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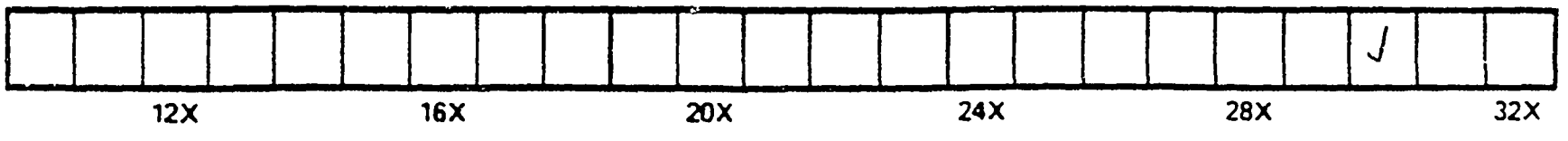

THE CANADA FARMER

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Manure Saving.

NEXT to the production of manure, a wise method of storing it and preparing it by due admixture, fermentation, &c., for application to the land, is important. As in money-making, so in manure-making, much depends upon a proper economy and judicious use of the wealth actually in hand. Manure is wealth without a figure of speech, and should no more be wasted and mis-applied than money. A very large per centage of the dung produced on the farm is often lost for want of a good way of hoarding it up until fit for use. Now we are not going to advocate an intricate and expensive system of pipes, pits, vats, cellars, &c., such as though proper and practicable enough in the case of an agriculturist like Mr. Alderman MECHI with plenty of money at command, and lots of time to spare for experiment-making, will not do for the ordinary farmer who, with small means, and pressed with work, must needs make the best of everything. But is it not possible to adopt some plan by which all the manurial substances within the farmer's reach may be carefully saved and made to go as far as possible? We believe it is, and with only such attention and labour as every one can bestow, great advantages may be secured.

Winter is the dung-harvest. It is then that stock is housed in stables and sheds, and the store of fodder and bedding consumed. Moreover, barnyard manure, made of as rich materials as possible, and well taken care of, so as to preserve its richness without loss, combines all the elements needed for plant-food. Whatever mineral and artificial manures supply, is found in greater or less abundance in ordinary dung. Some of its most valuable components are however extremely volatile in their nature, and readily pass off into the air, or are wasted away by the action of water. The admixture of suitable absorbents with animal droppings, is therefore the first precaution that requires to be taken. Bedding, while it adds materially to the comfort of housed animals, is not less valuable as a means of absorbing manurial moisture. Many farmers do not bed their stock, because they want their straw for food, and the result is not only a large amount of discomfort and filth — as benevolence to the brute creation disapproves, and neatness rebels against, but a degree of waste which upsets the supposed economy of this mode of doing things. For though pure droppings, sieved through sparred floors on which the unfortunate animals are gridironed, may be well saved on Mr. Alderman MECHI's plan, viz., by transference forthwith to an immense manure tank in which everything from a dead horse to a lump of fowl dung, is liquified, yet as ordinarily kept, if unmixed with straw or some other absorbent, much of its richness will escape. With due exercise of care, it does not require so large an amount of straw for bedding purposes as many think. Any farmer who has a horse-power, and will connect his chaff-cutter therewith so as to chaff his straw for bedding, will find his account in it, in the eking out of his straw-mow, and the more intimate mixing of the cut straw with the droppings. Another important matter is the saving of the liquid manure. A portion of this is secured when a liberal supply of bedding is provided. But a good deal is usually lost by draining under the stable floor or otherwise. Some simple plan of gutters leading to a suitable receptacle, would be found to pay. Or, if the farmer would store up saw-dust, spent tan-bark dried by exposure to air and sun in summer, thoroughly drained swamp muck, ordinary soil, or even sand, and scatter it daily so that it shall absorb the liquid droppings, he would gain immensely thereby. Forest leaves are also excellent for this purpose. They form, when decayed, excellent manure without the addition of any other substance, how valuable, then, must they be when saturated with liquid manure? Most Canadian farmers have a large proportion of bush land. How easy it would be to collect, just before winter sets in, a store of leaves for winter use in the way just named. The manure-yield of the stable, cow-shed, piggery, and poultry-house should all be hoarded with miserly care. Nor must another source of manurial wealth be forgotten, though it is usually allowed to be a nuisance instead of one of the feeders of the farm. We refer to human excrement. The privy should be so arranged, that its solid and liquid contents can be applied to the soil. It has been scientifically demonstrated that the solid and liquid fæces of every human being, properly husbanded and applied to the soil, are capable of producing food enough to support the individual for a year. One part of the urine of a man is equal to 13 parts of the manure of a horse, or 16 of a cow. A recent agricultural writer says: "The waste of a family of six persons, well saved and managed, will thoroughly manure two acres of land, and as the net value of the most valuable crops on well-manured land is at least $50 per acre, we have $100 as the value of the waste when this description of manure is thrown away" Offensive smells from human ordure may be easily prevented by the use of dry muck or plaster; also, by cheap chemicals such as copperas, sulphuric acid, Epsom-salts, chloride of lime, sulphate and chloride of zinc, &c.

Having thus indicated the first steps toward saving manure, the next thing is to point out how it may be husbanded until ready for use. If left to be exposed to the open air, and suffered to be drenched by rain, or parched up by the sun, serious loss must be the result. A trench or hollow in the ground, with a rough shed over it, would answer a good purpose. Better still would be a sort of cellar, stoned, boarded, or even logged round, with a floor of rammed clay sloping toward the middle from the sides. A roof of some kind is essential. The yield of stable, cow-house, sheep-fold, pig-sty, hen-roost, and privy, may all be thrown together in such a receptacle With a little contrivance, the buildings could be so arranged that the manure-house should be readily accessible from them all. To prevent excessive heating, plaster of Paris, swamp muck, ordinary soil, or turf, should now and then be added to the accumulating mass. All manner of refuse from the house, in short, every decomposible substance within reach, may be composted together. Such a building might not inaptly be termed the "manure-bank," into which deposits are constantly being made, and out of which wealth is drawn as required. Composting, mixing, completely rotting the entire mass before use, are highly necessary. The mistake is often made of hauling manure upon the land in an unripe state. To get it so fine as readily to intermix with the soil, and to destroy all noxious seeds, it should thoroughly ferment and decay down. But the best mode of applying manure to land is a wide question on which we shall enter hereafter.

Root Crops.

Now that we may reasonably suppose the mass of Canadian farmers to be revolving the questions, how best to lay out their farms, and what disposition to make of their fields the coming season, we desire to put in an earnest plea for the devotion of a fair measure of attention to the culture of Roots. The substitution in modern agriculture, of root growing for the system of naked fallowing formerly in vogue, has wrought wonders wherever it has come into effect. The simple formula—"grass, grain, and roots"—is an immense advance on the old one of "grass, grain, and fallow." Instead of leaving a field uncultivated for a time to be slowly re-fertilized by sun, wind, and rain, the best agriculturists of the present day secure the same result, with great advantage to themselves and their land, by the cultivation of a crop which does not require the same species of food, but can thrive on some of the materials left in the soil, and at the same time derive a large amount of nourishment from the air. Root crops fulfil these conditions. They search in the soil for elements not taken up by grain; while scientific experiments have repeatedly demonstrated, that by means of their long, broad leaves, they draw more largely on the air than on the earth for the material of growth. The discovery and practical application of these principles formed the turning-point of improved British agriculture, and brought about changes little short of magical in the farming regions of the old world. It is found that root crops restore fertility better than fallowing, give a greater return in value than any other description of product, provide an immense amount of fodder, and, what is of the last importance, increase the manure heap, both in bulk and richness.

But simple and self evident as these things appear when reflected on, it is obvious that they are too much overlooked. There is a great deal of old-style agriculture practiced still. By constant cropping with the same or similar products, much choice land is being rapidly exhausted, and many farms are be

coming so reduced, as to be scarcely worth tilling. Who is not familiar with that condition of soil which is indicated by the expressions, "worn-out," "skinned," "hard-run," and the like? To prevent this state of things, and to recover land that has been thus injured by injudicious tillage, farmers must have recourse to root-growing. Rotation of crops is the life of successful farming, and to have a really good rotation, roots must take their turn with other products. "Yet," says an American writer, "with all the light shed on root culture abroad, our agricultural newspapers contain every season accounts of some man's little experiment with half an acre of roots, and the wonderful profit therefrom, and to-day, any man who has two acres in roots is a wonder to his neighbours. The wiseacres dubiously shake their heads, while Englishmen have their 300 acres of roots." This is doubtless too true of many neighbourhoods in Canada as well as in the United States; but there are large sections of the country where the truth on this subject is beginning to be thoroughly understood, and the culture of root-crops is taking its proper place in the arrangements of the farm.

Turnips, mangolds, and carrots are the leading crops of the root kind which it is desirable to grow. While the two latter are valuable products, and well deserving of the farmer's attention, the turnip is especially worthy of culture. Its hardiness, its feeding properties, the readiness with which it may be kept through the winter, and particularly the time for sowing and harvesting it, are strong recommendations of it. Spring is a very hurried season in this country; but turnips do not require to be sown until the labours of spring are finished. This gives breathing time, and affords opportunity to prepare the land thoroughly—a very necessary point. Then, again, in the Fall, which is only second to spring in the pressing nature of its duties, the pulling and housing of the turnips may be deferred until every other crop is secured. From the fact that seed-time for the turnip is late, the excuse is often made for not sowing, "My ground is all full." This is seldom strictly true. There is usually some neglected corner on the farm—a bit of summer fallow, which could soon be got ready, or some little clearance near the bush, which could easily be burnt off and cleared up for a turnip patch; or the barn-yard is far larger than necessary, the lane four times too wide, or space enough is wasted elsewhere sufficient to raise a supply of roots such as would greatly help to eke out the winter stock of hay, and keep the cattle in vastly better condition than they usually are. By bespeaking attention to this matter, now that the work of the year is still prospective, we hope to prevent the land being all devoted to other things. Let every one of our readers resolve to have a good-sized and well-tilled turnip field this year. Choose the mellowest piece of ground at command, pulverize it well by repeated ploughings and harrowings, manure it thoroughly broadcast and in the row with well-rotted dung and bone-dust, obtain in time the best seed, sow it carefully, thin and hoe the plants well, and not only will the crop amply reward your toil and outlay, but the ground will be left in such a state for a succeeding crop of grain, as will make you wish your entire farm were a turnip field.

Cultivating Potatoes.

A long letter under the title of "Precautions in Cultivating Potatoes," has reached us from Col. E. G. O'Brien, of "The Woods," which we would gladly publish in full did our space admit. It is an able criticism on a recent article from the Belgian *Journal of Agriculture*. Col. O'Brien, as his conclusions on the whole subject, recommends—

1st. Planting not later than the 25th May—better by the 20th.

2nd. Following the known rule that "like begets like," select tubers of a full, fine growth, rejecting the smaller ones, and bearing in mind that the very large are apt to be hollow.

3rd. Cut the sets so as to leave two, or at most three, eyes in each, well spread, rejecting rather than retaining the crown, if it does not cut up well; selecting, if the eyes are sufficiently swelled to show it, those with large full ones.

4th. When cut, roll the sets in plaster.

5th. Change seed with a distant farmer, or country where you can.

