produce in abundance the best of cattle food. Cool springs of pure water are to be found nearly everywhere; a supply of ice may be secured with the greatest facility,—as a provision against hot weather,—by any one who so wishes. Horned cattle are here remarkably healthy, contagious diseases amongst our herds being entirely unheard of. In fact, everyone of the elements which go to make dairying profitable seem to unite here in the greatest degree, and they are the more apparent in our furthestmost northern and north-eastern settlements.

Another material advantage which this Province possesses, over the rest of the Dominion, lies in the fact that butter and

cheese can generally be shipped in the evening to Quebec, from all points connected by steamboat or railway, and can be on their way to Great-Britain in about twelve hours from the time they leave the dairy, while it appears that dairy produce shipped from any part west of Toronto takes, on an average, from 10 to 15 days before it can be collected in sufficient quantities and shipped in refrigerator cars to the ocean steamers.

Several districts in this Province have long been noted for their special adaptation to dairy farming, and for the excellence of their butter and cheese. The best brands of butter, from the Eastern Townships and other English settlements, although coming as a rule from comparatively small dairies, are certainly equal to the finest produced any where; in fact, they often obtain the highest price of any butters shipped from America to Great-Britain. Many excellent lots of butter also come, now and then, from some of the French settlements. Before railways were built through the Kamouraska district, butter under that name was in high repute and sold for shipment, on the Quebec markets, at the highest rates. Unfortunately, the greater facilities of communication have not tended to improve the quality of the butter from that magnificent dairy district. On the contrary, the larger demand rendered local dealers less exacting, and they finished by paying the same price for inferior butter as for the best. Bye and bye, manual labour becoming scarcer less pains were generally taken in the making and handling, and very soon the whole of the butter from that district lost its good name and was in fact noted as very inferior, the prices falling accordingly. Unfortunately the same might be said with truth of too many other localities.

From 1870 to 1873, the American system of cheese factories became generally known through the Eastern townships and in the neighbouring French parishes. The first attempt at cheese making on this system proved so successful that about three hundred cheese factories were started in our province, whilst those erected in the United States and in Ontario were numbered by the thousand. For a few years, farmers got from these factories larger returns than those obtained from butter making, whilst the amount of trouble and risk was greatly diminished. Had the price of cheese held out a few years longer, there can be no doubt that cheese factories would have been erected by this time in every township and parish of this province.

Although excellent cheese is made in several factories in the Province of Quebec, it must be admitted that a great many of our cheese makers have not yet learned to produce the best article, and that great improvement could also be made in the boxing of cheese and in its preparation for market. It would be very desirable that Dairymen's Associations be organized here and they should meet with public support, in order to secure the best instruction in everything pertaining to this art.

It is next to impossible, from the want of proper statistics, to arrive at anything like a fair estimate of the butter and cheese made for exportation in this province. The quantity, however, is very large and is greatly on the increase. Facilities for exportation to Great-Britain will now be greater than ever, and must tend to a still larger production of both butter and cheese. Let us hope that efforts will be systematically made, all over the province, in order to improve the quality produced, and to secure for our dairy production a repute which will tend to increase the demand and to enhance the prices obtained for the same on the European markets.

Of late years the system of cooling milk in butter making, and known as deep setting, found many admirers here. A good many of our private township dairies, and all the creameries erected of late, follow this system with very satisfactory results. More pains are also being taken in the selection of good packages of uniform weight, 56 lbs. being preferred. The best

English salt is now being used generally by all good dairymen. At the Ontario Eastern and Western Dairymen's Conventions, held in February last, it was shown on good authority that our creamery butter brought during the last season, on the Montreal market, an average of 22½ cts. a lb.

The best dairy butter from the Eastern Townships brought 17

Whilst good butter from other parts brought 12

These figures show clearly the profit there would be were farmers to unite together in order to produce the best butter on the creamery system.

Reports of the U. S. Commissioner of Agriculture, for 1877 and 1878.

We have to thank the Hon. Mr. Le Duc for his very valuable reports for 1877, and for 1878, which certainly deserve a most careful reading from every educated man who pretends to take an interest in the welfare of Agriculture in North America. Besides the official reports of the Commissioner; the Superintendent of gardens and grounds; the Chemist; the Entomologist and the Statistician attached to the Department of Agriculture at Washington, the Report for 1877 contains highly interesting papers on the following subjects, viz.

The sugar cane industry in the United States; Maize and sorghum as sugar plants. The Rocky Mountain locust, Cattle improvement in the United States; The Chinese tea plant; The olive; Shipments of fresh meat to Europe; Diseases of domestic animals; Cranberry culture in New Jersey, and European agricultural statistics. It will be seen that many of these subjects are of equal interest to Canada and to the United States.

We shall, in our future numbers, review such of the papers contained in these Reports as are of more direct interest to the Canadian farmer.

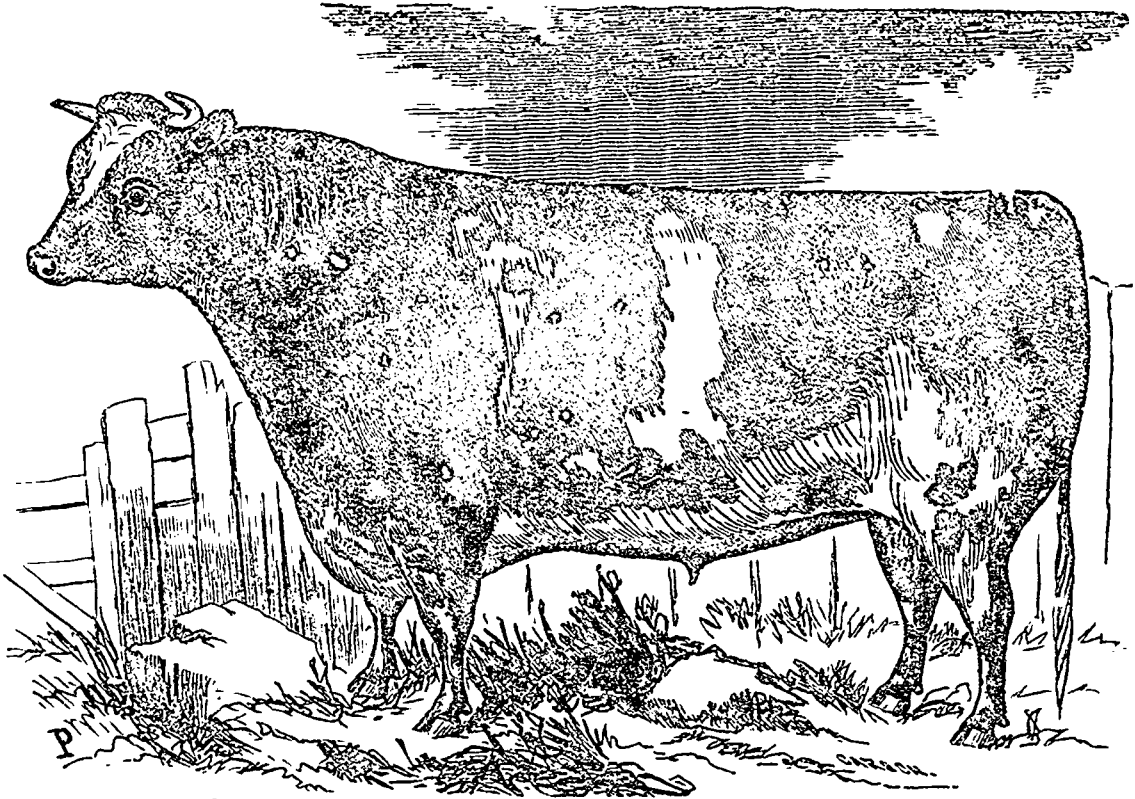
Besides the necessarily heavy work entailed every year on the Department of Agriculture at Washington, in the collection of agricultural statistics, and the distribution, through the United States, of the various seeds, cuttings and plants which are recommended for trial, considerable attention seems to have been given during the last year (1878) to the organization of the agricultural exhibits for the Paris' Exposition. General Le Duc's Report to the Senate also contains the results of carefully made experiments in the cultivation and production of sugar from maize and sorghum; some interesting statistics on the tea, coffee and sugar trade of the United States from 1790 to 1878, also the results of various trials of new varieties of wheat, corn, oats, rye, barley, potatoes, buckwheat, amber sorghum, sugar beets, tobacco, fruit and forest trees, and various other seeds. Although several important papers also accompany this special report, it will, when published in the ordinary annual form, contain the results of other labours which are promised us. We have now, however, an exhaustive paper on the origin and growth of sheep husbandry in the United States; a statement showing the condition and prospects of the cane sugar industry; a paper on the silk worm and several special reports on the condition of crops and of live stock in the United States.

From a cursory perusal only of this mass of valuable information just received, it strikes us that our neighbours have good reason to congratulate themselves on the appointment of the gentleman who now occupies the important post of Commissioner of Agriculture. Although this appointment only dates back to 1876, most useful work has already been done and a great deal more seems to have been carved out. It must therefore be gratifying to all patriotic and unprejudiced Americans to notice the really valuable work which is being brought forth annually by the Department of Agriculture at

Washington. We know of no country in the world, Germany perhaps excepted, where more interesting and more persevering efforts are officially made to study out the various and all important questions connected with the agricultural improvement of the whole country.

We have often read complaints as to the useless expenditure connected with this department. Of the fairness of the complaints we know nothing: but what we do know is that however immense the agricultural wealth of the United States may be, yet it can easily be increased tenfold. And nothing can sooner tend to this enormous possible increase than the careful and diligent study of the innumerable agricultural problems which are constantly being studied or solved by the scientific practice of the best agriculturists in that

country, and by the far and wide dissemination of such practical solutions, when they have been obtained. This is really the work which the Department of Agriculture at Washington strives to do, with such means as the United States Legislature may allow. Let us hope that every possible assistance, consistent with due economy, will be generously voted by the American people for this all important Department, and that its work will be scrupulously watched, in order to make it always thoroughly useful. Let us hope also that the eminently satisfactory results which must follow may induce our own Department of Agriculture at Ottawa, to organize work of the same nature which is so much needed for the improvement of the agricultural interests of the various Provinces in the Dominion of Canada.



MARS, Ayrshire Bull, imported by John L. Gibb, Compton, P. Q. Canada.

Ayrshire Stock.

The animals represented in this number are the Ayrshire bull "Mars" and cows "Medora" and "Rossie," imported from Scotland and owned by Mr. John L. Gibb of Compton, P. Q.

Mr. Gibb has, since he commenced farming on the old homestead at Bellevue, near Quebec, in 1859, devoted his attention principally to the breeding of thoroughbred Ayrshires, which he considers the most valuable and suitable animal for this particular section of Canada.

From time to time he has made large additions to his herd—which generally consists of about fifty (50) Ayrshires—by importations from Scotland. In the year 1868 he had the good fortune to become possessed of the bull "Mars" purchasing him from W. A. MacLachlin, Esq., Sterlingshire, Scotland, a gentleman whom none surpassed as a breeder and exhibiter of Ayrshires.

This bull has been pronounced one of the finest animals ever brought to this country. His success in the show ring proves this to be a fact. He not only won his laurels at our

Provincial Exhibitions, but also in the United States, carrying off first prizes from animals of high repute. M. Gibb twice refused the large sum of twenty five hundred dollars for "Mars"; and considers that his success with this breed is greatly owing to the good qualities transmitted by "Mars" to his progeny.

In 1870, a valuable importation of twelve cows and heifers was made, including "Medora" and "Rossie," purchased from the famous herd of Mr. Lawrence Drew, Merryton, factor to the Duke of Hamilton. This shipment arrived in splendid condition after a sail of forty days.

In 1872 Mr. Gibb visited Scotland with the express intention of buying a few Ayrshires that could not be beaten. The result was the importation of five prize cows which arrived in Quebec the 11th September 1873, a few days previous to the Provincial Exhibition held in Montreal. It is satisfactory to note that with one of these cows, "Heather Bloom" Mr. Gibb carried off the first premium over thirty-two of the finest Ayrshires that ever entered a ring; and took the herd prize with "Mars" at its head, over six competing herds.

We are pleased to learn that although by far the greatest number, and most valuable portion of those sold, have gone to the United States, yet a considerable proportion have been bought by and are now in the hands of our Canadian farmers, and that the demand from Canadian breeders is rapidly increasing.

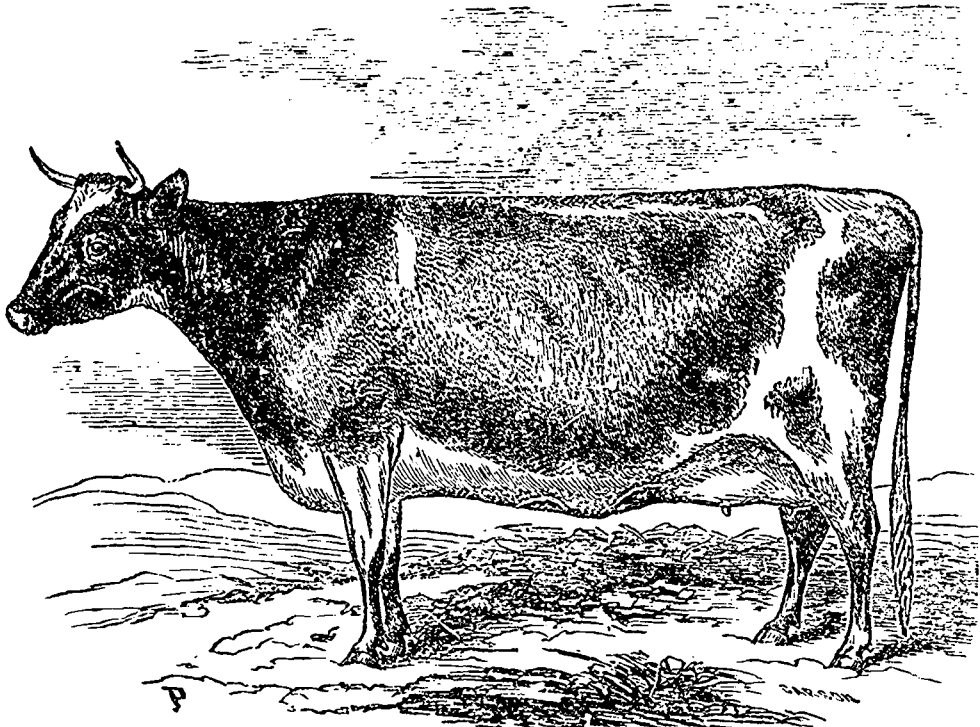
Mr. Gibb has proved the superiority of the Ayrshire over other breeds, especially for our climate, as he finds them easily kept, yielding a large return in butter and milk, for the food consumed, besides making the best of working cattle; and, when required for the butcher, they grow to a good size and fatten readily.

In a future number, we hope to give a description of Mr.

Gibb's farm and buildings at Compton, with mode of stabling and feeding the cattle.

We are desirous to state that should any of our friends visit this farm, they will at all times be made welcome by Mr. Gibb, or his foreman.

We intend to visit and describe, from time to time, the various herds of pure bred stock kept in this Province. Our breeders of Ayrshires are numerous. We may here mention in that connection, Mr. Andrew Allan, the Messrs. Dawes, and the Messrs. Sommerville, all of Lachine, Mr. Wm. Rodden, Plantagenet, Mr. Thos. Irvine, of Logan's Farm, the Messrs. Drummond, of Petite Côte, Mr. N. S. Whitney, of Frelighsburg, and Mr. Browning, late President of the Council of Agriculture, of Elenhurst, Longueuil.



MEDORA, cow imported by John L. Gibb, Compton P. Q., Canada.

THE MONTREAL VETERINARY COLLEGE.

We call special attention to the advertisement in our columns respecting the Montreal Veterinary College. We have watched closely the working of this school since its very beginning, and we must say that considering the very small amount of public aid given to this college, and the great difficulties attending the formation and proper starting of such an establishment, the results obtained by Dr. McEachran and his assistants are really wonderful. The Montreal Veterinary College is already admitted to be one of the best, if not the very best institution of its kind in America. We have even heard it stated, on good authority, that it compares most favorably with the best institutions of the kind in the world.

It is not surprising therefore to see so many American young students flocking in every year to this school, from all parts of the United States; but what is more surprising, we might say, painful, is to find how very few Canadian students, comparatively, take advantage of the free tuition therein offered to them. Let us hope that, in the coming term,

the free bursaries at least will all be taken up by educated, intelligent and willing Canadian young men.

Beware of the Potato bug.—Our farmers and gardeners in this Province had better prepare immediately for the appearance of the potato bugs this season, in greater numbers than ever. This scourge has been steadfastly making its way in every direction, until it has attained the extreme Eastern and Northern limits of this Province. In the district of Quebec, it made but little havoc, comparatively; but it has taken possession of the territory, and this spring it must be destroyed or it will eat up the whole of the potatoes as they appear.

It is no use trying experiments; there is but one way to keep down this terrible enemy, and it is only by the frequent and systematic use of *Good Paris Green* that this can be done. Unfortunately, for one farmer who is willing to act with energy in this matter, there are thousands who will as usual be dilatory, who will do things by halves, or who will do nothing at all. However, there is this to be said: good farmers can save their crops with Paris green, no matter how numerous the bugs may be, and they are sure to obtain a large price for their potatoes, whilst the negligent farmers will lose their crop and their pains.

It is very important to make sure that the *Paris green* purchased is of the best quality. There is great adulteration on this article. None should be bought except the best and from reliable firms, who guarantee the quality of what they sell.

The Dalmatian Insect Powder.

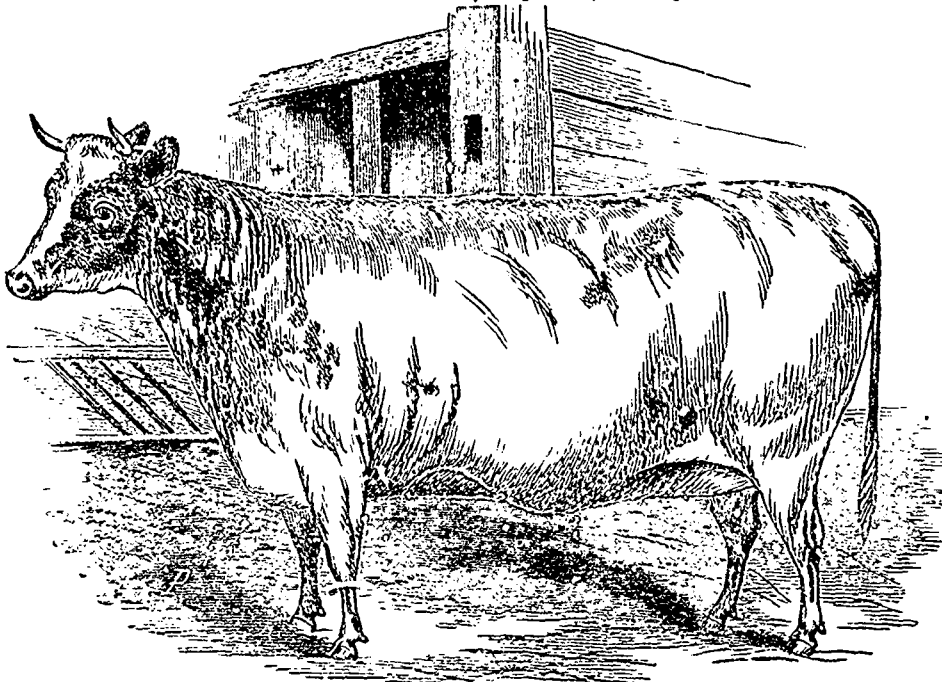
The *Pyrethrums* are hardy plants which bloom abundantly the second year from seed. The powder is prepared from the half-opened flowers gathered during dry weather and dried in the shade under cover, but the process of gathering, drying and preparing involves so much time that their culture can only be made profitable where labor is cheap.

Insect powders have not attracted general attention as insecticides until within the last three or four years, during which time they have been introduced in various forms in packages and boxes, accompanied by suitable blowers or insect guns for the purpose of properly distributing the powder, and recommended for the destruction of flies, cockroaches, fleas, bugs, &c. Sometimes these prepared articles have been artificially colored so as to disguise their source, but all have owed their activity solely to the presence of the powdered flowers of one or other of these *Pyrethrums*.

House flies are very sensitive to the effects of these powders. A few puffs of the dust from an insect gun, blown into the air of a room with the doors closed, the discharges directed towards

those parts where flies are congregated, will stupefy and kill them within a very short time. The powder is somewhat pungent, and to breathe an atmosphere charged with it will frequently cause a slight sneezing, but beyond this the operator need not anticipate any annoyance. Frequently during the past summer, when flies have been troublesome, we have pretty thoroughly charged the air in our dining-room and kitchen at night, closing the doors, and in the morning found all, or nearly all, the flies lying dead on the floors. A few minutes after its use they begin to drop on their backs, and after a very short time die; if a room be closed for half an hour after using the powder, few, if any, will escape. By some this energetic action has been attributed to the presence of a volatile oil in the flowers, by other and later investigators, to a particular crystalline principle believed to be an alkaloid; but this point does not as yet seem to be fully settled.