6th. All other matters, not of cultivation, are matters of convenience.

Col. O'Brien thus concludes his letter:—

"That the potatoe, as a crop, has generally deteriorated must be admitted; that is to say, the yield has been generally less, and the quality often inferior, and some of our best kinds, the "pink-eye," for instance, appear to be running out. But I doubt very much whether the potatoe, as a plant, has deteriorated. I mean that there are still to be found in the country as fine potatoes as any hitherto grown. The terrible disease which has lately affected the plant, and at one time nearly exterminated it, must necessarily have left its mark, and had an injurious effect. But now that the cause of the disease is ascertained, there is reason to suppose that fair care and cultivation will not only very rapidly bring the potatoe crop up to its old standard, but with our generally better farming, to a much higher one. To obtain this end, let not the farmer run off on a wrong tack, or follow theories, calling themselves science, until he knows more about them; but rather follow that course which the practical experience of years recommends, taking the aid of science as explanatory of much that he does, as well as much that he wants, and giving valuable hints and information as to future progress, but as it comes to us commonly but half fledged, refusing it as an infallible guide until experience has tested its practical application."

Deterioration of Soils.

Dr. Daubeny, Professor of Rural Economy at Oxford, recently delivered a lecture before the Oxfordshire Farmers' Club, on "The supposed deterioration of the soil of Great Britain through the exhaustion of its vegetable mould." The Professor remarked that his attention had been drawn to this subject by the perusal of a communication in the *Times* newspaper. In this communication the impoverishment of the land, and the consequent decline and ultimate ruin of the country, were predicted from the gradual diminution and final exhaustion of its vegetable mould. A leading article was also devoted to the subject, in which, without precisely adopting the views of his correspondent, the journalist seemed to adopt the idea that the earth was becoming effete, and that the gradual decrease of vegetable mould was the chief cause of the apprehended ruin. Now this erroneous conception of the causes of the sterility of soils arises from a revival of the exploded notion that vegetable mould serves the same office to plants which vegetable food does to animals, and consequently that when that storehouse which had been filled by the *débris* of former generations of plants is once consumed, the crops must infallibly fall off, owing to the deficiency of the necessary provender.

Dr. Daubeny very fully discussed the nature of *humus*, or vegetable mould, and showed that the elements of fertility in it were originally derived from plants, and hence argued that they will be reproduced in sufficient quantity wherever vegetation is proceeding in a vigorous manner. He therefore regarded the fears as to ultimate exhaustion of the soil by drawing too freely upon the vegetable matter, as chimerical. Decline of fertility wherever apparent, has arisen from causes which are capable of removal. A recent writer on Japanese agriculture remarks that the empire of Japan covers an area about equal to Great Britain and Ireland, and that owing to the hilly nature of the ground, not more than one-half is fitted for tillage. Nevertheless its population, which is greater than that of the British Islands, is maintained exclusively by the produce of their own land, whereas Great Britain annually imports corn from other countries to the extent of many millions. This fact alone is sufficient to falsify those theories which attribute the falling off of our crops to the exhaustion of the natural humus.

In speaking of the means of restoring the materials consumed by preceding crops through the aid of manures, the Professor says:—"The soundest and most efficacious method of effecting this object is the one in use from time immemorial in China and Japan, where human excrements are employed almost exclusively for the purpose of replacing what had been removed by the crops which afford subsistence to man." He styles this "the most unfailing recipe," and contends in the strongest manner "that the only method of maintaining our land for an indefinite period in a condition of undiminished fertility is by availing ourselves of the excrementitious matters not only of cattle but also of man, and in taking advantage of the latter by not allowing that derived either from the country or the town population to run to waste."

The Prime Principles of Agriculture.—1. The soil ought to be kept dry; or, in other words, free from all superfluous moisture. 2. The soil ought to be kept clean; or, in other words, free from noxious weeds. 3. The soil ought to be kept rich; or, in other words, every particle of enriching material which can be collected ought to be applied, so that the soil may be preserved in a state capable of yielding good crops.—*Farmer.*

Good Flax Crop.

We are indebted to Mr. Sheriff Treadwell for the following memorandum respecting a crop of flax raised the past season by James D. Mills, Esq., of Vankleek Hill:—

"Sowed on 1½ acre of land (loam approaching to clay) with a slight depth of black mould on the surface, well manured with compost of leached ashes and barn-yard manure, ploughed-in in the fall and ploughed again in spring, 2 bushels flax-seed (grown from the Riga seed.) The produce was 29½ bushels seed which sold for $53 91. Of fibre—It is highly probable from the best estimates that could be had under the circumstances that there was not less than four tons—being fine and of extreme length."

Mr. Treadwell states that he has personally examined the flax straw and considers the quantity underrated at *five tons*. Taking it however at this moderate estimate, and supposing it to be dew-rotted by the grower, it would fetch $50, which would make the entire yield of the acre and a-half $103 91.

We shall be glad to chronicle other facts of a like nature.

Onions.

Mr. Meeker, of Westport, a famous cultivator of the onion crop, thus describes his mode of raising onions:—

"Our mode of preparing the ground is, as early as practicable in the spring, to cart on about 20 tons of manure to the acre, having previously had it thrown into a heap, that it may be well heated, and thus kill all noxious weeds. After spreading, we plough it in, turning it under so deep that the harrow will not draw it to the surface. If it will not turn under readily, a man, following the plough, pushes it into the furrow. We next cover it thoroughly with a wooden-toothed harrow, then use the brush, leaving the ground in good order for raking, which is done with a common wooden hay-rake. We then sow from 3½ to 4 pounds of seed to the acre. When the onions are up, we commence hoeing, and the weeding follows, which is continued at regular intervals, as long as required. In September, the tops become dry and fall, when onions should be pulled and spread on the ground, separating the green ones from the dry. The latter should be raked into heaps, after a few days; for, if allowed to remain too long exposed to the sun, they will assume a dull-red color, and be liable to injury. When well cured, remove them to a building for the winter, where they should be spread upon a platform, about a foot from the floor, giving them air when the weather will permit. In topping them, cut about an inch from their bulbs. Hog-manure and wood-ashes are the best fertilisers for this crop."

☞ A little sand
Improves clay land.

Salt on Land.—It begins to be understood by those who have practiced it, that salt sown broadcast at the rate of about two bushels to the acre is a benefit. Especially is it good for wheat. Like lime it is lasting, and need not be repeated every year.

☞ Few farmers are aware that in feeding turnips they thus more effectually rot their manure, the pectic acid of the turnip having an effect upon straw, which water alone will not dissolve. To mix turnips with straw when fed, has a still greater, a more direct effect.

An Example.—The *Genesee Farmer* says: A day or two since, we were on the farm of John Johnston, of Geneva, N. Y., the noble old farmer of underdraining celebrity. He remarked: 'The wheat midge never did me much damage.' For thirty years he has fed out large quantities of oil-cake, corn, &c., to cattle and sheep on his farm. He has used more or less lime and any quantity of plaster. He has raised immense crops of clover, and made it into hay, and fed it out to sheep. In this way he has made his land rich. At the same time he has tile drained every field on the farm, or, we might say, every rod. He has laid over fifty miles of under-draining tile. His land is dry, rich and well cultivated, and the 'midge never did him much damage.' No wonder that he is the great American apostle of high farming.

CLOVER-SICK FIELDS.—The question of clover-sickness has engaged the attention of vegetable physiologists, chemists and practical farmers. The explanation given by Liebig, however, is apparently the only rational one. He shows from the experiments of Mr. Lawes that the common red clover, owing to the character of its roots, which descend into the subsoil, and from which it derives the greater portion if not the whole of its food after it reaches the subsoil, fails when that subsoil does not contain those constituents which it requires. Mr. Lawes endeavoured to show that it was not a question of manures, as they had applied the ash constituents to a portion of a field which was sown and ploughed down; but Liebig explains the apparent failure—that the corky nature of the upper parts of the roots of the clover prevents the absorption of food except at the extreme points of the roots, fibres ramifying through the subsoil; and that while the surface soil contained all the elements which the plant required, so soon as the roots of the clover descended below this, the plants were starved and necessarily died. This is further elucidated by experiments with clover in a garden plot, conducted by Messrs. Lawes and Gilbert. On the deeply-stirred and rich garden soil, the clover-plants continued to yield abundant crops of clover year after year, and without any apparent diminution of produce or any apparent tendency to the plants dying out.—*North British Agriculturist.*

THE CANADA THISTLE—*Cirsium arvense.*—This is a formidable weed in two respects. It spreads extensively by seed, and the roots being both perennial and creeping, the plants quickly extend into patches beneath the surface. The roots have been sometimes found several feet below, in porous subsoils; and as the fragments of roots are sufficient to produce new plants, it was formerly supposed to be incapable of eradication, without digging out every portion, which, in a large patch, would involve immense labour. This opinion has now been found to be fallacious, and by the observance of a simple principle, the whole subterranean net-work of roots may be easily destroyed. *The roots cannot live, unless they breathe through their lungs, the leaves.* Keep the portion of the plants above ground from growing, and the whole patch may be destroyed in a single year. This may be accomplished in several ways. Small patches may be smothered by covering them with boards, closing the joints with a second layer, to prevent a single plant from finding its way through. Sawdust, tan or straw, will accomplish the same end, if laid on thick enough. If a single plant, however, escapes, it will sustain life in a portion of the roots. Another way is to cut the plants off daily even with the surface of the ground, so that a single leaf cannot grow. The best way for common practice is to plough them under, and continue the ploughing often enough to keep them smothered. If well and deeply done, once a month will answer the purpose. This mode succeeds best on heavy or clayey soils, which do not permit the thistles to find their way readily upwards. But even on such soils, the work must be very carefully performed, for if a portion of the weeds are but partly covered, they cannot be destroyed. On gravelly and other porous soils, it is more difficult to destroy them by ploughing. The operation must therefore be more frequent on such soils, and greater care taken to do it deeply and in the most thorough manner. The Double Michigan plough will be found to answer an excellent purpose on these as well as all other kinds of soil.—*Country Gentleman.*

TWO WHITE CROPS IN SUCCESSION.—Prof. Anderson, in an address on the "Rotation of the Crops," before the Highland and Agricultural Society, remarked, that as to the "growing of two white crops in succession, it may not generally be economically advantageous to do so, but by proper manuring it is perfectly possible to obtain two successive wheat or barley crops in the same soil, and this is even sometimes done, although I need scarcely say it is not considered good farming." Whereon, the *North British Agriculturist* makes the following comments:—"The opinion of many skilled agriculturists is, that two white crops in succession is not bad farming if the land is clean, and otherwise in a suitable state for growing full crops. The practice was at one time much more common than it is at present, but with the relative prices of wheat and barley it is probable it will be resumed by many farmers. The taking of a crop of barley after wheat, and thus changing a four or six-course of cropping to a five or seven-course rotation has much to recommend it to those who occupy lands which are what is termed clover-sick, and also lands where the turnip or other green crop is liable to become diseased. By a recent decision in the Court of Session, a tenant was interdicted from sowing oats upon a field from which a crop of oats had been grown the previous year—it being the opinion of the judges that the taking of two white crops in succession was bad farming. In the event of the question being again raised in Court, the opinion of practical farmers should be obtained. It may be instructive to know, notwithstanding the opinion of the chemist of the Highland Society, that the finest samples of wheat and barley have been obtained from lands the previous crop upon which were white crops. In the department of the International Exhibition of 1862, most of the beautiful samples of grains shown in the Victorian department were stated to be from lands the previous crops, of which were white crops, the wheats being either the second or third wheat crop, or wheat after oats. No doubt these Australian soils are virgin soils; still, with the fertility maintained by manures, there is nothing in practice, taking success as the criterion, to condemn the taking of two white crops in succession."