More recently we have been experimenting with this powder on the green Aphid which troubles our green-house plants. The usual plan of smoking with tobacco is an unpleasant remedy, and is also very injurious to many plants of delicate constitution, whereas the insect powder used to any extent is perfectly harmless to plant life. After freely charging the air of a green-house with the powder, blowing it in fine clouds of dust among the plants,



ROSSIE, Ayrshire heifer, imported by John L. Gibb, Compton, P. Q., Canada.

the tiny tormentors who are busily engaged in sucking the life of the leaves and tender shoots, soon manifest symptoms of uneasiness and begin to drop from the plants to the ground, and in the course of an hour or two the larger portion of the enemy's forces will be found lying sprawling on the earth in the pots or on the shelves and floor of the house, where, probably partly from their natural inability to find their way to any given point, they fail to reach the plants again and hence perish. By applying the powder freely in the evening and giving the plants a thorough syringing in the morning, they may in the worst cases be almost freed from Aphides by a single application; it is better, however, to repeat its use the next evening, so as to make sure work. The powder does not appear to kill this Aphis as it does the fly. For the purpose of testing this point we placed a number of them in an open glass cell of a microscope slide and powdered them thoroughly, and found some of them alive after two days of such severe exposure to its influence. Having recently found a plant literally swarming with the green Aphis, so that the sight of it was almost disgusting, we submitted it to the action of this powder one afternoon, having previously spread a large piece of white paper under the plant, so that the effect of the powder on the insects might be distinctly seen. Almost immediately they began to fall on the paper, and in less than ten minutes a hundred or

more of them were lying on their backs or crawling sluggishly about. In the course of half an hour some four or five hundred had fallen on the paper, and when the plant was examined again the following morning, there remained but very few on it, and most of these were removed by a slight syringing. We have had the powder used in green-houses by some of our friends, who also report its success. This matter is well worth the attention of all those who indulge in window gardening or who grow plants in small conservatories attached to dwellings, since if this proves an efficient and economical substitute for tobacco smoke, it will save much annoyance and some loss. Success will necessarily depend on the quality of the material used, but after the experiments we have tried, we feel confident that with good Dalmatian powder there need be no failure. It will be interesting to learn as opportunity offers how moths and other insects are affected by these powders. If the beautiful specimens which sometimes fly into our rooms at night can be drugged in this way and captured without a struggle, we may add many a perfect specimen to our collections which would otherwise be more or less defaced. There is quite a field for experiment here.

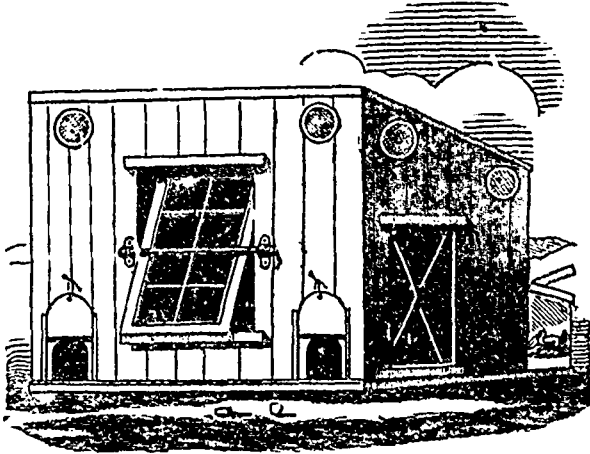
The Canadian Entomologist.

We can send good Dalmatian Insect Powder by mail to our correspondants for ten cents per oz, postage prepaid.

POULTRY.

A desirable Poultry House.

We give to the readers of our journal a cut of a movable poultry house which can be built cheaply. Size about 6 by 8 feet, height in front 6 feet, at back 5 feet 6 inches, roof covered



Poultry House.

with tarred paper or battened to make it tight. The window 3 x 5 feet, revolving on a bar. The runways are kept open during the day, having sliding doors to close at night to keep out cats, foxes or other midnight prowlers; the nests are placed outside the building, they are covered to protect them from rain, preventing the necessity of going into the house to get the eggs. Perches may be placed opposite the door, in notches prepared for them, so that they may be removed to clean them. Ventilation is well secured by the round holes at the top; during midsummer the window can be removed, and the opening covered with wire netting or laths. The house should be placed upon high, dry ground to prevent it becoming muddy in wet weather, and moved as often as may be necessary to keep vermin from collecting, and the ground from becoming filthy from the droppings of the birds.

Our artist has shown the opening, to remove the eggs, at the top. It should be on the side, so as to make the top rain-proof.

Hints for the Season.

In years past, almost a universal idea has been that poultry could not be kept with profit except on large farms, and even then, only when raised in large numbers. This is a great mistake, as a few well chosen birds, when properly cared for, yield as much in proportion, if not more profit, as when kept in large numbers. There is scarcely a family who have a few common or barn yard fowls but have found them profitable. As a general thing, the management of poultry is considered of too little importance, and is left pretty much to chance; but, of late years, the Poultry Exhibitions throughout the country have inculcated a taste for poultry breeding which, we are glad to see, is increasing.

Among all domesticated animals, none are more profitable than poultry when their products are properly disposed of.

There is no good reason why, at all seasons of the year, eggs should not become as much the food of the poor as they are a delicacy for the rich.

Poultry breeding is carried on largely by fanciers who deal in fine feathered and full blooded stock, bred strictly to colour and shape of feather and body, which they sell in pairs

or trios at good round prices. But there is money in raising poultry for flesh and eggs alone.

If you cannot afford to buy high priced birds or eggs for hatching, and you have the common barn yard fowl, select your best layers, and flesh producers. Mate properly for that purpose, using only your best stock every season to breed from. Though you may not succeed in getting particularly fine points in plumage, you will in a short time succeed in making great improvement in your stock, for flesh and eggs.

Hens are not profitable to keep after the third year as egg producers. If they are of a valuable breed they may be kept, for the sake of breeding to keep up the stock.

When eggs are the only object, the Polands, Black Spanish, Leghorns, Crèvecoeurs and La Fleche are the best. The game are also very good, but it is difficult to keep many together, because of their quarrelsome dispositions. The Spanish and Leghorns are best, the first laying large white eggs and most in weight of any in the year, the Leghorns most in number and not large. For flesh, the Brahma, or Plymouth Rock,—the latter being essentially the farmers' fowl,—maturing early, and forming flesh quickly at the least expense.

Now, as the season is coming when you can let your fowls out, from their winter shelter, to run in the grass, you must not forget to care for them, if you expect to make any profit from them. It may be that you are obliged to confine your birds in small yards, in spring as well as winter, preventing them from getting to the garden or planted fields. Therefore it is needful to provide them with food such as will take the place of that which they would pick up when running at large.

Pure fresh water, and plenty of it, daily change of food, cooked and raw, greens, such stuff as cabbage, turnips; once a week chopped onions, gravel, oyster-shells broken up, old mortar, scraps; in fact any thing left from the table may be cooked and given to them rather than be thrown away.

Provide dust baths in the sun where they will be dry, made of good road dust or sand, well mixed with a little flour of sulphur.

Keep a record of your work. Do not burden your minds with trying to remember either your success or failure. If you make an experiment, record it, so that you can trace it up for reference if it is a success; if a failure, you can protect yourself against it, another time.

If you buy eggs for hatching, be sure of the reputation of the man you buy of, know what the merits of his stock are, note how they are packed, if sent by Express; if badly done make complaint at once.

Do not allow the bones from the table to be thrown into the dust heap, or lie around the yard; throw them into the fire, burn them a little, crush and give them to your fowls. If bread is burned, or anything else that is cooked in the house, do not throw it away, but use it as charcoal for your birds.

If they have been obliged to run in the orchard or meadow to pick up their living as they can and feeding on what they could get, their eggs and flesh are likely to taste;—feeding charcoal in any shape will remedy the evil.

If you can spare a piece of land from garden or field, plant sunflower seeds. Mammoth Russian is best—the seeds will prove useful for your poultry next fall.

Prepare now for the winter's supply of green food for your poultry.

Provide onions, cabbage, turnips, and beets. Cut grass when about six inches long and cure it well;—it will save you

much trouble and anxiety when the cold winter comes, and will not be expensive in time or material.

The season for hatching chickens, for market and exhibition, is now at hand, the poultry keeper finds himself busy preparing for his work; if he does his duty, the fowl houses should be thoroughly cleaned and whitewashed, nests washed, and new bruised straw or soft hay may be used. It is full early for us in this climate to commence setting the hens, unless good provision is made to guard the eggs from being chilled, by the hens leaving the nest too long when feeding, or at night, as pullots will frequently do after setting for a week or two and getting tired of their business.

Old hens as a rule are safer and surer for this duty, their eggs hatch better than those of young fowls.

Experience has taught good breeders in this cold climate that birds hatched out in May and June do as well as those hatched a month earlier.

Unless provision is made for green food, a good rule is to bring the young chicks out so as to be ready when the young grass is starting up.

Set a hen at this early season on nine eggs rather than a greater number, let them be fresh laid, place her upon them at night, keep her in a quiet place, with food and water near, and let her alone, she will bring her brood off better than with your help; feed the young chicks for a week upon dry bread crumbs mixed with eggs boiled hard; a little boiled wheat after this is very good. Cook up fine scraps of meat well cooked every other day until the grass is well started.

Keep the mother and chickens free from lice and, from cats and rats until they are well grown.

Good and bad breeding of Poultry.

There is a great difference in the plans used by poultry breeders, even when they desire to do the best they can for the comfort and well being of their fowls.

They are inexperienced and often fail in producing the desired results, such failures arising partly from badly constructed shelter, allowing the fowls to forage for themselves anywhere and everywhere in all kinds of weather. Some claim that to allow birds to rough it keeps them in the best health, makes them hardy, and in fact is the most natural for them.

Carelessness in the little details necessary to good management, such as the waste of food, feeding irregularly, unguarding them from exposure, is often the cause of the bad and unprofitable results experienced by those just starting in the business.

To be a good breeder is to be one who is willing in part at least to give back an equivalent for what he receives from his properly tended and kindly treated stock. No man should keep, on his premises, any animal which he is not disposed to care for properly, either by attending to it himself, or having it attended to by some one competent and faithful, and particularly in the care of fowls and chickens, as they being unable to care for themselves, need to be provided for.

The more care and attention is given to keep them in good appearance and health, the more uniformly they are fed and watered, and the more cleanly they are kept in well lighted and ventilated quarters, the better returns they will make us for such attention.

The last course of treatment will ensure successful breeding, and we hope, no intelligent man will keep more stock than he can attend to unless he desires to be out of pocket; a sure way to become disappointed and disgusted with poultry breeding.

To become a successful breeder requires time, care, thought, and study, as well as practice, and now is the time for our readers, who have not already done so, to begin. Select some good fowls of any breed which you may fancy, of pure blood, and start with one kind only, until you have learned their habits and how to manage them; have patience to learn well, you will be amply repaid for your trouble; and starting upon a good foundation will be able to compete with those who have already been long in the business.

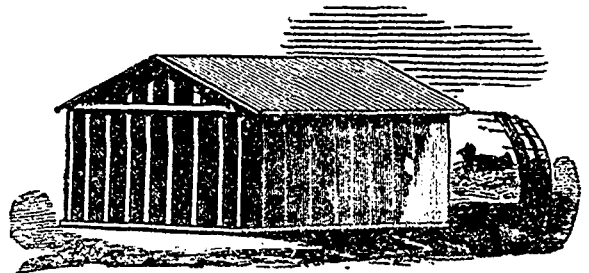
Red Peppers for Chickens.

We have found so much benefit from its use that we desire to call attention to it now, in time to sow the seed. The small pepper known as "Bird's Pepper" is the best.

The plant is very pretty when growing, and attains from eighteen inches to two feet in height, and in autumn its bright little red heads looking out from under the rich dark green foliage are very beautiful. The seeds have a stimulating property that is very good for newly hatched chickens, especially if they are weakly; two or three given them have a wonderful effect.

If a moulting hen shows signs of weakness, three or four pods daily in the food will help her greatly.

We give a cut of a coop for setting hens prepared by our own artist, and described by I. R. Felch in the *Fanciers Journal*, he says: April and May, months in which the greatest



A Setting Coop.

number of hens are set, are upon us. As hens come off with their broods, a suitable coop ought to be provided. The time to make those coops is now, before the hurry of the hatching season, and when they will serve a double purpose. The mode of setting a hen will go far towards the result. Build your coop 30 x 30 with posts 15 inches high, and a double roof; finish one end with slats one inch wide and three inches apart; the other, finish with a slide door large enough to admit a hen. Now, with a barrel, you are ready for work. Place a barrel on its side, and sink it four inches in the ground, filling the same with earth, level with the ground outside, on which form the nest with chaff and short hay. Place the coop, constructed as above, with the sliding door in front of the barrel. In the coop the hen has a dusting and feeding yard from which she cannot escape and in which she is not molested in any way; she is prevented from deserting her nest, and the moment she hatches, the rear door is closed and coop and brood removed to their raising grounds. This mode of setting secures most heat, and being literally nested on the ground, the results are uniformly good.

Note.—We tried this plan in 1874 and can recommend it as good practice.

VETERINARY DEPARTMENT.

Under the direction of D. McEachran, F. R. C. V. S., Principal of the Montreal Veterinary College, and Inspector of Stock for the Canadian Government.

The favourable reception which our labours in this department in the French Journal have met with lead us to hope that in endeavouring to comply with the wishes of the Department of Agriculture for this Province, to disseminate useful information on subjects relating to animals in health and disease in an English Journal, we shall meet with some encouragement also.

The object of this department is not by any means to teach our readers how to doctor their stock, nor in any way to interfere with the legitimate privileges of veterinary practitioners. True we shall from time to time be called upon to reply to questions and to give advice; but, in doing so, we shall discriminate between those who are beyond the reach of skilled assistance and those who prefer to risk gratuitous advice, which, from want of personal examination must always be unsatisfactory. Our principal object will be to deal more with general topics concerning the breeding and management of farm animals, more especially with the prevention of disease, the improvement of stock, and such subjects in this connection as may be considered interesting and instructive to our agriculturists.

It is a well known fact that in a new country many errors, in the breeding and management of stock, were unavoidable sequences of primitive circumstances, many such errors are yet perpetuated. We shall endeavour to point out these and suggest the remedy.

As in the course of professional duty, we are privileged to visit the principal breeding farms in Canada and the United States, we shall endeavour from time to time to give our readers the benefit of our observations, and at the same time we cordially invite exchange of ideas from those of our readers who desire to aid us in working for the general weal.

Correspondents who desire information on the management of cases, should bear in mind that in no case where we are aware of it will we advise to the detriment of members of the profession. They should describe the case as shortly and clearly as possible, giving the age, size, sex, and breed of the animal.

A TAX ON STALLIONS.

For many years back we have observed with regret that while the praiseworthy efforts of some of the Agricultural Societies, and of a few private individuals, to introduce good Stallions have met with some success, yet, looking at the country as a whole, we cannot see that the improvement in our horses is very apparent. In fact, in the Province of Quebec, we are assured by those best qualified to give an opinion, that our horses are steadily but surely degenerating.

The question is often asked; why? and the reply is always the same; the country is over-run by cheap mongrel stallions.

Our Societies spend large sums of money on the purchase of horses, but, such is the competition by cheap horses, and such is the cupidity, or rather blind stupidity, of some of our farmers, that even the small fee necessary to pay expenses determines their choice in favour of the cheap cross bred, usually unsound animal.

What is the remedy? no legislation can compel any man to breed from certain sires, nor sow a certain kind of wheat or other grain; but legislation does limit the spread of weeds, —Canadian thistles, for instance,—and should not legislation

put a check on the sowing of weeds entailing far more serious losses than thistles? If we consider that, with ordinary care in breeding, our horses should average at least \$125.00 each at four years old, whereas as they are bred and managed, we are within the mark when we say that they do not average more than \$75.00, thus showing a loss of \$50 a head on all the horses in the province, which are estimated to number 240,000, representing an annual loss of \$12,000,000; that is to say, with more care in breeding, our horses would be worth \$12,000,000 a year more than under the present system.

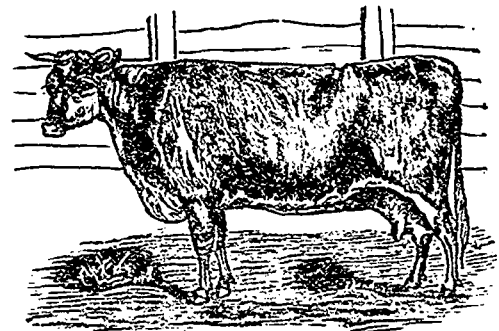
The only way we can see to remedy this evil would be to put a tax on all Stallions kept for breeding purposes, and let the Provincial Government appoint a commission to examine all stallions and grant them licences for the season. In this way none but good horses would be kept or licensed.

Horses with spavin, navicular disease, or blindness would not be permitted to transmit these diseases, and thus would be saved large sums annually, which are lost by depreciation in value of horses from hereditary and hence preventible diseases.

We hope the above suggestion will meet with some practical response on the part of some of the Members at the coming Session of Parliament. We hope also to hear from many of our readers, as a free discussion on the subject must be of advantage to us all.

THE JERSEYS.

To the north of the coast of France lies a group of islands known as "The Channel Islands" the inhabitants of which have long been celebrated for their industry and frugal habits, but more especially for their successful breeding of dairy cows. Owing to the rugged nature of the soil and the stormy exposure of the precipitous and rocky coast which is washed by the tempestuous waves of the English Channel, the cattle do not assume the large proportions of those raised in more fertile countries; but, owing to the care bestowed on them, and the judicious selections made of the best milkers for breeding stock, they have developed a race of dairy stock which while not equal to the Ayrshires in yield of milk, far excel them in quality and butter making properties.



Alderney cow.

The Island of Jersey is the largest of the group and has given its name to the cattle exported from there, as have also the islands of Guernsey and Alderney. These various breeds of cattle are all very much alike in appearance and qualities, although the Guernseys may be distinguished by being larger and courser than the Jerseys, while the Alderneys are smaller and finer than either. Out of the islands however they usually all pass as Jersey cattle.

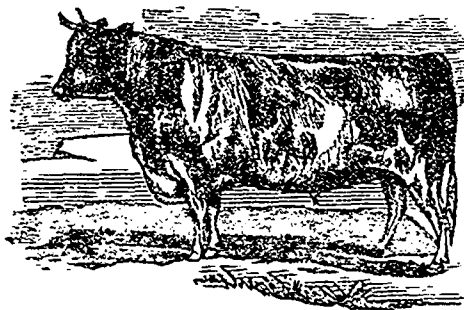
That our Canadian cows are direct descendants of the Jerseys cannot be doubted, we have seen in this province small cattle possessing all the markings and distinctive characters of the Jersey in places where it was well known no importa-

tions had taken place of that breed within the memory of man. Nothing is more probable than that the early French settlers of Canada would import some of the famous dairy cattle from old France.

We have authentic records of the appreciation by the islanders of keeping the breeds pure, from a very early date. As early as 1787, their legislature passed an act prohibiting the importation of cows, bulls, heifers or calves, with the penalties attached of forfeiture of the vessel and tackle, a fine of £200 stg., besides a fine of fifty pounds for each sailor on board who did not inform of the attempt to import; moreover, the animals so brought in were to be killed directly and the meat given to the poor. The act, so modified as to permit the importation of animals for slaughter only, still stands, and a recent writer from there declares it to be strictly enforced and adds "that they will not for any price part with their choicest animals for export."

While our neighbours in the United-States have encouraged this breed to a considerable extent during the past fifty years, it is only here and there, in this country that they are to be found, the Alderneys being most in favour in Canada. In the immediate neighbourhood of Montreal, Mr. Romeo H. Stephens has a most excellent herd of Alderneys, on his farm at St. Lambert's, most of them imported or bred directly from imported animals. Hon. M. H. Cochrane has also a small herd at Hillhurst, Compton, and the Hon. J. J. C. Abbott has started a herd of Guernseys at St. Anns.

"The Jerseys are of medium size, with a small tapering head with a fine muzzle, encircled with a light stripe, the horns are small, smooth, crumpled and tipped with black, with the eyes wide apart, large full and gentle in expression. The ears small and thin, neck thick and straight, chest broad and deep, body round and well ribbed up, hips broad, tail small and fine, skin deep yellow, mellow to the touch and covered with fine silky hairs."



Alderney bull.

The Guernseys are light red inclining to yellow striped, with white over the body and legs. The Alderneys are often squirrel grey, or black brown colour, and are generally more symmetrical in form. In all three breeds, the udder is well placed, large, extending well back and well forward, with large veins and medium sized teats, squarely placed and wide apart. As a rule they are most gentle, intelligent and can readily be petted by kindness. They are quiet in yard or field, seldom quarrelsome with one another, and are never troublesome about fences.

The Jerseys, Guernseys and Alderneys, are par excellence the family cow; their medium size, beauty and extraordinary milking qualities have long rendered them desirable for families; but, they are by no means to be despised as beef producers. Their great reputation however is in the production of butter.

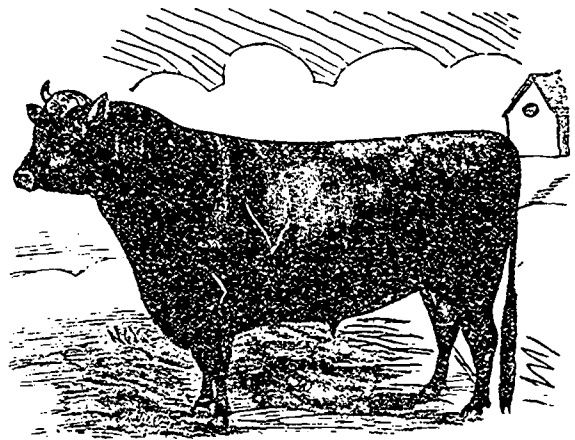
Mr. Inkham of Pomfret, gives some most extraordinary

statements of their milking qualities; thus, Mr. Davenport's Kate, gave 21 quarts of milk, per day. Mr. Keed's Europe made 19 lbs. of butter per week.