ALSIKE OR HYBRID CLOVER.—Some ten years ago an attempt was made by one of our principal seedsmen to introduce alsike clover into general cultivation, but without success; at least, we have not heard of its having been grown to any extent by any of our farmers. Within a few years past, it has become a great favourite with English farmers, and is likely to supersede the common red clover entirely in that country. The alsike clover is a native of Southern Europe, though its field culture was first practiced in Sweden. It was introduced into England in 1834, by Mr. George Stephens, under the name of alsike clover, for which that of *hybrid* clover has since been substituted, though botanical investigations have clearly proved that it is not a hybridal production. This idea of its being a hybrid, arose from the resemblance of the head or flower in size and colour to the (*T. Repens*) white clover; while its habits of growth resemble more the common red clover (*T. pratense.*) Its seeds are smaller than those of white clover, differing essentially from them in colour also, being of a dull olive green. The alsike clover is a perennial. Its leading characteristics, as set forth by English agriculturists, are:—

1. That it is more permanent in duration than common red clover, or any of its varieties.
2. That from having more flowers, or less deeply penetrating roots, it is not so well adapted as the common clover to resist the effects of long-continued droughts.
3. That on *clover-tired* soils it will thrive well.
4. That it will not, on good clover lands, produce as great a weight or bulk of produce as common clover.
5. That it far surpasses white clover in the weight and bulk of its produce.
6. That, compared with the white clover, it is more keenly sought after and eaten by cattle, sheep and horses; hence it may be inferred to be superior to it in nutritive and feeding properties.

From the foregoing, we are led to think that it might be cultivated with profit in the United States. While it may not, perhaps, produce, acre for acre, so large a yield as our red clover, still, if cattle eat it more readily, and if it possess greater nutritive powers, together with the important advantage of being a perennial, it certainly has strong claims to attention.—*The Culturist.*

The Apiary.

EVERY hive contains three orders of bees, the queen, the workers, and the drones. They are easily distinguishable from one another, as the cut accompanying this article will show.

There is but one Queen in a hive. She may be readily identified by her having a longer body than the rest, and also by her colour which is darker on the upper side, while her legs and the under side of her body are rather yellow. She is the mother of the entire family, and her sole duty seems to be to deposit eggs in the cells

The drones are males and vary in number from a few hundreds to a few thousands per hive. Their number depends not only on the size of the swarm, but on the yield of honey. When honey is abundant they are numerous, but as it becomes scarce they are destroyed. Their bodies are large and clumsy, and covered with short hairs or bristles. They are—

"The lazy fathers of the industrious hive."

The workers are females with undeveloped ovaries, and vary in number from 5,000 to 20,000 according to the size of the hive. They are armed with a sting which while it inflicts a wound, deposits a poisonous fluid The queen bee also has a sting, but only uses it to slay rival queens. The drones have no sting. All labour devolves upon the workers

QUEEN. WORKER. DRONE.

Their duties are various, and they perform them with wonderful system, regularity and diligence. "They range the fields for honey and pollen, secrete wax, construct combs, prepare food, nurse the young, bring water for the use of the community, obtain propolis to seal up all crevices about the hive, stand guard and keep out intruders, robbers," &c. When swarming takes place, it is the old queen who leaves the hive, and leads off the emigrants to form a new home.

219 Acres Earned by Bees!

To the Editor of THE CANADA FARMER.

SIR,—I was much gratified when the prospectus of the CANADA FARMER appeared. I have reason to look upon agricultural papers with special favour, having derived great benefit from them in the matter of bee-keeping.

Settling in this place on the 4th of June, 1843, I found that all the bees belonging to my predecessor had died the previous winter. After making some enquiry, it was ascertained that an Indian woman had found a bee-tree during sugar-making. This was immediately purchased, and an old hive altered to the proper size. Equipped in bee-hunting style, axe, smoking materials, hive, &c., in a canoe an Indian boy and myself descended the river two miles for the tree on its bank. Being small, it was soon felled favourably, crushing none of its unfortunate inmates. There were young, unhatched queens in the comb. The whole contents were soon placed in the hive, and, after being well secured in a sheet, placed in the canoe for a voyage up stream. No sooner was the hive put on its stand than the little inmates, forgetting their rude extradition, sallied forth in quest of subsistence What a lesson to those who have had misfortunes! Now, at the commencement of 1864, I can point to the proceeds of their assiduity in the shape of two hundred and nineteen acres of land in a favourable locality.

J. V.

Moraviantown.

NOTE BY ED. C. F.—The author of the above letter is well known to many of our readers. They will need no voucher for the truth of this statement, but for the benefit of others we may say that we have personal knowledge of its accuracy.

EFFECT OF ICE OR FROST ON BEES AND COMB.—When the bees are not smothered, this water in the hive is the source of other mischief. The combs are quite certain to mould. The water-mould or dampness on the honey renders it thin, and unhealthy for the bees, causing dysentery, or the accumulation of fæces that they are unable to retain When the hive contains a very large family, or very small one, there will be less frost on the combs,—the animal heat of the first will drive it off, in the latter there will be but little exhaled.—*Quinby.*

☞ A correspondent of the *Illinois Farmer* recommends all bee-keepers to sow a few acres of Alsike or Swedish white clover. It is excellent for the bees, while it makes the best of hay.

Sheep Husbandry.

"Blocking" of Sheep.

To the Editor of THE CANADA FARMER.

SIR,—Allow me to call your attention to a rule lately adopted by the "Royal Agricultural Society" in Britain regarding the *Blocking* of Sheep, and clipping them out of season. It shows that this unfair practice (it might be called by a much harsher term) is not confined to the Province of the Atlantic. Were this rule to be adopted by our Provincial and County Agricultural Societies, it would be most beneficial in its effects, as there would then be much more probability of an animal being judged upon its real merits. The rule is as follows:—"Sheep in future are to be really and fairly shorn bare after the 1st of April, and the date of shearing is to form part of the entry certificate. Two inspectors are also to be appointed to report any cases in which the shearing rule has not been properly complied with. At the annual meeting of the South Waterloo Agricultural Society this year, a member remarked that a spring show of Rams, at which the animals should be shorn in presence of the judges, would be the most effectual means of finding out the best animal, but it did not seem to find much support, whether from the fear of the expense necessarily attending it, or the fear of breeders to put their animals to such a severe test, or the lateness of the hour at which it came on I cannot say.

Trusting that this communication will awake parties interested to move in this matter,

I am yours, &c.,
DUDINGSTON.

South Dumfries, Jan. 23, 1864.

Buckwheat Unfit for Sheep.

To the Editor of THE CANADA FARMER.

SIR,—In the fall of 1862, we went into winter quarters with 48 French and Spanish Merino Sheep, and 10 common grade sheep, all of which were in good (*store*) condition. We kept them in the basement story of a barn 40 × 53 feet, which was very comfortable with good racks, &c. In the early part of the winter we fed pea straw, wheat straw and corn stalks; and having over 400 bushels of buckwheat to thrash in that barn, about mid-winter we commenced thrashing it with the *flail*, and as feed was supposed to be very scarce, we thought it necessary to save every ounce of feed, and therefore began feeding buckwheat straw, and occasionally we would feed stalks and pea straw; *but our sheep would leave both and eat the buckwheat straw in preference.* Consequently we gave our sheep what buckwheat straw and chaff they could eat for six or eight weeks; and during this period all seemed right, until the fine warm days in April, when we observed one sheep after another would leave the flock and appear stupid, not appearing to recognize the flock, or anything else, and perhaps the next day we would find one dead; then another, and so on. It now became necessary to ascertain what the disease was, and I consulted "Youatt on Sheep," "R. L. Allen's diseases of Domestic Animals," "Rural New Yorker," "Genesee Farmer," &c., but could find no light thrown on the matter. We did not know what treatment to follow. The sheep were getting worse every day. Nearly all the flock showed signs of the malady. They became bloody about the forehead and neck, the wool and skin having been rubbed from their necks, foreheads and legs. One of the sheep rubbed so close as to spoil the sight of one eye. They kept dying one after another in this way until we had lost 20 of the Mermos, and 9 out of 10 of the grades. We now changed our feed to carrots and turnips, and gave frequently plenty of *salt and ashes*. I with a good deal of care and trouble we saved the balance of the flock, but they did not entirely recover from the malady until about the first of July.

I have had sufficient experience with buckwheat straw. I imported these Merino sheep from Niagara Co., N. Y., at a pretty high figure, and if I only had had the good fortune to profit by another person's experience, I should have been better pleased. But one man's loss is another man's gain, therefore if any person profits by my loss or experience, I ought to be satisfied.

I am Sir, yours truly,
JAS. H. PECK.

Albury P. O., Co. Prince Edward C. W.,
January 25, 1864.

☞ To young men entering upon the sheep business, I offer the following practical observations:—

1. Begin with a few common ewes, and improve by using the best bucks.

2. Keep no more sheep than you can keep well the year round.

3. Tend them carefully, thus losses other than by accident will be avoided.—*Cor. Stock Journal.*

HOW TO CATCH SHEEP.—Never seize them by the wool on the back. It hurts them exceedingly, and in some cases has been known to kill them, particularly in hot weather, when they are large and fat. The best way is to avoid the wool altogether. Accustom yourself to catch them by their hind leg, or, what is still better, by the neck, placing one hand under the jaws, and the other just back of the ears. By lifting the head in this manner, a child may hold almost any sheep, without danger to the animal or himself.

BARLEY FOR SHEEP.—Barley is suitable for sheep of any age, but a mixture of barley, beans, or peas, or tares, or lentils, is to be preferred to barley given alone. One lb. per day for each sheep is usually given, although some farmers allow at the rate of two lbs. per day to aged sheep. In some of the best farmed districts in England, light barley with a small quantity of beans is extensively used for feeding sheep. Sometimes oleaginous cakes are added to the mixture. If you can obtain lentils at moderate rates, use this grain to mix with the barley; also rapecake of good quality. The dentition of sheep is so usually good that they are enabled to grind such small seeds as flax seed. Grain should therefore be given whole. —*North British Agriculturist.*

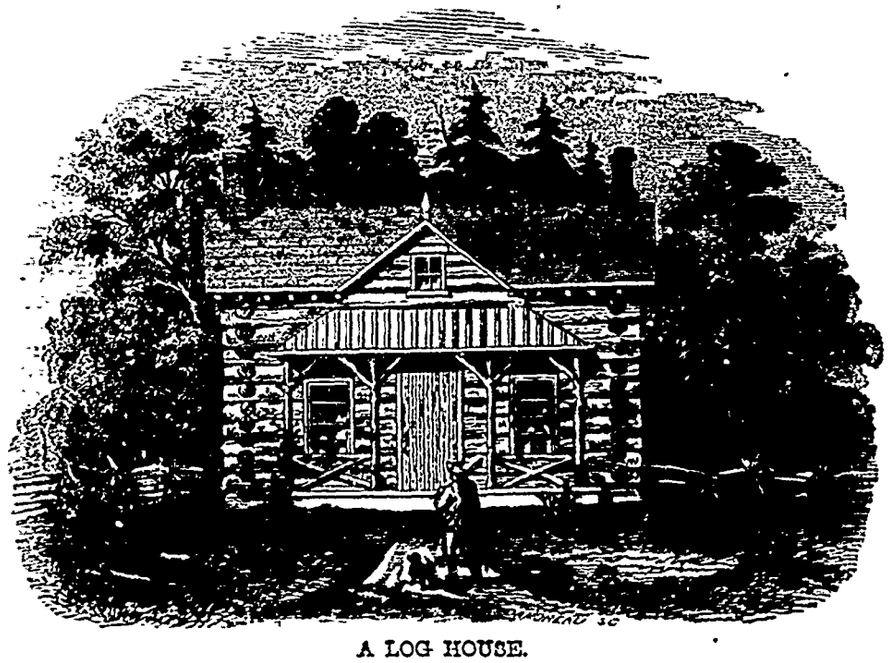
THE AMERICAN SHEEP INTEREST.—The great agricultural interest of America at the present time is that of sheep and wool. Everything seems to tend to enhance their importance and increase their value in our markets. While the supply of American wools is by no means commensurate to the demand, foreign wools are greatly enhanced by the high price of gold which must be had to pay for our imports; mutton, too, is being sought for as an article of food more than formerly, notwithstanding its greatly increased price. The high price of cotton of course has its effect upon wool, and although it has reached the high rate of from 80 to 90 cents per pound for good clean lots, we shall not be surprised to see it go still higher, before the next clip.—*N. H. Journal of Agriculture.*

A GOOD SHEEP CROSS.—The attention of the readers of the *Farmer* has been called to the importance of crossing the common blackfaced ewes with the Shropshire ram, as productive of a description of sheep which pays the breeder and pleases the consumer. The pure Shropshire is acknowledged by all who know it to be first rate for the production of well-mixed mutton, and the value of the cross of it with the blackfaced has been proved at Dublin by the fact that the same money was paid for a pen of the cross-breeds, as was paid for a prize pen of pure Shropshire wethers, both pens being sheep of the same age—two shear—both bred by the same gentleman, on the same farm, and both fed in the same manner. The price paid in each case was £4 a-head. The dams of the crosses were bought at Falkirk, and cost probably 15s. or 16s. a-piece.—*Scottish Farmer.*

Farm Architecture.

A WISE man, before commencing to build a house, will sit down and count the cost; he will ask himself, Where shall I build? What accommodation do I require? How much can I afford to lay out on my house? If his means are limited, he will attempt no ambitious imitation of a particular style, and will not impose upon the public with spurious examples of Italian or Gothic castles. No, he will endeavour to give a cheap cottage a tasteful and truthful appearance. He will have no showy ornaments and expensive carving on the exterior, while the interior is badly planned, meagre and poor. His cottage will be well planned and tastefully built, so that every part wil bear the impress of refined judgment, and will afford quite as much pleasure in its way as a spacious mansion; although not the same kind of pleasure, it will be perfect of its kind. The selection of a situation for a house is of the greatest importance. The character of the soil and subsoil should receive attention. The site for a dwelling should never be selected where the subsoil is wet and spongy, unless it can be perfectly drained.

The best aspect for a house in any country is that fronting the south-west. In determining what kind of a house to build, all builders agree that a simple square is the most inexpensive; the next form an oblong. The cost of a building is much increased where an irregular plan is adopted, although the irregular plan has many advantages, which will be shown hereafter. Those who desire to combine economy with good taste in building, should adopt a rectangular plan as capable of being cut up the best advantage, combined with a pleasing exterior. Having these objects in view, we proceed to give the first of a series of illustrations, in the shape of

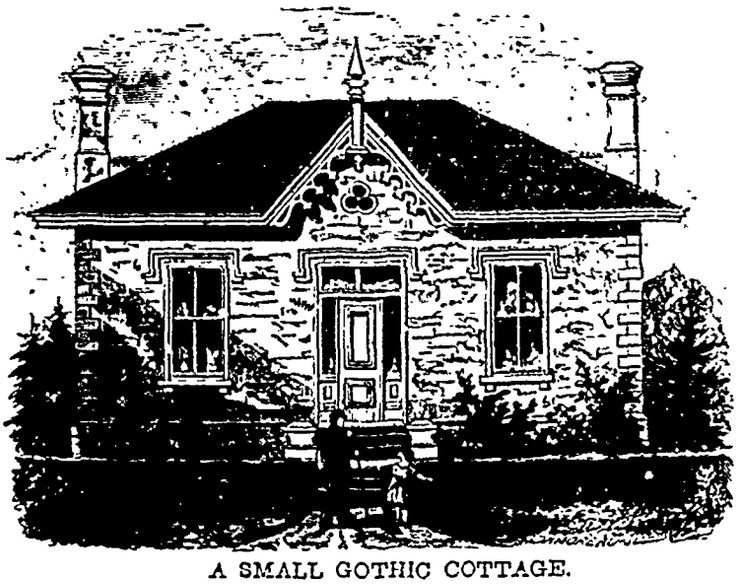


A LOG HOUSE.

This figure shows how a simple log-house can be made tasteful, and even ornamental, by raising a small gable over the front door, building a neat chimney at each end, and adding a rustic verandah

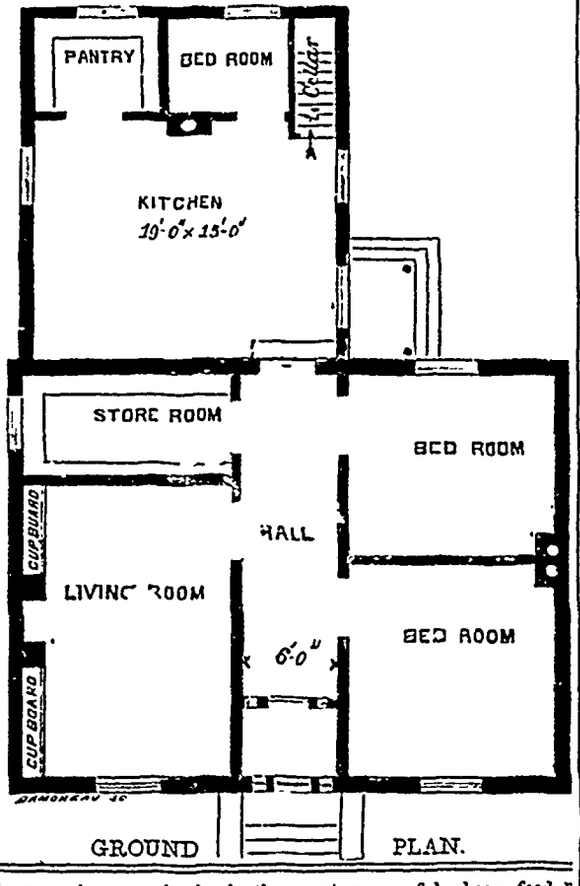
with cedar posts and railing. The ends of the logs are sawn off square, and the tops and bottoms dressed off straight; they are then halved into one another and pinned. They project about 18 inches from the corners.

The second illustration we give is—



A SMALL GOTHIC COTTAGE.

This building can be constructed with stone, brick, or timber. It is a dwelling suitable for a small family, the main building having a hall six feet wide running through the centre and entering the kitchen; on the left side of this hall is a large living room or parlour, 11 x 19, and store room, 14 x 7; on the right are two bedrooms, one 13 x 14 and the other 11 x 14; in the rear addition is a large kitchen, a pantry and bed-room. From the kitchen is a stair leading to the dairy and cellar, which should either have a brick or concrete floor, laid with a fall to the drain. If the kitchen flue is brought down to the cellar, it will materially assist in its ventilation. The walls of the cellar to the ground surface should be built with stone laid in water-lime mortar, and be at least 18 inches thick. None of the ceilings of the rooms should be under 10 feet high. The manner of laying out the interior may be as in the following figure:—



GROUND PLAN.

The second figure shows the front elevation of the cottage which is situated on a raised terrace, and built with red brick, with white brick corners. The window-sills and the drips over the front door and windows, could be of dry pine, painted and sanded, but stone would be better. A small gable is raised over the front door, surmounted with a turned pinnacle, and having a simple piece of tracery fastened to the under side of the cornice, and in the centre of this gable is a small trefoil window to give light and ventilation to the garret. The roof should project at least two feet over the walls, having tin eavesgutters and down pipes to carry the rain water to the cistern. The shingles should be of dry pine, laid on four inches to the weather, and bedded in good hair mortar. The walls, if built hollow, a brick and a half thick, would be very dry and warm, and require no lathing on the interior surface. Round flues of glazed tile are much better than square brick flues, as they are safer from fire, and do not require sweeping.

The cost of a cottage of the above description would not exceed $1,000. If built of timber, and boarded perpendicularly, or rough-casted on the outside, the cost would be about $750. It must be borne in mind, however, that estimates are governed by the style of finish and the price of material in a given locality.

Size of main building, 36 x 28. Kitchen extension, 21 x 22. Scale, 12 feet to the inch.

IMPROVED FARMING IN ALBANY COUNTY, STATE OF NEW YORK.—A friend of ours, in this county, began farming some 20 years ago. His farm would then produce 20 tons of hay for sale, and eight for home consumption. This present season he *has sold forty-three tons*, and has enough left to winter 675 sheep, with his farm horses and other stock. The size of the farm, we believe, is about 100 acres. Its productiveness has been increased by the system of stock feeding we have so long advocated, together with draining where most necessary. The number of sheep mentioned above, are fatting for the late winter or early spring market. Notwithstanding the high price of Indian corn and all feeding material, and the tempting inducement to sell more hay, when it commands $22 or $23 a ton, the sheep will be fed as freely as ever. There is no success in half-way work, as our friend understands; and the consequence is, he is the most successful sheep feeder within our acquaintance in this or any other State.—*Country Gentleman.*

CLIPPING SHEEP FOR EXHIBITION.—This has grown into a great abuse in Great Britain, as well as, to some extent, in this country; and at the meeting of the Council of the Royal Agricultural Society, Dec. 9th, the following regulations were adopted: 1 That sheep exhibited for any of the prizes must have been really and fairly shorn bare after the 1st of April in the year of the exhibition; and that the date of such shearing form part of the certificate of entry. 2. That two inspectors be appointed by the council to examine the sheep on their admission to the show-yard, with instructions to report to the stewards any cases in which the sheep have not been really and fairly shorn bare.

The Breeder and Grazier.

The Horse.