Lady Milton, 6 years old, for June, July and August, 92 days, gave 1595½ quarts of milk which made 249½ lbs. of butter, an average of 17½ quarts of milk and 2 lbs. 11¼ ounces of butter per day.

"Cream Pot" five years, old which in 24 days of June, July and August, in all 86 days, gave 1533 quarts of milk, which made 239½ lbs. of butter, an average of 18 quarts of milk and 2 lbs. 12½ ounces of butter per day.

The milking qualities of the Channel Island cattle cannot be doubted, but that they are beef producers, their most ardent admirers do not claim, although we have seen some of them attain a considerable weight. Col. Le Couteur, a gentleman engaged in breeding, in Jersey, declares that they feed well and fatten readily when dry, making a good quantity of beef of superior quality and mentions one old cow put up to fatten in October and killed in January weighing when slaughtered 1330 lbs., making a gain of 205 lbs. in 98 days of feed of 20 lbs. of hay, 30 lbs. of roots (carrots, swedes and mangolds) and a little wheat straw per day.



Jersey bull.

The milk of the Jersey is better adapted for butter-making than cheese; it separates its cream more completely than that of the Ayrshire and its cream usually churns into butter more readily. Dr. Sturtevant of Massachusetts furnishes us with some interesting facts in connection with the relative qualities of the milk of different breeds. The milk of the Jersey breed has larger globules than that of the Ayrshire. The variations between the time occupied in churning is determined by the milk globule and we find the cream with the largest globule takes less time to churn. The richness in globules and their readiness to separate renders the milk of the Jersey unsuited for the manufacture of cheese and there is a difficulty experienced in retaining the cream in the cheese. A certain quantity rising to the surface in the intervals of manipulation will not again mix with the milk in the ordinary process of making and is accordingly lost to the cheese. A milk whose globule rises quickly and completely would seem to aggravate this trouble wherever used.

For butter, the Jersey milk is well suited, the cream rises quickly to the surface and churns with great facility under favourable circumstances, and little of the butter remains in the skim milk. The size of the globule however allows a large amount of nitrogenous matter to remain entangled with the butter and theoretically this would affect its keeping as ordinarily made. The butter is usually of an orange yellow colour. In connection with this subject we

cannot do better than quote Dr. Sturtevant's remarks on the milk of the Ayrshires, to show the comparison.

"The milk of the Ayrshire cow is habitually used in Scotland for the manufacture of either butter or cheese, or both. The effect of this has been, on their breeding, to build up one class of cows which are excellent butter makers and another class better suited for the production of cheese. The cow which occupies a place between these two extremes is valuable both for the production of butter and cheese, although not equal to the typical extremes for the production of either product alone. This division is not only indicated by experimental practice but also by the appearance of the milk globules under the microscope. The butter families of Ayrshire are large milkers; their milk shows a globule not equal in size to that from Jersey milk yet large enough to indicate excellent butter qualities. The butter is of a yellow colour, often deep yet not possessing that peculiar orange tint which is often characteristic of the Jersey cow. Its quantity is large at the period of greatest flow, and as far as our facts indicate, the cow of this division yields a large annual product. The cheese family of Ayrshires furnish a large secretion of milk containing a small globule and more numerous granules than does the milk from the butter family. The cream rises to the surface less completely and mixes again more readily. A practical difference between the milk of the two families being the greater uniformity of constitution of the milk after standing in the one case than in the other."

We have endeavoured to give our readers an unbiassed account of these two favourite breeds. We will now make a few practical suggestions as to what our farmers should do under these circumstances to improve their stock. As we have more than once indicated, all our farms are not adapted for stock raising on a large scale; in many instances neither the extent of the land nor the nature of the soil will permit the breeding of heavy beef cattle. The majority of our farmers only keep a few cattle and these are kept chiefly for dairy purposes to supply the family milk and butter with perhaps a little to spare for market. What breed then is most suited to their wants. We have seen that the Ayrshire gives the largest quantity, but the Alderney gives the richest. The former degenerates very readily if she is subjected to privations, while as seen by the original Canadian cows still, through over a hundred years, retaining the characteristics of the original Channel Islands' cattle imported by early settlers in a well marked degree, many of them being excellent milkers, and not a few still retaining the Jersey colour and markings, it is quite evident that they are well suited to the climate.

We would therefore advise those farmers who only keep a few cows for milk and butter to cultivate the Jerseys, as they possess many qualities which specially recommend them. They are easily kept, very docile and beautiful, giving milk of superior richness from which is produced butter of a superior quality and flavour.

Grades are but little inferior to pure bred, more especially those obtained by crossing the Channel Island bulls with our native cows. Nothing would be easier than for our farmers to improve their stock by this cross. Young thorough bred bull calves can be bought very cheap without the pedigree.

Breeders of pure bred stock when selling their animals distinguish between those sold to keep up pure pedigreed stock and those intended for crossing: the one comes into direct competition with themselves, whereas the other does not, and they prefer to give their bull calves to farmers cheap rather than kill them.

Not only are the improved cattle more profitable on the farm, but, they sell for more on the market for family cows. Gentlemen who keep family cows will give nearly a third

more for a half bred Alderney, in many cases double as much as for a common bred cow.

They are of medium size, easily fed, give very rich milk, just what is wanted in a family, and are pretty to look at and gentle to manage, consequently they are the animal par excellence for the family. The sale of family cows, especially near cities, judiciously managed, could be made a very profitable business. Forty and fifty dollars are common prices for family cows in Montreal; there would be no difficulty in selling grade Alderneys at these prices, and they would cost no more than the common cattle which are sold at from \$15 to \$30.

By all means let the Agricultural Societies in those districts not adapted for raising larger stock, purchase pure bred Alderney bulls for the use of the country and we are confident the results will prove satisfactory.

FRUIT CULTURE.

In Horticulture as in other pursuits, individual efforts must precede each step in the march of progress, but individual effort alone is insufficient. The processes of nature are too subtle, making it necessary to observe from various standpoints before any law of action can be deduced,—her operations, though unceasing, appear, in comparison to our short lives, long in arriving at important results, while the bounds of individual power and experience are so narrow, that, in order to accomplish great things, it is necessary to lay hold upon two great aids which have naturally sprung up in response to the needs of humanity. These are first, the registered experience of the race, failures as well as successes, as we find them recorded in books or other printed forms, and second in the association of many persons who are interested in the same subject.

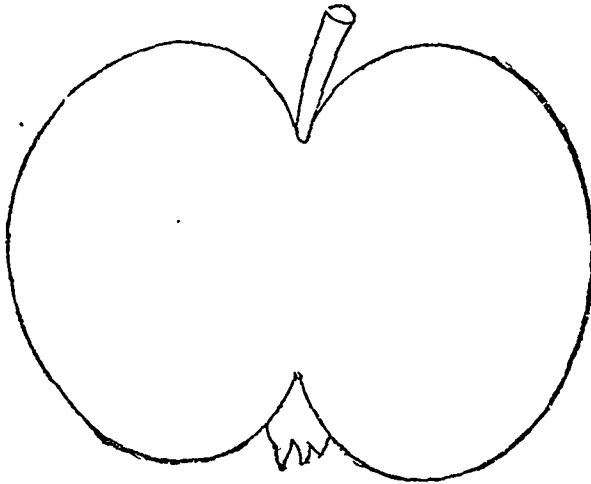
The fact is, we all look actively at things which interest us, but only from the point of view of our especial interest, and consequently when we are able to make use of our neighbour's eyes as well as our own, we can direct our labour with two fold wisdom, reasonably expecting proportionate results. Hence the necessity and value of the societies for promulgating various forms of knowledge, especially of those whose object is to scatter information among persons who are actively employed during the day, the nature of whose avocations obliges them to live at a distance from centers of business and intellectual life, thus making them in a great measure dependent upon these periodic reunions and upon the publications of their societies for such constant aids in their daily work as they require.

Realizing this need, a meeting was held in Oddfellow's Hall, in March, 1847, and an attempt made to establish a Horticultural society in Montreal. This project seems to have failed in the immediate accomplishment of its object, but in 1854 a committee on fruit was formed. No report was published as the result of their deliberations, but a collection of water colour paintings of various native fruits was made, in preparation for the Paris exhibition. In December 1875, a second committee was appointed at the general annual meeting of the society, and a fruit list published, which, with some later additions may be considered a safe, and, to the present date, a complete guide to fruit culture in this region. This report described forty-seven Apples and Crabs and except in the "Experimental list," each word stands as the united voice of the members of the committee.

We cannot do better than quote from this report in recommending the following varieties of apples as most suitable for general planting.

Duchess of Oldenburg.

This is a handsome fruit of Russian origin, and well suited to our severe climate. It bears often in unfavorable seasons, when others, alongside of it, fail. It also bears early, sometimes before it has been taken from its row in the Nursery, and the heaviest crops do not kill, but only stunt it at worst. The tree is vigorous, and forms a somewhat upright, spreading head, needing little, if



any, pruning. It is thus a valuable variety to grow for market, or for cooking. For the table it can hardly be recommended, being acid without sweetness or richness. Hence the sheltered gardens of Montreal do not sing its praises as those in the less favored districts of our Province, who profit by its hardiness, and fair, even sized fruit.

Fruit: Above medium size, roundish-oblate, beautifully streaked and splashed with red.—Flesh: White, juicy, somewhat harshly sub-acid. It ripens not long after Red Astrachan, and its use is mainly for the market, or the kitchen, and only secondarily for the table.

Peach of Montreal (*pomme pêche*).

L Hamel, of St. Hilaire, formerly gardener to the late Col. de Rouville, states that he remembers this tree in Normandy fifty years ago; and it appears indeed to have been imported by the late Francis Des Rivières, from France, and to have been first propagated below, where Terrace Bank now stands. The importer's gardener named it "Irish Peach," but it is not known under that name, nor is it the "Peach," "Irish Peach," or "American Peach," described by Downing, nor has it been recognized as any old variety by that author, or by the Committee on Nomenclature of the American Pomological Society. It has, in fact, no right to the name "Peach," so perhaps it is best to call it "Peach of Montreal."