THE introduction of *pure blood*, when judiciously managed, will be productive of good not only to the carriage, but also to the farm horse. But judgment and great caution are necessary in considering the points and qualities of a blood stallion before he is admitted to mares whose progeny is intended for the saddle, the carriage, or for the heavier work of the farm. Let his shape and qualities be good, bad or indifferent, the stallion which possesses a sprinkling of blood is almost sure to be the animal which will be selected. His light action, showy appearance, and high sounding pedigree, will be a sufficient recommendation to those who are ignorant of the various *points* and *qualities* which are connected with the strength, substance, durability and disposition of the animal. Besides, the same horse is certain of being put to a great number of mares of all sorts, shapes, and sizes, without the slightest regard to that exact adaptation of form, in sire and dam, which is absolutely necessary in order to secure a satisfactory result. Breeding from blood stallions is highly commendable, provided it is done with judgment and discretion; but the practice of *violent* crossing is decidedly objectionable, and cannot be too strongly condemned. "Extremes in crossing," observes a writer in the *New Sporting Magazine*, "are very rarely successful; and it is really astonishing to see farmers so constantly putting their complete cart-mares to thorough-bred horses, expecting to have foals of a class fit for hunters, whereas nine times out of ten, they are fit neither for draught nor hunting; for though they may be up to weight, which is what they expect, there is always a lamentable deficiency of pluck; and the same mare, with a three-parts bred horse, would be likely to produce a very valuable class of horse—the coach horse." By the practice here referred to, the breeders expect to produce a horse combining both strength and action; but they are frequently treated to an animal of such a nondescript character, that he is fit "neither for the land nor the sea." In place of being a fair medium between the sire and dam, he will take chiefly after the one in some parts, whilst in other places he will lean entirely to the opposite side; and he is consequently so badly balanced and proportioned that he is comparatively useless. His temper, moreover, is frequently characterized by a want of conformity to the purpose for which his owner might think him in other respects best adapted. At the last Provincial Exhibition in Kingston, there were some half dozen specimens of pure blood, which, with judicious management in crossing, might be made subservient to the improvement both of our carriage and farm horses.

The *Suffolk Punch* appears to be a good type for improving our ordinary race of agricultural horses. He is a decided favorite in several of the Eastern Counties of England. Being of medium size, compact, thick, and "punchy" in appearance, good step, and exceedingly muscular and enduring, he could not fail, when judiciously used, to get a progeny possessing many desirable qualities, and adapted to the wants of farmers in this country. A stallion of this breed has been in use for several years in Guelph, Woodstock, and subsequently in some places west of the latter, that has produced stock, we have been informed, of a very desirable character. It is often observed that short-legged, firm, compact horses, do their work better, and last longer than larger ones, particularly if they have a clean, flat bone and plenty of muscle. It often happens that cart horses of great height and weight have round bones; but round-boned horses, of any breed, are often gummy, and are apt to get greasy; besides which, it indicates softness. For these, among other reasons, the Suffolk is deserving a more extensive trial in this country.

The *Cleveland Bay* may be classed among the lighter breeds of draught horses, and forms a distinct species. Their colour and general points are very uniform; of a large size, 16 hands and upwards; colour bright bay, as the name indicates, with black

legs; good points, symmetry, and substance; strong clean bone, and full of muscle; good action, head and neck well set on; and, on the whole, what are considered in the old country a most useful breed of horses for farm work; while the lighter and best shaped are much sought after for carriage purposes, and always command high prices. The Cleveland is not so well known on this side the Atlantic as its many excellent merits deserve.

Among the most valuable breeds of draught horses, unquestionably ranks the *Clydesdale*, which is well known and appreciated in several districts of Canada, although there is reason to think that we have not at present so many good specimens derived from this celebrated breed, as we had a few years since. This animal is the one almost exclusively used for farm work in Scotland, and we shall never forget the splendid collection of this breed, which we saw at the Highland Society's Show at Dumfries, a few years since. Their general characteristics are short legs, and strong, thick, and compactly-formed bodies; a fine head, well set on neck; wide expanded nostrils full chest, well laid back shoulders; deep from shoulder to breast, round well formed ribs; short back; strong loins, with short couplings; long well formed hind-quarters; round well turned hips; tail well set on; strong hocks and flat bones, sound good feet; heavy legs and full of muscle, colour black brown, or grey. It is sometimes objected that this breed, like some of the English is too heavy for the use of Canadian farmers, a question by no means finally settled, and deserving the best consideration.

The *Canadian Horse* is mainly of French descent, and possesses several excellent qualities. He is long-lived, easily kept, exceedingly hardy, and of sufficient size, makes a good draught and farm horse, admirably adapted for all work. In general the French Canadian is too light for many kinds of farm work, especially upon the heavier soils, the efficient cultivation of which requires animals of more weight and power. This breed in many parts of Canada has lost by a continued series of crossings many of its original characteristics, and in some instances, the change is of doubtful utility. It may still be found in its original purity in the neighborhoods of Three Rivers, Quebec, and places eastward.

A breed of horses known as *The Morgan* originated in the New England States more than half a century ago, has obtained great favour in many parts of the American Union. He has gained much celebrity as a buggy and saddle horse, and has been highly approved by some for farm purposes on the lighter classes of soils. Others on the contrary, do not regard the Morgan as a pure and distinct breed, and assert that it is often wanting in muscle, weight and bottom for the most important labors of the road or the field. At Agricultural Exhibitions, which, in the States, have of late years strongly tended towards racing, the Morgan is much admired for his graceful action and trotting qualifications.

Our farmers would do well to bear in mind when considering the different breeds most suitable to farm work that as their farms get older, the soil becomes more consolidated and consequently heavier, requiring greater animal strength to cultivate. The fact is also worth remembering, that an advancing agriculture demands a greater depth of ploughing than has hitherto been the practice, conditions that can only be met by better constructed implements, and stronger animals to propel them. It is also a question worthy of a dispassionate consideration, whether the different qualities necessary to make up a good carriage and plough horse can ever be found in the same animal.

☞ M. Thury, a *savant* of Genoa, has recently discovered what he considers will enable the farmer to produce the sexes at will. As is well known, the ova or eggs are produced in all animals from the ovaries, and travel with more or less rapidity through the womb and vagina. M. Thury considers that the sex of the future progeny depends upon the period at which the ovum is fecundated. If this occur at an early stage in its migration, the result will be a female; if at a later period, a male. Thus, if cows be put to the bull so soon as œstrum is observed, heifer calfs will abound; whilst when access to the bull is prevented until towards the termination of œstrum which generally extends in the cow over thirty-six hours, bull calves will be produced. Huber's interesting observations on bees greatly strengthen this ingenious view. This indefatigable naturalist found that queen bees produced female eggs first, and male afterwards; and that where conception does not take place within a lunar month from her birth, the queen bee produces males only.

Winter Feeding of Horses.

The following hints are extracted from a valuable, practical address before the Farmer's Club at Bideford, Devonshire. Some of our readers may need to be reminded that *corn*, in England, signifies grain of any kind, and *chaff* means cut hay or straw:—

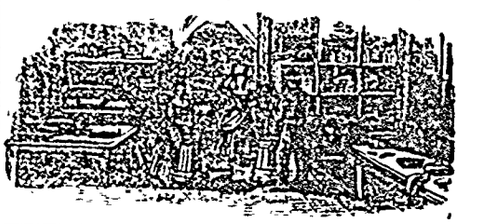
"Hay and oats will always form the staple of horse food here, but variety is without doubt as pleasing to the horse as to man, and there is little trouble in varying the regular diet occasionally. Hay, whether meadow or clover, and oats and beans should possess the same good qualities. They should be bright in colour, sweet in smell and free from any mustiness, and should not be used in the same year in which they are grown. A good many of the oats brought into this market will be found to weigh less than 36 pounds a bushel. I have known the black American oat to weigh 40 pounds a bushel, and the white Canadian oat to weigh nearly 46 pounds a bushel, and as comparative weight in grain is a decisive test of quality the superiority of this class of oats is obvious. Good food will be found the cheapest, and those who use inferior fodder under a delusive idea of economy, will find that they only gain a loss by doing so. Beans may be considered the chief horse-corn next to oats, and when bought at a reasonable price and given to the horses with a recollection that one feed of beans may be considered nearly equal to two feeds of oats, will be found a useful change. That mixture of barley and oats known here as dredge is also often used for horses, but I have not used it myself, from an opinion that oats and beans are preferable. Oil cake in small quantities, say two or three pounds a week, will be much liked by the horses, and I think it exercises a decidedly good effect on their coats. Turnips, carrots, of which most horses become immoderately fond mangold wurtzel when they will eat it, trifolium incarnatum, and early vetches, will afford a sufficient range to enable the food of the horse to be varied from time to time. The question of crushing corn for horses is constantly brought before us by advertisements. Its necessity, for young horses at least, is to me doubtful; and the evidence of the stock authority on the subject, as quoted in the advertisements—a London Omnibus Company—is entirely vitiated by the fact that in the experiment in question, crushed corn and chaff were used against whole corn and hay thus only proving the general advantage of comminuted food, and not the special advantage of crushed corn. By feeding horses regularly, and mixing chaff always with the corn, I think you will ensure its being properly ground, without the intervention of any other mill than that provided by nature. When the chaff and corn are given to the horses, enough water should always be sprinkled over the feed to moisten it, and lessen the horse's desire to drain the bucket to the bottom. I am strongly in favor of the use of chaff for horses, but I would recommend any one who uses it to discard all idea of cutting it by hand, and to arrange for the use of either water or horse power, according to circumstances. Fifteen pounds of chaff a day, in the proportion of ten of hay and five of straw, with a peck, say nine or ten pounds, of good oats, 12 pounds of carrots and a small allowance of hay at night, will form good winter feeding for a horse in full work; but the quantity, of course, must be suited to each horse's wants, remembering always that a horse that is regularly well fed will require less and do better than a horse that is stinted at one time and over-fed at another."

☞ A hog will eat grass readily when cut and carried to him with the dew on. Of course, it must be cut when short and tender. A hog will thrive on such feed.

Cure for Lice on Cattle.—A correspondent of the *North British Agriculturist* says he has found that sweet cream rubbed on the parts affected speedily relieves the animal of these insects.

Feeding Values of Grain, etc.—In answer to an inquiry, the editor of the *Irish Farmers' Gazette* states that "45 lbs. wheat are equal to 54 lbs. barley 59 lbs. oats, 54 lbs rye, 57 lbs. Indian corn, 69 lbs. linseed-cake, 374 lbs wheat straw, 195 lbs. oat straw, 100 lbs. hay, 276 lbs. carrots, 504 lbs. common turnips, 350 lbs. swedes, 359 lbs. mangolds." Farmers in some parts of England are now feeding wheat to their cattle in considerable quantities as it is relatively cheaper than other material.

Why Hogs Eat Ashes, &c.—Mr. Mechi, of Tiptree Hall, England, has discovered that pigs, when shut up to fatten, are very fond of cinders, and improve in condition by eating a certain portion of them every day. Some persons are unable to account for this singular propensity in swine. Poultry are very fond of egg shells, lime, sand, &c., and it is well known these substances are necessary in order to form the shells of eggs, and to furnish material for the bones of fowls. Now it is reasonable to suppose that swine eat ashes and cinders for the purpose of supplying material for their bones, and this singular instinct in animals so low in the scale of intelligence, is truly wonderful, for ashes contain the ingredients which are necessary to form bones, viz., carbonate and sulphate of lime, and magnesia, clay, silica, gelatinized and made soluble by the fire. When hogs are at large they take in clay and silica with their food, and eat bones and roots which contain the necessary ingredients; but when they are pent up they endeavor to supply the material necessary for keeping up their frames by devouring ashes and cinders. Let them have plenty of them.



Dairy Farming in South Oxford.

Just prior to the recent heavy snow-storm we proceeded to Ingersoll, and from thence southward with the intention of making a pretty general visitation of the more prominent Dairy farms in Dereham, Norwich, and other localities in the County of Oxford, where butter and cheese are largely produced. The state of the weather and roads prevented our fully carrying out the design with which we started, and we were obliged to content ourselves, in the meantime, with a visit to Messrs. Hiram Ranney and James Harris, from whom we received much polite attention, and a number of details, which we propose briefly to lay before our readers. At some future time, perhaps in the height of the dairy season, we hope to make another and a more extensive tour of observation in the same localities. Our present remarks will have reference exclusively to cheese production and manufacture, as the parties whom we visited make but little butter except for their own use.

Mr. Hiram Ranney, who resides on Lot 15, Con. 2, in the township of Dereham, is the pioneer of Dairy Farming in South Oxford. He commenced the business about twenty years ago, and his neighbours taking their cue from him, have fostered the dairy interest until at the last census taken in 1861, Oxford was producing upwards of 240 tons of cheese annually. Of this total yielded by eleven townships, the single township of Dereham is credited with upwards of 102 tons, or nearly one half of the entire product. Mr. Ranney and his son-in-law Mr. James Harris, have for many years past headed the Provincial prize list in the article of cheese, and from their undiminished energy in the prosecution of the business, we judge they have no idea of letting their honours depart from them.

Mr. Ranney and his two sons own and occupy 700 acres of land close to the village of Salford, and on either side of the gravel road from Ingersoll to Tilsonburg. Of this large tract, some 600 acres are in a state of tillage. The soil varies from sandy loam to clay loam. From 80 to 100 cows are kept, and these with 5 horses, 120 sheep and a few pigs constitute the entire stock of the farm. The cows are pastured during the summer, and fed on straw, turnips and hay during the winter. Beside the cheese manufactured, there were raised during the past season some 300 bushels of wheat, 550 of oats, 300 of peas, 2,000 of turnips, 100 of corn, about 200 tons of hay, and about 4,500 lbs. of pork. Of course an estate so large might be so managed as to produce far more, but the Ranneys appear to be satisfied to make money in a quiet, comfortable way, rather than to grow rich

faster at the expense of more care, bustle and worry The stock are allowed a wide range in summer, and fed in the least troublesome way during the winter. The dairy season lasts from May to December usually. In winter the cows are allowed to go dry, and each is expected to bring her calf in the spring, so as to begin the dairy campaign with a full supply of milk. The calves are usually killed at 3 or 4 days old, as it is found unprofitable to make veal of them. They are valuable only for their skins and rennets. So soon as the milk of the mother is fit for cheese-making, the rennet of the calf is fit also. The rennet, which is simply the upper stomach of the calf, and secretes a fluid which has the effect of curdling milk, is prepared for use by thorough salting only. A good rennet will make from 200 to 300 lbs. of cheese. The process of cheese-making as practised by Messrs. Ranney & Harris, is as follows: The cows are milked twice a day, and the new milk is strained from the pail into tubs, and forthwith its conversion into cheese begins. The milk is in the best state to receive the rennet at a temperature of about 90 degrees. The rennet takes about half an hour to operate. The milk begins to curd in fifteen minutes, but it requires at least as much more time for it to harden to a proper consistence When sufficiently hard, the curd is cut backward, forward, and crosswise with a many bladed knife, in order that it may settle to the bottom of the tub, and leave the whey floating on the top. A cloth is then spread upon the surface through which the whey is strained and dipped off into conducting troughs by which it is conveyed to the piggery. The hogs fed receive nothing but whey until the close of the season, when the supply of milk begins to fail, and a few peas are given to finish them for butchering. After being cut as above described, the curds are thoroughly broken three times with the hands. They are then placed on a species of rack over a sink and left to drain for an hour, when they are put back into the tub, and being by this time in a somewhat solid state, are cut into pieces two or three inches square preparatory to washing. Whey is heated for the purpose of scalding the curds, and washing out the remaining whey from them. The whole mass should be at about a temperature of 100 degrees, during the scalding process. After being washed, the curds are again placed on the rack over the sink,—cooled by pouring cold water upon them, and again left to drain for nearly an hour. They are then put into the curd grinder,—a sort of cylinder with a number of short knife-blades, or sharply-filed nails in it, (nails work best,) turned with a handle in the same way as a grind-stone. One person feeds the hopper with curds, while another turns. The grinding is soon over, and the next step is to salt the ground curds. About a teacup-full of salt is applied to 20 weight of curds. Salting the curds is a very particular process, and requires to be done carefully and thoroughly. The salted curds are then put into the hoops or moulds, and are ready for the cheese-press. Slight pressure is applied at first, and in half an hour or an hour it is increased. Cheeses are pressed from 24 to 48 hours according to size. They are made of different weights: *e. g.* 30 lbs., 50 lbs., 60 lbs. and from that up to 250 lbs. The common size, and that generally preferred, is about 60 lbs. For the Provincial Exhibition, Messrs. Ranney & Harris have made cheeses of from 1,000 to 1,200 lbs. These mammoth cheeses when cut and sold have proved in point of flavour quite equal to those of smaller size. After their removal from the press, the cheeses are enveloped in a tightly-fitting case of factory cotton, and placed on shelves or counters in the cheese-house to cure. They are turned daily, or every other day, and the white mould which gathers upon them is rubbed off with a cloth. They are fit for sale and use when about two months old. They cure and acquire flavour quickest in the heat of summer. Fall made cheese is necessarily mild, unless kept over till another summer. The older a cheese the richer and stronger it becomes; hence epicures like old cheese. Mr. Ranney makes from 14 to 18 tons of cheese per annum, and Mr Harris from 9 to 10. The price ranges from $8 50 to $9 per cwt., or $160 to $180 per ton, wholesale. The retail price is from 10 to 12 cents per lb. It is all disposed of and consumed in Canada. A twelve hundred-pounder was sent to England as a curiosity for exhibition at the Worlds' Fair, but was excluded because of the rule against the reception of perishable articles. It was, however, sold at a remunerative price. This year the single town of Guelph has bought nearly all the cheese manufactured by the Ranneys.

In addition to the common cheese, Messrs. Ranney & Harris manufacture Pine-apple and Stilton cheese. Both are similarly made. The Pine-apple is so called from its shape and marking; the marking in diamonds like the pine-apple rind, being caused by hanging in a net during the curing process. To make these cheeses, sweet cream is added to the new milk before the application of the rennet, in the proportion of about a quart of cream to a cheese of ten pounds,—the usual size of the Stiltons and Pine-apples. The curds are not salted quite so much because they dry quicker than in those of the common kind and size. Sometimes a little cayenne-pepper and lemon-peel are put in to flavour them,—as in the manufacture of common cheese herbs are sometimes added to produce a particular flavour. The Stilton and Pine-apple cheeses are made in the month of June, that they may cure quickly and acquire richness and strength from the summer heat. Mr. Ranney made about five cwt. of them last summer, which were sold to London (U. C.) merchants at $18 per cwt.,—double the price of common cheese.

A cow is estimated to yield from 300 to 350 lbs. of cheese annually. The old, kicking, three-teated, or otherwise disabled and unprofitable animals are fatted in the fall and early winter, and replaced by new stock the following spring. Mr. and Mrs. Ranney, senr., visited the cheese factories in Herkimer County, New York, a season or two ago, in order to acquaint themselves with the mode of manufacture pursued there. On the whole, they considered their own process about as effective as what they witnessed. The plan of turning heavy cheeses described in our last issue, is in use in the factories, and is almost the only improvement on their own method they think worthy of adoption.

From the foregoing account it will be seen that so simple and inexpensive are the arrangements in use by the Messrs. Ranney & Harris, that cheese making, as practised by them, is quite within the reach of Canadian farmers in general. Without large outlay or complicated apparatus, they have taken and held the first place as cheese makers in this Province, and have succeeded in regularly manufacturing an article which would do credit to the best dairies in the world. We hope to see their example imitated all over the Province as widely as it is in their own immediate neighbourhood. It may be encouraging to state that these gentlemen have found cheese-making a most profitable business. Mr. Ranney's success is, indeed, remarkable. He came to this country without means, and is now one of the richest farmers in Canada.

A brief mention of a few others of the more prominent dairy farmers of South Oxford, will form a fit ending to this notice. Mr. Josiah Collins, two miles South of Mount Elgin, keeps a dairy of about 60 cows; Mr. Isaac Hadcock, of Mount Elgin, about the same number; Mr. Charles Wilson, two miles from Salford (east,) keeps about 50; Mr. Adam Trip, a little north of Mount Elgin, about 30 or 40. Mr. Trip's cows are spoken of as excellent milkers, and he is said to make a great deal of cheese in proportion to the size of his dairy. Mr. And. Smith of Norwich, five miles West of Norwichville, and ten miles from Mr. Ranney, keeps a large dairy of 100 cows or more He intends to start a cheese factory in the spring, similar to those which are becoming so common in the United States, and has already advertised that he will buy the milk of 400 cows. Some Americans, we were informed, have settled near Norwichville, and rented several farms with the intention of also starting a factory next season. Mr. Smith uses vats instead of tubs for curdling the milk. Vats hold more, and are usually made to let off the whey at the bottom, instead of its being skimmed off at the top. Messrs. Collins and Smith have not heretofore used the curd-grinder, but have made curds fine by hand. Mr. Collins has, however, lately adopted the grinder, thinking it works better. With the trifling exceptions just noted, the dairy-farmers named pursue very much the same system in the manufacturing process. A like remark may be made in reference to the care of their cows. Pasture is wholly relied on in the summer, soiling is not practised, the animals have free access to running water, salt is given twice a week, milking is done out of doors, and the cows are dried up for the winter. An almost uniform system of land management also prevails. The pastures are broken up once in five or six years. Breaking up is done in the fall, peas or oats are sown the following spring, and afterwards wheat. Spring wheat has been usually sown for some time, but fall wheat can now be grown again, the midge having nearly disappeared. With wheat it is usual to seed down to clover and timothy,—not quite half clover. After mowing two or three years, the fields are pastured for a like term. A most neighbourly feeling seems to exist among the dairy farmers of South Oxford, none feeling that others are rivals, and all regarding Mr. Hiram Ranney with special respect as the dairy patriarch of the region.

Hints on Butter-Making.