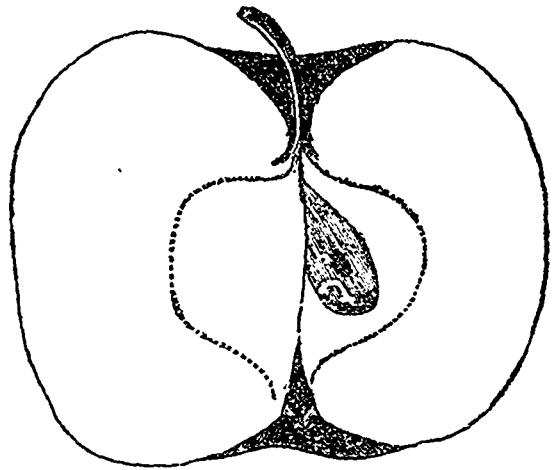
Tree: Extra hardy and long-lived, grows freely in the nursery, and in the orchard forms a large spreading head; it bears early, and, in alternation, heavy and moderate crops.—Fruit: Above medium, oblong-conic.—Skin: Greenish-yellow, with reddish blush, where exposed to the sun.—Flesh: White, tender, juicy, sub-acid, pleasant.—Quality: Second-rate, or, as some think, first rate.—Use: Table, kitchen and market.—Season: Beginning of September. It bruises easily, and shows its bruises; yet, if care fully handled, may be grown very profitably for a near market.

Red Astrachan.

This variety was, says Downing, introduced with the White Astrachan into England, from Sweden, in 1816. It is a handsome apple, and, indeed, one of our most valuable fruits. It grows vigorously, forming a large, upright, close head. In some instances, it proves long-lived, and trees are to be found bearing good crops in an old age. But, as a rule, it is not thought quite so hardy, or long lived as the Fameuse, as it is often found to injure at the forks, in which case large branches die. Complaints too are made not only of this decay of large branches, but of its being non-productive. In some cases, a dry, sandy soil seems the

cause to blame. On deep, gravelly, moist soil, the fruit seems finer and more abundant, and the tree healthier.

Fruit: Medium in size, crimson, with a lovely bloom.—Flesh: White, often stained with red, crisp, tender, juicy, and pleasantly acid.—Use: Table, kitchen, market; bringing, in the last named, a higher price per bushel than any other apple, so that they are



almost, if not quite, as profitable per tree as Fameuse. It ripens from August 15 to September 5th, and so unevenly, that the same tree has to be picked over, at first daily, and then twice or thrice a week for three weeks, which is not a disadvantage in a perishable fruit for a near market.

Alexander.

This fruit, as its name suggests, is of Russian origin. It is usually considered hardy and long-lived, though found by some to tend to decay at the forks. It bears early and heavily, every alternate year.

Fruit: Very large and handsome, too coarse and acid for dessert, but valuable for cooking, and so readily salable that we do heartily recommend it as one of our *most profitable* varieties. For a fall fruit, it keeps and travels well.

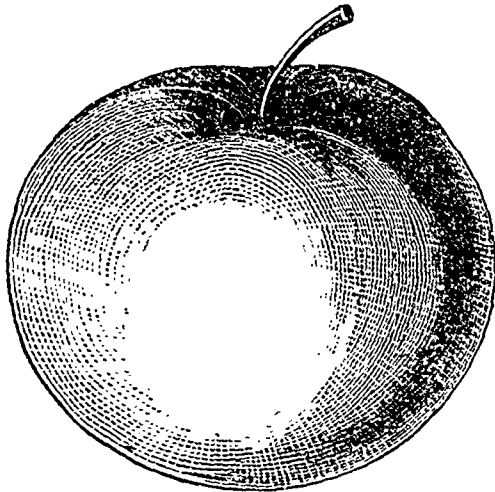
St. Lawrence.

Mr. J. E. Guilbault has supplied us with the following strange history of this well-known tree: The late Samuel Gerrard, when living in St. Sulpice street, about the year 1815, on land now occupied by the Parish Church of Notre Dame, had some rotten apples thrown on his manure heap. This was carted to the garden of the late Henry Shrouder, on ground now owned by Mr. John Molson, on the corner of Sherbrooke and St. Lawrence. From these seeds sprang a number of seedlings, of which the St. Lawrence was one. The original tree is still alive, and bore two or three bushels last year. The trunk is about twenty inches in diameter, but only one small branch is left on it. This veteran tree must have fruited as early as 1828, as buds were taken from it in 1829 by Mr. Wm. Lunn, under the name of Hogg's seedling, Mr. Hogg having been probably the gardener at that place. The St. Lawrence is hardy and long lived, attaining a large size, and therefore not to be planted too close. It is not an early bearer, but a yearly bearer of moderate crops. Strangely enough it is, in rare cases, a heavy biennial bearer. It is not as profitable, and therefore not so much planted as Fameuse.

Flesh: White, very tender, very juicy, fine grained, rich and luscious. To the south of us, it has been described as second or third-rate, but *here* it has none to surpass it as a table apple, not even the Fameuse.

We are unable to throw any more light upon the origin of this favorite. Many old and valued opinions here incline to the belief that two distinct apples have been grown under this name. The Committee do not hold to this view. On the one hand, there were, many years ago, orchards about Montreal which bore a Fameuse

colored much less highly, and that in distinct stripes. It was less saleable than the red, and so buds were procured, and these orchards, when enlarged, were enlarged with the red. But that the red produces the red, and the striped produces the striped from the bud, the Committee are not ready to state. On the



Fameuse.

other hand, the Red Fameuse will, exceptionally, bear striped apples, and *vice versa*, and one apple-grower in Huntingdon County even affirms that he has the two budded from the same tree.

As to the distinctive marks of the two, after comparing a great many opinions, it might be said that the Red Fameuse ("Fameuse Rouge," the Fameuse or Snow Apple of Ontario and the States) is rather the smaller, and more oblate (some few say more oblong) than the Striped Fameuse (or "Fameuse Barrée"). The former has its flesh firmer, its skin thicker, and it keeps longer. Some exaggerate these differences, some have never observed them. Some say the striped is more delicate and high flavored and *sucrée* others that it is insipid in flavor, and greenish-white in flesh. From this we may conclude that it is the more variable in flavor. Nearly all think the red the most productive, and all say it is the most saleable, and so, profitable. On the other hand, the Fameuse Barrée might well be grown, where the soil brings out its fine table qualities.

Some apple growers in Missisquoi, Brome, Abbotsford and Belœil agree in the main with the above-mentioned points of difference.

The Fameuse is perhaps the best bearer we have, often bearing enormous crops. One tree, which stood in front of the Montreal General Hospital, once bore 14 barrels, of 2½ bushels to the barrel. These sold at \$6 a barrel, or \$24 for the crop. The late John McGregor, of Côte des Neiges road, stated that he had gathered 22 barrels from one tree.

When orchards covered what is now the upper part of the City of Montreal, the demand for apples was smaller, and Fameuse fetched from \$2 to \$2.50 per barrel, and, on one occasion, 100 barrels, shipped by a grower to Quebec, in 1837 or 1838, fetched only \$1 a barrel on the wharf.

But, for many years, the price has been steady at \$3 to \$4 for a barrel of 3 bushels, without any sign of reduction in years to come.

Of *Late Winter Apples* we wish a more encouraging word could be spoken. We have the "Jonathan," "Yellow Belle Fleur," "Blue Pearmain," "Bourassa," and "Pomme Grise," but like the "Early Joe," and "Irish Peach" of early maturity, they are dessert luxuries (though inexpensive ones) and not like those early varieties already named which the poorer farmer can avail himself of. Even the "Golden Russet," (though it should be in every orchard) rarely makes the monied return of a "Fameuse," or "Duchess."

Of those in the "Experimental" list mentioned in the report, the "Wealthy," a Minnesota seedling, is the most valuable. The news from Minnesota regarding it, is up to

the present time, all in its favour, and it has a few fruited specimens in the Province of Quebec.

In *Crab Apples* the main point is *beauty*, but especially of colouring. "Hyslop" is very beautiful, but poor in quality, yet readily saleable, though the greater productiveness of "Transcendent" rather claims for it the palm. These have been thoroughly tested, though not so well known as our own "Montreal Beauty" and "Waxen," both of which, with careful management prove very profitable to the grower.

* There is no reason why these more easily grown varieties of apples should not become as much a regular article of daily food upon the table of the poor working man, as are the commoner kinds of vegetables. That the use of fruit conduces greatly to health is a recognized fact, and if each of the smaller farmers will take pains to plant properly a few trees of these hardy varieties, he will find that they not only yield him an enjoyable and healthful article of food, a good profit on his small investment, but he will at the same time confer a boon on his fellow labourer, the mechanic who toils in the crowded city and who, even more than himself, needs and gratefully appreciates these luxuries which are now too often beyond his limited means.

We have said plant "*properly*," believing this to be the key to success which is often missed. Only a few months since in passing an orchard we chanced to observe that while all the trees were of the same age, certain distinct rows were of far more sturdy growth and appeared in much better condition than others of the same variety only a few yards distant. To our inquiry as to the reason of such a marked difference, the owner of the orchard replied "Oh, I planted some of the rows myself, while the rest were left to my men."

In planting an orchard, choose a site, if possible, protected from the winds, either by hills, or by a belt of evergreens. An apple tree requires either a deep loam, sandy or gravelly soil, or a rocky bottom. It is useless to attempt to grow an orchard on a cold clayey, or wet soil, as perfect drainage is absolutely necessary.

The site chosen, the first thing to be done is to stake out the positions for the trees, which should be, for standards, not nearer than twenty four feet each way. Next in order before the trees are disturbed in the nursery, prepare the holes. These should be at least three feet in diameter, by eighteen inches in depth, then filled to within six inches of the top with surface soil or inverted sods. Upon this bed place the tree, having carefully pruned of all broken or injured roots. Have at hand sufficient pulverized soil to fill the hole after the tree is placed, great care being taken to spread out the roots, gradually filling in the fine soil by hand until the tree stands firmly. After the hole is filled up and the earth firmly but not roughly packed above the roots, pour on a bucket of water, completing your task by putting a mulch of long manure around the tree, taking care not to pack it about the stem, and not to plant too deep.

In a following number of this paper we propose to take up the subject of Plum, Cherry-and Pear culture.

Formation and Management of Gardens.

We cannot too earnestly recommend the careful reading of the following article; most of the rules therein contained apply as well to general farming. Were farmers and gardeners to carry out these very elementary principles to perfection, the crops in this Province would soon be doubled and tripled. We have in a few instances made some changes to suit our own circumstances; these are printed in italics.

THE SITUATION.