Mr. J. B. Harris writes a letter to a Western contemporary on the above subject, from which we make the following extract:—

In the first place, the milk must be kept in a clean, cool place, entirely removed from the heat and steam of the kitchen; and as cellars are very scarce in this level country, I would recommend building a small house, purposely as a milk-house. Brick makes a good house for this purpose, if properly constructed and well ventilated; for while necessary to keep milk cool, it must not be kept in a damp, close room. There is, however, a medium in this, for if too open, so that the wind blows directly on the milk, the butter which it produces will be full of white caps. The best mode of ventilation therefore is by apertures in the walls, connecting with an aperture in the middle of the floor, over which a grating may be placed, to let in a free current of air, and to have the windows so hung that they may be let down from the top to such distance as may be requisite. Those who have not access to brick can build frame houses at a small outlay The walls should be as thick as possible, in order to exclude the heat. Lath and plaster inside, and raise about a foot from the ground, so that there may be free ventilation under the floor, which should be provided with a grating in the centre as before described. Tin or zinc pans, holding about nine or ten quarts, are the best vessels for holding the milk, as they are more easily handled and kept clean than earthenware. The great object to be sought is, to have the cream rise thoroughly before the milk becomes sour. Scald the pans, and dry them thoroughly before using. Never allow the milk to run to whey before skimming, or the cream to mould on top. So soon as the milk thickens at the bottom of the pan, all the cream has raised that will. In cold weather, when there is no risk of the milk becoming sour, it may be necessary to have a fire in the room. Five milkings is enough to have on hand at once; and do not allow the cream to stand too long without churning—three days is long enough, and in warm weather two days is sufficient. When churning, perform it as quickly as possible; if the cream is too warm, and the butter becoming soft, cool it by adding cold water. About 60 degrees, Fahrenheit, is the proper temperature at which cream should be churned; the butter will come quicker and be of better quality at that heat than at any other; but it is better to cool the cream before the butter breaks. When the butter is come and gathered properly, don't let it stand in the churn, but take it out immediately, and wash it in two waters, so as to get all the milk out; then add salt—one ounce of fine dairy salt to the pound is sufficient, or, if barrel salt, it must be pulverized and made fine, before using it. Work the salt into the butter properly, but be careful not to work it too much, or you will spoil the grain of the butter, and make it *salvey*. This is one of the greatest faults I have found in the butter I have purchased in this section. When properly wrought, set it past in some clean, cool place, till next morning; then work again lightly, and pack away in the keg. Pack firmly, and then cover so as to exclude the air, as it injures butter very much to have it exposed to the air, which will give it a rank taste in a short time. Many will no doubt say they knew all this before; but if so, my experience would lead me to conclude that the bulk of farmers in this section have not acted up to their knowledge, or I would have found better butter, for which I could have paid a higher price. Montreal merchants, for whom I have been purchasing wished that I should send them a better article. Were the hints I have above given practised, I would have had no difficulty in complying with their wish, and instead of paying 10 or 12c per lb. (and dear at that), would gladly have given 16c., 18c., or even 20 cents; but as long as the present system is continued of selling butter to the merchants and grocers, by the pound, in pails, and in rolls, in the summer season, Canadian butter will be regarded in the market as an inferior article, and must suffer in price, accordingly. Merchants and grocers, as is well known, take it in and throw it promiscuously into a large box or tub, which, very probably, has not been cleaned or scalded perhaps for months. Here it is allowed to lie, perhaps for a week, or even more, without packing; and being exposed to the air, though originally ever so sweet, will, in less time than I have mentioned, become quite rancid; the more especially if it is kept in a dirty cellar, where codfish, rock oil and other kinds of merchandize, which are sure to communicate an offensive flavor to the butter, are stored. Under such usage, Canadian butter cannot compete with that made in the dairy portions of the United States; nor will it do so until farmers and packers adopt a different plan. Let farmers and dairymen erect suitable buildings, purposely for milk; keep them well

aired and clean: pay strict attention to the manufacturing of the butter as above described; buy their own kegs, and pack their own butter, and sell to whoever will give them the highest price on examination. This they can easily do by following the above directions, and they will then have an article which will compete with the best that is made, and get a price accordingly.

Feeding of Dairy Stock.

To the Editor of The Canada Farmer.

Sir,—Although a very young farmer I venture to offer a few remarks and suggestions on the above subject. It is I believe well known to every dairywoman, that although the yield of milk decreases in the fall when cows are taken from pasture; yet that the less quantity of milk yields an absolutely greater quantity of cheese. That is to say that the diminished milk contains much more caseine. This alteration in the composition of the milk is doubtless caused in a great measure by the change of food; and it would be of some importance to know whether the wheat-straw, pea-straw or turnips then fed contain any appreciable quantity of caseine. It has occurred to me that in some cases dairy farmers might find it advantageous to feed a small quantity of pea meal. Leguminous seeds (peas, beans, &c.), it is known contain caseine, identical with the caseine of milk, and that in such large proportion that as is stated in *Gregory's Hand Book of Organic Chemistry*, the Chinese make cheese from peas and beans, coagulating the curd with rennet. Again, it is stated in *Stephens' Farmers' Guide*, that "bean meal is said to bring a great flush of milk upon sows." If so, pea meal or bean meal may perhaps have the same effect on cows; or if not, it may increase the proportion of caseine in the milk. Stephens recommends scalded pea meal as the best substitute for milk in feeding calves. I think I would add a small quantity of linseed, the oil of which would perhaps form a good substitute for the butter in new milk. Judging from the little I have seen it is of great advantage to feed linseed to all animals with young. Three or four pints may be boiled in a copper containing a barrel of water and the liquor used to moisten chaff. Its effects are laxative, and I think slightly diuretic; it tends greatly to improve the condition, facilitates delivery and subsequent cleansing. Care however must be taken to feed it at first in small quantities, otherwise disagreeable results may follow.

Very truly yours,
L. C. B.

P. S.—Since writing the above I see it stated in *Johnston's Agricultural Chemistry* that beans, peas, &c are believed to promote the production of cheese. Our knowledge on this subject however seems capable of extension.

Letting of Cows.

To the Editor of The Canada Farmer.

Dear Sir,—I come from a country where letting Cows is almost universal. The farms vary from 500 to 1,200 acres of meadow, water-meadow, extensive run for young stock, &c. &c. The price of a good milch Cow at home varies from £8 to £15 sterling. The usual rent of a Cow is £9 per annum. The Farmer *lets* the Cows, the Dairyman *rents* them. The Dairyman has a good house, dairy, farm yard, piggery, &c., &c. His rent of the Cows includes all payments. He neither pays tithe, nor rates of any kind. The Farmer finds feed for the Cows throughout the year—the Dairyman helps himself to hay, turnips &c, which are hauled for his use. At hay making, harvest, and potato digging, the Dairyman and his household turn out to help. The Dairyman has the *whole lactal produce* of the Cows, just supplying his Landlord with as much cream, and milk, as he requires for his family. The Dairyman has *all the calves*, unless one of particular beauty and promise should be coveted by the Landlord, who pays the Dairyman a good sum for it. A Dairyman keeps a great number of Pigs to drink the whey, &c., &c. These pigs the Dairyman buys (*their manure* is so valuable that I had a clerical friend who kept 500)—If a Cow should die or become diseased or injured the Landlord supplies another, or loses the rent of it. Now this is far more simple than the plan of "paying a price per gallon for milk," &c., &c. A Dairyman gets a bare living at £9 a Cow. One of my farmers said to me, "Ech! Sir, nine pounds is a deal of money to draw out of one Cow's *lets*." *And so it is!* By the way, if a Cow loses a "*let*," no uncommon event, the Dairyman gets an allowance until a sound Cow is purchased, and if the defect should be permanent, the Landlord grazes the Cow for the butcher.

The letting of Cows is generally profitable to all parties. It often happens that the sum which the Cows are let for, represents the whole rental of the Farmer, and often exceeds it. The Farmer, I shall add not only finds feed for the Dairyman, but hauls home his potatoes and gives him the ground to grow them on, rent free, the Farmer finding manure, the Dairyman plants and digs them. In many cases the Farmer gives so many hogsheads of cider or beer. In Dorsetshire most of the Farms have from ten to fifty acres of water-meadow—the water is laid on three times a-year and the produce, in grass, is wonderful. The Dairyman at home wants little or no capital. He pays the rent of his Cows quarterly, is always within a few miles of a market to sell his butter, eggs, pork, &c. The cheese-dealer comes round at regular intervals, inspects the cheese loft, tastes the cheese, agrees upon a price, and the Dairyman gets the use of the Farmer's waggon, horses, men, &c, &c, to haul the cheese to the point fixed upon.

Yours truly,
HENRY P. HOPE.

Toronto, Feb. 1, 1864

A Coating for Cheese.—X. A. Willard recommends a coating of gum shellac to be put on cheese when ready for market. Dissolve the gum, and apply with a brush. It is a harmless application.

Depth of Milk.—Col. Pratt, of Prattsville, N. Y., finds that the largest quantity of cream rises, and consequently the greatest quantity of butter is made when the milk is *one and a quarter inches* in depth, in hot weather, and an inch and a half in cool weather, seven or eight quart pans thus containing but two and a half quarts for the first-named depth, and three quarts for the latter. The temperature is kept as nearly as possible to 62 degrees, although in warm weather it may run up to 65 degrees, and in extreme cases to 70 degrees.

Cheese Factories.—Herkimer county, N. Y., is famous for its production of cheese. A correspondent of the *Rural New-Yorker* speaks of the past season as an unusually favourable one for its dairymen. In one case the cows averaged 600 lbs. of cheese, which sold for 15 cents per pound, being $90 per cow. The writer remarks: "Cheese factories are becoming popular. They save labour, relieving the "women folks" of nearly all the drudgery of cheese-making, except milking; besides they increase the quantity and generally improve the quality, especially of cheese designed for shipping. Factory-made cheese sells from one to two cents a pound in advance of small dairies, and we predict that in less than ten years the majority of Herkimer county cheese will be factory made."

Bone Dust and Cheesemaking.—On this subject, Mr. Rigby, a Cheshire farmer, says:—The most decided improvements observable in the last twenty years have been seen in draining and boning grass lands. The principal product of this county, as you are aware, is cheese, and the quantity of this commodity has been quite doubled by the application of bones on the pastures and of draining, although there is yet much of the latter to be done. I know many farms that used only to keep 40 cows ten years ago that now milk 80, and one farm which then kept 60, has now 110 milking cows on it, besides other stock, and this has been effected principally by these means: the stock too, are better kept in the winter than formerly, and come to calve in much better condition, and as a consequence give better results.

Yellow Butter in Winter.—On this subject S. Edwards Todd says: "Making yellow butter in winter will depend on certain conditions and contingencies, which are as follows.—1st. A cow must have a good supply of good hay, that has been made of good grass, cut before the blossom has fallen, and cured properly, without having been wet while it was being cured. 2d. A few orange carrots daily—not reduced to a fine pulp and mingled with butter—but fed to the cow in connection with a few pounds of Indian meal, made of yellow corn. 3d. A good supply of good cornstalks—not those that have been frost-bitten and weather beaten. 4th. A good cow with a yellow skin about the udder is very essential. 5th. A cow in good condition—not one as poor as "poverty-ation." 6th. A good stable well littered, an abundance of clean water for the cow to drink. 7th. Never allow the milk to freeze.

Correspondence.

Sillen.—Your letter received. It will be published in our next number.

W. O. B.—Thank you for your suggestions. We shall be always glad to hear from you on practical matters, but pray have mercy on our eyes. Your writing is microscopically small.

Agricultural Societies.—We have received a large number of reports of annual meetings and elections of office-bearers. Our space is very crowded this issue, but we will endeavor to give a brief synopsis of them in our next.

Baron Solway.—Mr. Snell writes us to say that *Baron Solway* was purchased from Mr. Syme by *Mr. Simon Beattie* of Markham, C.W., and by him imported from Scotland, and that he (Mr. Snell) purchased him from Mr. Beattie.