The most suitable situation is a very gentle inclination towards the East or Southeast, that it may have all the advantages of the morning sun. All good gardeners take pride in having early crops, and this inclination insures an early maturity of the vegetable. A Northeastern aspect is to be avoided, as our worst storms are from that direction. A Northwestern exposure, though cold and late, is less liable to injury from late and early frosts, as vegetation in such situations is sheltered somewhat from the rising sun, and does not suffer so much if it becomes slightly frozen. It is not the frost that injures the plants so much as the direct heat of the sun falling upon the frozen leaves and blossoms. Cabbage, cauliflower, spinach, lettuce, and other salads are much more easily brought to perfection in a Northern exposure. Many of these, in the more Southern climates, run up to seed immediately if exposed to the full sun. The soil, too, is usually richer, and will retain its fertility longer, other things being equal, in a Northern exposure. It is a great advantage, if the garden slope at all, to have it slope in more than one direction, giving a choice of exposure, and generally also of soil, as it is thus adapted to both late and early crops. When the drainage is good, a level is not undesirable, but whatever the situation or aspect, the surface must be smooth and level. Care should be taken that the productivity of the garden be not diminished by the proximity of large trees, which are injurious by their drip to all plants beneath them, and, by their shade and extended roots, to those more remote.

THE SOIL.

In selecting the grounds, it is of the utmost importance to have the soil of a healthy quality, being mellow, dry, and capable of being worked with a spade. The best soils are of a friable and loamy texture; the worst, those of a very light sandy, or stiff, clayey description. In a garden designed for the cultivation of a variety of plants, both sand and clay soils are desirable. But the best soil, for general purposes, is a loam of medium texture, arising from a suitable admixture of the two, as they reciprocally correct the defects of each other, and with the addition of organic matter, form a soil suited to the cultivation of nearly all garden productions. Any soil, with judicious culture, draining and manures, can be converted into such a loam.

THE SIZE.

A garden should be proportioned to the size of the family, and their partiality for its different products. A small garden, well manured and cultivated, with a suitable rotation of crops, will yield more pleasure and profit, than an ordinary one of three times its size. An active, industrious hand can take care of an acre, well provided with hot-beds, cold-frames, etc., keeping it in perfect neatness and condition; or, if the plow and cultivator be brought into requisition, as they should be in large gardens, four times that amount can be under his care. If but little room can be allowed near the house, cabbages, carrots, turnips, potatoes, and the common crops can be grown in the field, if well enriched, and cultivated with the plow and hoe.

THE FORM.

The form will often depend upon the situation of the garden, or the inclination of the ground; however, it is of no great importance, and may be arranged to suit the peculiar taste of the proprietor. When it is a matter of choice, a square or parallelogram is most convenient for laying out the walks and beds. A parallelogram, extending from east to west, gives a long south wall for shading plants in Summer, and a long, sheltered border for forwarding early crops. In plantation gardening, an oblong square shape has the further advantage of giving longer rows for the plow.

FENCING.

The objects of fencing are to procure shelter for delicate plants from cold winds; also, shade for those that require it, and above all, to keep out of the garden intruders of all kinds, that the owner may enjoy its fruits without molestation. A high, close, board fence answers a good purpose, but a stone or brick wall is preferable; and, what is better still, in sections where it can be cultivated, a living hedge of closely planted evergreens.

THE SELECTION OF SEEDS.

The most healthy and vigorous plants are generally produced from seed, and this is the only method of obtaining new varieties.

Some seeds retain their vitality but one or two seasons, while others grow better by keeping. *Great care should be used in the selection of seed*, as on its perfection the growth of the young plant depends, and the cost of cultivating an improved variety is no more than a degenerated one; hence the necessity of purchasing only such seeds as are offered by RELIABLE HOUSES, or men who pride themselves on sending out none but the best or most improved kinds. Above all, do not buy *cheap seeds*, thinking to save a few cents in the purchase, for they will prove *far dearer* in the end.

SOWING SEEDS.

This is one of the most important garden operations. Seeds, to germinate well, require light, heat, air and moisture. They should be sown when the ground is mellow and fine, and, if possible, before a gentle rain; and the soil should be rolled or gently pressed upon the seed, after sowing. The freshest seeds of some varieties often fail from improper management in sowing. When sown too early, while the ground is wet, they are apt to rot. When sown too shallow, in a dry time, there may not be sufficient moisture to sprout them, or they may be destroyed by dry and hot weather after they have germinated. Insects may destroy the plants before or as soon as they appear out of the ground. Strong manures, such as hen dung, guano, and chemical manures, if under powerful fermentation, will frequently destroy the vitality of seeds, and sometimes kill the tender plants. Complaints frequently made that seeds sown are not good, may quite as often be attributed to other causes as to the quality of the seeds. The first effect of air, heat and moisture upon the seed, is to change its starchy matter into a sugary pulp, the proper food of the embryo. If, at this time, the seed be withered by exposure to heat, without sufficient covering, it will perish. It often happens that seeds are planted in a fresh-dug soil, and the above change in the properties of the seed takes place, but the earth not being pressed upon it, the seed dries up and the embryo perishes. Others, again, are buried too deeply, and though the seed swells, yet sufficient warmth and air are not obtained to give it life. The first thing in sowing, is a suitable preparation of the soil, so that the young roots thrown out, may easily penetrate it. It must be made more or less fine for different seeds. Peas, corn, beans, and coarse seeds do not require the soil to be as finely pulverized, as small seeds. The seeds must also be firmly fixed in the soil, and pressed by the earth in every part, in order to retain moisture sufficient to encourage vegetation; but they should not be so deeply buried as to be deprived of air, or to have their ascending shoots impeded by too much soil above. In all cases, seeds should be sown in fresh-dug soil, that they may have the benefit of the moisture within; but they should never be put in when the soil is really wet, as the ground will bake, and they will perish. Moist weather in Spring or Summer is excellent for putting in seeds, provided the ground is mellow. Just before a light rain is the best possible time for sowing most seeds. When the seeds are planted, the earth should be usually pressed upon them with a roller, or by treading with the feet, in the case of large seeds, or by smoothing the surface with the back of the spade, or by walking over them on a board, for the smaller kinds. Light must be excluded until the roots can derive nourishment from the soil. When they come up, keep them free from weeds, and thin according to the requirements of each plant.

CULTIVATING THE SOIL.

The surface of the soil cannot be too frequently stirred. "If I had to preach a sermon on horticulture," says Downing, "I should take this for my text: 'STIR THE SOIL.'" As soon as the plants are well above the ground, they should be thinned out, so as not to interfere with each other's growth. At the same time, the soil may be loosened a little about them, so as to break any crust that may have formed, without injury to the young plants; and the weeds may be removed. A little later, stir the soil with a narrow hoe, taking care not to cover the young plants. Every weed should be cut down or pulled up, no matter how small. It is not enough to keep the weeds down; digging deeply among the plants admits the atmosphere, and actually manures the young plants. In dry weather, it is very essential that the soil be stirred often. The air waters the fresh-dug soil much more effectually than we can do. A man will raise more moisture with a spade and a hoe in a day, than he can pour on the earth out of a watering pot in a week. If the ground be suffered to become close and

compact, the cool surface exposed to the air for the reception of moisture is smaller, and what is deposited does not enter into the earth far enough to be appropriated; but if the soil be loose and porous, the air enters more deeply, and deposits its moisture beneath the surface. Almost any soil, in which a seed will germinate, may be made, by continued hoeing, to produce a crop. Above all, *cut away every weed that appears.* "One year's seeding makes seven years' weeding." The only use of weeds is to make a necessity of tilling the ground more frequently. Weeds will come up in spite of our care, but much can be done to prevent their spreading or maturing.

MANURES.

Anything, which, being added to the soil, directly or indirectly promotes the growth of plants, is a manure. Manures *directly* assist vegetable growth, either by entering into the composition of plants, or by absorbing and retaining moisture from the atmosphere, or by absorbing from it nutritive gases. Manures *indirectly* assist the growth of plants, either by destroying vermin or weeds, by decomposing in the soil, by protecting plants from sudden changes of temperature, or by improving the texture of the soil. The manure from cows and all animals that chew the cud, is considered cold, and suited to a light soil; that of horses, hogs and poultry is hot, and best suited to a cold, heavy soil. All new and fresh manure engenders heat during fermentation, and has a tendency to lighten the soil, while old, rotten manure is thought to render it more compact and firm. The manure of birds is richer than that of any other animals. Three or four hundred weight of the manure of fowls, turkeys, etc., is equal in value to from fourteen to eighteen loads of animal manure. Guano is a manure of this class. It is well to apply about two hundred weight per acre, with one-half the usual quantity of other manure. Guano should never, in a fresh state, come in contact with seeds or the roots of plants, as it is sure to destroy their vitality. A thick coat of hog-pen or barn-yard manure, spread on the garden and turned in every spring, will enrich, warm and lighten the ground better than any application of other manures. The principal animal manures are those of the horse, the dog, the cow and the sheep. Of these, the horse manure is the most valuable in its fresh state, but it should be exposed as little as possible, as it begins to heat and lose its nitrogen immediately, as may be perceived by the smell; mix it with other manures, and cover it with absorbents as soon as possible. That of the hog comes next in value, while the cow is at the bottom of the list. The richer the food given to animals, the more powerful is the manure. If animal manures are employed in a fresh state, they should be well mixed with the soil, and given to coarse feeding crops, such as corn and the garden pea; but nearly all plants do better if the manure is composted and fully fermented before use. Bone dust, mixed with ashes or pulverized charcoal, and sown broadcast over the ground at the rate of three bushels per acre, is very beneficial, and the most valuable for Turnips, Cabbages, etc., and the quantity needed for an acre is so small that the expense is less than almost any other application. Common salt, at the rate of six bushels per acre, sowed in the spring, on lands distant from the sea shore, not only promotes fertility, but is very useful in destroying worms and slugs. Marl, where it can be obtained, may be applied with advantage, especially to sandy soils. Soot is excellent to drive off insects and vermin. Very little of this can be obtained, but it should be carefully preserved, and applied in small quantities to cabbages, turnips, cucumbers, melons, squashes, and all plants infected with insects. Charcoal renders the soil light and friable, and gives it a dark color and additional warmth for early crops. When composted with night soil, it becomes *poudrette*, and is second only to guano as a fertilizer. Leaves, straw, and rubbish, thrown together, and moistened with a mixture of lime and salt, if kept damp until decomposed, forms the best known manure for trees and shrubs. Swamp muck, mixed with salt, lime, or leached ashes, is of value where it can be obtained, but of still more value is the leaf mold, or black surface soil of the woods. For the vegetable garden, it is best composted with fresh animal manure, but can be applied directly to most plants in the flower garden, many of which will not flourish unless this material is present in the soil. Tanbark, decayed chips, sawdust and shavings, covered with soil, are of great advantage to potatoes. Wood ashes, leached or unleached, may be used with decided benefit, as a top-dressing, to most growing vegetables, especially onions and

turnips. Plaster sown upon the growing crop, is good for turnips, cabbages, beans, cucumbers, squashes, melons, and all broad-leaved plants.

COLD FRAMES.

A cold frame is a simple construction of boards for planting out early in the Spring, cabbage, lettuce, cauliflower, brocoli, etc. Select a dry, southern exposure, form a frame from four to six feet wide, and as long as is required. The back should be fourteen inches, and the front six inches high, with a cross-tie every six feet. The soil should be well prepared and smoothly raked before planting. Admit air freely on all pleasant days, but keep close in severe weather.

HOT FRAMES.

In order to secure a supply of early vegetables, a hot-bed is indispensable. It can be constructed by any handy man, at a very small expense. It consists of a wooden frame, generally six feet wide, and from six to sixteen feet long, according to the supply of early vegetables required. One side should be at least six inches higher than the other—the frame sub-divided by cross-bars, and each division covered by a glazed sash; the sides and ends should be joined by hooks and staples, to admit of its being taken apart and stored away when not required. The frame should face the south or southeast. After completion, place it on the manure bed, prepared in the following manner: Fill in about ten inches of rich, pulverized soil: and allow it to stand a few days, giving it air by slightly raising the sashes, so that the fiery vapor, or steam may escape. The seeds of cabbages, cauliflowers, peppers, tomatoes, and other hardy varieties may be sown, and the plants planted out as soon as the weather begins to be warm.

PREPARING MANURE FOR HOT-BEDS.

Fresh stable manure, in which there is plenty of litter, is most suited for this purpose. There should be at least one-third litter in the heap. If this is not in the mass in sufficient quantity, add leaves or tanbark; shake it up, and mix it well together, adding water if at all dry and musty, and throw it into a compact heap to ferment. Let it remain a week, and then work it over thoroughly, as before, and add water, if necessary. Where the ground is quite dry, a very good method is to dig a space about eighteen inches deep, and put in the manure, tramping it firmly and evenly, and place thereon the frame or sash, and put in the rich earth, and, in about four days, sow the seed, having previously stirred the earth freely, to destroy the seeds of weeds therein.

TRANSPLANTING.

In transplanting, the main points to be regarded are, care in taking up the plants so as to avoid injury to the roots, planting firmly so as to enable the plant to take a secure hold of the soil, reducing the top to prevent evaporation, and shading to prevent the hot sun from withering and blighting the leaves. Transplanting should be done in the evening, or immediately before or after a rain. Give each plant a gill of water, and shade with a shingle.

WATERING.

The best time to water plants is at sunrise, or in the evening, and always use rain-water when it is to be had. If well water must be used, it should be exposed to the sun a day or two, till it rises to the temperature of the air, before it is applied. Water may be given to the roots at any time, but should never be sprinkled over the leaves in the hot sun, for it will make them blister and become covered with brown spots wherever it touches. If watering a plant has been commenced, keep on until the necessity ceases, or more injury than good will result from it; one copious watering is better than a little and often. The use of the hoe should always follow the water pot, as soon as the ground becomes dry.

ROTATION OF CROPS.

As different plants appropriate different substances, the rotation of crops has considerable influence in retaining the fertility of the soil. If the same kind of plants are continued upon the same soil, only a portion of the properties of the manure applied is used, while by a judicious rotation, everything in the soil or in the manure suitable for vegetable food, is taken up and appropriated by the crop. Another reason for a rotation of crops is, that some

crops are so favorable to weeds, that if continued long upon the same ground, the labor of cultivating them is much increased, while if raised but once in a place, and followed by a cleaning crop, the weeds are easily kept under. Again, many crops planted continually in the same soil, are more liable to be attacked by the insects which are the peculiar enemies of those plants; and different plants derive their principal nourishment from different depths of soil. Hence, deep-rooted plants, such as beets, carrots, parsnips, salsify, turnips, etc., should be followed by those whose roots extend but little below the surface, such as onions, lettuce, cabbages, cauliflower, spinach, etc. However plentiful manure may be, a succession of exhausting crops should not be grown upon the same ground. In these rotations, it is not necessary to apply manure to every crop; but for bulbous roots, as the onion, and plants cultivated for their leaves, as spinach and asparagus, the ground can scarcely be too rich, and the bulk of the manure may be applied to them.

UNDERDRAINING.

There are but few gardens in our country that would not be materially benefitted by being thoroughly underdrained with round, brick tile, two or three inches in diameter, laid say three feet deep, (we should rather say four. Ed) and from one to two rods apart, and inclined so as to carry off the surface water from the subsoil. The result would be that the ground could be worked earlier in the spring, the plants would resist drouth better, would not be injured so much by a wet season, and, as a rule, would double production. We have over 50 miles of tile laid on our seed farm, and think thorough underdraining one of the best investments a gardener or farmer can make.—From D. M. Ferry & Co's Seed Catalogue.

Bee Keeping.

Bee culture is now admitted, both in this country and in Europe, to be one of the most profitable of rural pursuits. Having practiced apiculture with success for many years in the most northern points of this Province, and watching as we have done for several years our brother bee-keepers of the States, who are far ahead of those in any country, we hope to be useful to our Canadian readers. In these articles, which will appear from time to time, we mean to be strictly impartial and to recommend nothing but reliable practices which are sure to interest bee-keepers, and we shall endeavor to be always as practical as possible, striving at being thoroughly understood by even the very beginners in apiculture.

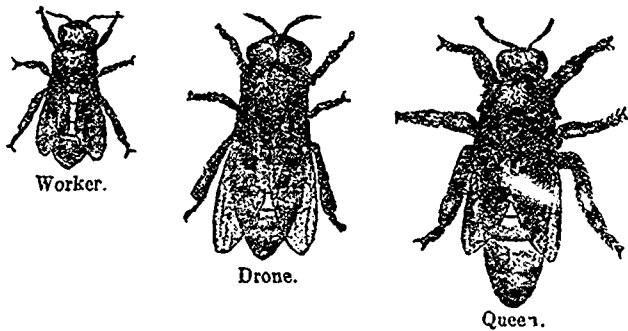


FIG. 1. (Magnified.)

The inmates of a hive are of three kinds. The Queen which deposits all the eggs, the working bees, and the drones or male bees. The working bees are imperfectly developed females. About six days after birth the queen leaves the hive for fertilization by the drone, which dies after the act of copulation. One impregnation of the Queen suffices to operate through life, which averages three years. She will sometimes lay from 2,000 to 3,000 eggs in 24 hours.

The workers being the most numerous.—averaging from 15,000 to 30,000, and in the swarming season sometimes 40,000—have but a brief existence, six weeks in the height of the season, and 7 or 8 months in winter. They perform the whole work: they cleanse the hive, feed the young bees, defend their home, and gather all the stores.

The drones are consumers only. They have no sting and may be taken in the fingers with impunity. They only help to insure the fertilization of the queen.

An egg is deposited by the queen in a cell; in three days it hatches into a small worm, is fed until about the ninth day, when the larva becomes a nymph and is sealed up in its cell, to emerge a perfect bee. The drones mature in 24 days, the workers, in 21, and the queen in 17 days from the laying of the egg.

Hives.

We shall in the forthcoming numbers illustrate the different hives in use in the States and in Canada, and especially those that seem to be the most fitted for our climate.

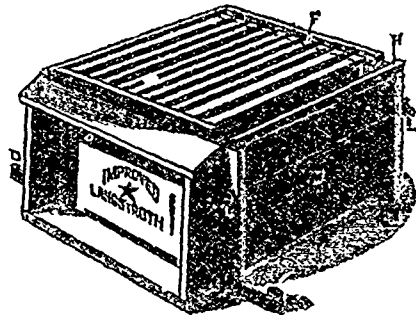


FIG. 3. Langstroth hive.

The time has gone by when a bee-keeper could succeed in making his stock profitable in hollow logs or in boxes, as they afford too many hiding places for the moth and its progeny of worms. A great revolution has been effected in bee culture since it has been found possible to so construct hives

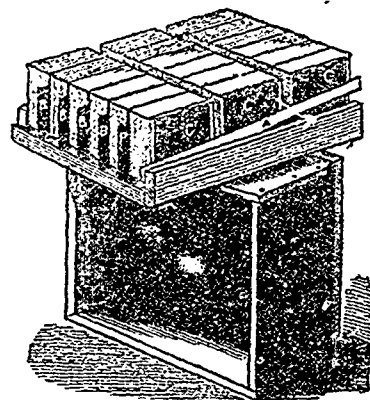


FIG. 3. Honey rack and 2 lbs. sections.

that every comb will be built and secured by the bees to a movable frame, so that each one or all can be taken out and examined, without danger of stings to the owner, or detriment to the bees.

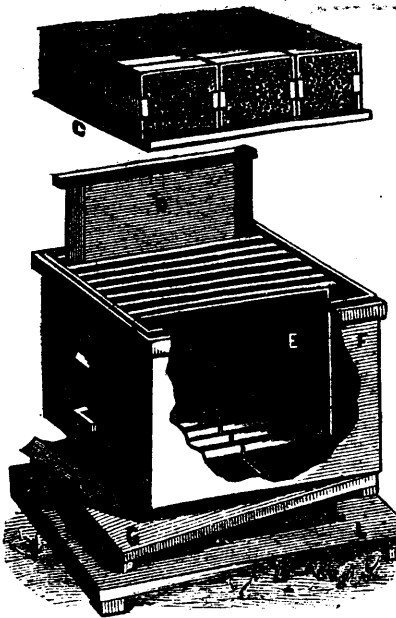


Fig. 2. Movable frame-hive.

good stock colony. A colony of bees in a movable comb-hive need never grow old, it is "a perpetual institution."

Questions and answers.—We shall at all times be happy to answer any practical questions our readers might wish to have elucidated through the *Bee* columns of this journal.

These frames have laid open all the internal economy of the bee-hive, and an intelligent use of them will always secure success.

By using such hives, the bee-keeper may know at all times the exact state of his bees and the amount of their stores. If they are weak, he can strengthen them by a comb of brood or honey from some other hive; if they are queenless, he can supply a new queen, make artificial swarms, raise choice queens, and in the fall he can unite two poor ones and make of them a

Timely hints.

Sow your wheat and oats as soon as the ground will harrow dry, the earlier the better. However, never harrow unless the dust flies around.

Remember that wheat requires a well beaten soil; therefore, harrow well and then roll heavily. A clod crusher does better generally than the smooth roller.

Grass seeds should be *brushed in*, or harrowed in with a light harrow. Sow them before the drought sets in.

Fodder corn will prove useful on most farms. Sow, three bushels to the acre, at various dates, after the warm weather has fairly set in. Many sow broadcast; we prefer sowing in drills three feet a part and highly manured. The horse hoe always helps on the corn crop wonderfully. Pearl millet and Early Amber Sorghum are highly spoken of both as forage and as sugar producing crops. Should you try them, do so carefully, and let us know in the fall, the results obtained. With green fodder, pastures need never be bare; therefore, cheese and butter makers should never be without it. When not wanted as summer food, it will prove useful in winter.

Hired men can now be had, the year round, for very nearly what a farmer has to pay for help through the busy season only. Take advantage of the hard times, and give work to the poor. There is hardly a single farm in this Province where an additional hired man could not be kept at profitable work the year round, by a little careful planning on the part of the proprietor.

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