Prospects of the Peach Crop.—An esteemed correspondent writes us from Niagara under date the 23rd January: "I am sorry to say that the prospect "for peaches in 1864 is anything but flattering. The "cold winds of the early part of this month have "killed the blossom buds, which were more than "usually forward. When very forward, the buds are "exceedingly susceptible of cold especially of cold "winds."

"G," Peterborough.—Your letter is received. In the main, we quite agree with you. Still, while it were unreasonable to expect working farmers to "become anatomists, physiologists, chemists, veterinary surgeons," &c., they should "seek and intermeddle with all wisdom" that may help them in their calling. We entirely subscribe to your suggestion: "let every one send in to the Editor the results of his experience, with any new ideas or useful hints, and he will cull plenty of useful information from the mass." We shall at all times be glad to receive practical suggestions and items of interest.

Milking Machines.—Mr. John Mackenzie, of Barrie asks:—"Can you, through your valuable publication, "give any information respecting the American Milking Machine, as to where it may be obtained, pro- "bable cost, and practical utility on a dairy farm?"

[Ans.—We are inclined to think it does not answer a very good purpose. The Editor of the *Scottish Quarterly Journal*, after patient and thorough trial reported the following defects in it: "1. It does not milk clean. It will only milk to within half a quart to a quart of their full milk in the case of the most easily milked cows. 2. It is very difficult for cows with uneven teats to be milked by it at all. 3. Nothing can be done by it with kicking or restive cows." We do not know the price of it, or where it is to be had.]

"Farmers, Write"—This is the motto of a very racy letter by Mr. W. O. Buell, of Perth, which appears in the last number of the *Canadian Agriculturist*. Mr. Buell is justly indignant that the farmers of Canada "will not write to each other through the journal." He suggests various methods of stirring them up, *e. g*, competition, by the Board of Agriculture offering premiums for short essays on various subjects. Or, if this will not do, he proposes to "stir up our Stones, Snells, Nimmos, Millers, and others," by exciting their combativeness. "Drop the great meed of praise showered upon them,—put in a little criticism—assail the Durhams, pitch into the Galloways,—tell them their Leicesters and Cotswolds, or their Durhams and Ayrshires are too fat or too lean, over-fed or too high priced. Do something to set them in motion with their pens." Another plan suggested is, provoking a spirit of emulation. Mr. Buell speaks of a visit eastward by one of the Editors of the *Agriculturist*, and of his published notes of the trip,—notes which though "scattered and hurried, were interesting to read." Such notes, and short pertinent letters from observing men in various localities, setting forth the experiences and the doings of intelligent farmers, would lead others to emulate them.

BLACK SEA WHEAT.—Mr. Ira Morgan, Secretary County of Russell Agricultural Society, asks:—"Can "you, for the benefit of our Society, give any in- "formation through the columns of the next CANADA "FARMER as to when and where the most recent im- "portation of Black Sea wheat took place, where most "likely to be obtained, or what kind of wheat you "think best adapted under present circumstances to "the soil and climate of Central Canada?"

[ANS.—We are not aware of any recent importation of Black Sea wheat. Our impression is that it has not given satisfaction to those who have tried it. The Fife wheat is the most suitable, we should think, for the locality you mention. Perhaps some of our readers may be able to send us their experience of Black Sea Wheat.]

GROWING ONIONS.—"A SUBSCRIBER" writes us from Stratford, as follows:—"I intend to grow from 400 "to 500 bushels of onions next spring. The land is "a light clay, or, perhaps, a sandy loam. In the Fall "I laid on about 15 loads of old, rotten cow-dung "upon one acre, and ploughed it in. I intend to "plough it again this spring, and then lay it "out in beds. How will leached ashes answer, "about one inch thick? What is the best seed for "sowing?"

[ANS.—Clayey land is better for onions than sandy loam. Leached ashes will be a very good application, but half the thickness you speak of will be sufficient. For a field crop of onions, the large yellow or large red Wethersfield are the best seeds to sow. In some parts of New England great attention is paid to the raising of onions; 500 bushels per acre is not an uncommon crop and large profits are derived from it. We refer our correspondent to the mode of cultivation as published in another column.]

REGULARITY IN MILKING.—A subscriber at Cobourg writes as follows:—"My farmer insists upon it that my cows suffer no injury when milked at irregular hours, which is contrary to all I have ever heard. Please satisfy me on this point in your next issue, and state the reasons why irregularity in milking injures the cow's powers of production."

[ANSWER.—Your farmer is undoubtedly wrong. All authorities agree that irregularity in milking is injurious to the animal and lessens the yield of milk. The reason for the latter is, that when the udder becomes gorged, as it will do by too long delay in milking, the secretion of milk ceases, and absorption of the thinner and more watery particles of the milk already formed, commences. This absorption takes place more readily in the smaller or more distant lacteal tubes. Milk is constantly forming when they are empty, but if gorged, the secretion ceases and absorption takes place. Nature guards against a recurrence of the mischief, by lessening the secretion. Hence the importance of regular and thorough milking.]

MODEL FARMS.—*"A Friend of Canada and a Gloucestershire Land owner,"* in a letter on Canadian Agriculture, makes a number of judicious suggestions in reference to the establishment of *Model Farms*. The writer has had the opportunity of observing for twenty years, the effect of such a farm in his own county. He says:—"It has extended its influence far and wide, and led to other establishments and institutions, for the improvement of agriculture, among the rest, an agricultural college for training the sons of gentlemen, and giving them scientific and practical knowledge of farm matters. But the most truly useful for the benefit of practical farmers, has been the Model Farm, the establishment of which, requires a larger capital to undertake and carry out, to give it full efficiency and a fair trial, than falls to the share of Canadian farmers in general, who might gladly avail themselves of its advantages when established. My neighbours who us to think twenty and twenty-five bushels of wheat per acre, a good crop now raise fifty, since they have learned suitable means for the improvement of the land,—and other crops in proportion."

[The Model Farm above alluded to, was established by a wealthy nobleman, a class of agriculturists unknown as yet in Canada. In our circumstances, it is hardly reasonable to expect that private enterprise and liberality will take that direction, but we think this is one of the modes in which the Canadian Government may materially assist the agricultural interests of the country, and we trust the attention of those in power will ere long be turned that way. Well-managed Model Farms would be of the greatest practical service.]

CLUBS!

No subscriptions for THE CANADA FARMER are received for less than one year; and all commence with the first number, and end on the 31st Dec., 1864.

All the subscribers to a club must receive their papers at one Post-office; but each paper will be addressed and mailed separately.

Agricultural Societies are supplied with THE FARMER at club rates, and papers ordered by them are mailed to any Post-office within their respective territorial limits.

When any party has sent $10 for a club of twelve subscribers, he can add single subscriptions at the rate of 83 cents each until he reaches twenty, when he will be entitled to a return of $1 60. He may then add additional subscribers at the rate of 75 cents each until he reaches fifty, when he will be entitled to a rebate of $2 50. He may then add additional names at 70 cents each until he reaches one hundred, when he will receive back $10. Every name added above one hundred will be at 60 cents per copy.

☞ Finding it more convenient to date THE FARMER on the 1st and 15th of each month than on the 15th and 30th, as originally intended—this number bears date the 1st of February. During the year we shall publish an extra number to make up the 24 issues.

☞ As THE CANADA FARMER will be printed from Stereotype Plates, back numbers can always be had in any quantity.

The Canada Farmer.

TORONTO, UPPER CANADA, FEBRUARY 1, 1864.

OUR RECEPTION!

WE hardly know how to express fittingly our deep sense of the generous reception THE CANADA FARMER has received. Not only have strong expressions of satisfaction with our first attempt poured in upon us from all sections of the country, but in almost every case they have been accompanied by the most cordial assurances of active support. Not only have the office-bearers of the Agricultural Societies very generally brought their great influence promptly and heartily to our aid, but scores of kind friends have gone vigorously and voluntarily to work to extend the circulation of THE FARMER among their neighbours. Before a copy of the paper had issued from the press, many hundreds of persons had recorded their names in our subscription books, and by every mail we have continued to receive large and increasing additions to the list.

And what shall we say as to the welcome given to us by our cotemporaries of the public press? They have received our little sheet with a degree of hearty kindness, for which we have no words to express our gratitude. Their commendations are all the more valuable that they have not been unaccompanied by frank criticisms,—and by which assuredly we mean to profit. To set up a fine modern printing machine, distribute new type, put in operation a stereotyping establishment, organize an editorial staff, and secure competent draftsmen and engravers, was not an easy task when crowded into four short weeks. Scant time was there for reconsidering matters of detail; but having passed muster respectably under such circumstances, we look forward with hope and confidence that our improvements in the future will satisfy the most fastidious.

References have been made to Agricultural Journals that have preceded us in Upper Canada, which we ought not, in justice, to let pass in silence. It may be that the Agricultural publications of past years have not been all that could have been desired; but with a knowledge of the many difficulties against which their conductors had to contend—the limited resources, the apathy of the public, the small subscription-lists, and a hundred other drawbacks,—we can only wonder that they were maintained so efficiently. They contained a vast amount of practical instruction; they contributed largely to the improved state of agriculture in the Province; and we shall always feel that a deep debt of gratitude is due to those early pioneers who, to advance the cause of agricultural improvement, spent their time and their labour without pecuniary reward—nay, too often, with actual money loss. If THE CANADA FARMER comes to-day before the public under far more favourable circumstances than our predecessors enjoyed, we are indebted in no small measure for it to those who preceded us in the work. They prepared the way; they created the desire for improvement: and our anxious hope is, that we may only be able to discharge the trust they have transmitted to us with a degree of improved efficiency equal to the material progress of the Province, and the advanced state of agricultural science.

References have also been made to American Agricultural papers largely circulating in Canada, as to which we have one word to say. To these publications, the farmers of Canada have been long indebted for much valuable information and advice. Many of them, such as the *Country Gentleman*, the *Genesee Farmer*, the *Rural New Yorker*, &c., are admirable publications. We shall strive to cultivate the most friendly relations with our American co-labourers. We mean to copy largely from their columns, as they, perhaps, will sometimes do from ours; and we shall strive to keep pace with them in the march of improvement. We would not wish one copy less than now of these valuable papers circulated in Canada. But what we do say is this: We propose to do for Canada what these papers so well do for their own country; our matter will be entirely for Canadian readers; we have not, like our neighbours, a population of thirty millions to appeal to, and the united support of our whole farming population is necessary to our complete success. The moral, therefore, is—take as many American publications as you can, but first and foremost, *take* THE CANADA FARMER!

Destruction of Sheep by Dogs.

EXTRAORDINARY DECISION

THE following detailed account of a recent sheep case has been sent us by Mr. William Gordon, of Burnbrae, Township of Whitby, a gentleman on whose statement the utmost reliance can be placed:—

"ON the night of the 24th November last, I got 28 sheep mangled by four dogs, and 24 of them died from the injuries received. The same night a neighbour, Mr. John Willis, had 11 sheep torn by the same dogs, of which six died. The night being soft, there was no difficulty in tracing whence the dogs came and whither they went; but redress for the loss caused by the dogs having been refused by their owners, I had them cited before Wm. Laing, Esq., Mayor of Whitby, James Rowe, Esq., Deputy Reeve of Whitby, and Dr. Gunn, all Magistrates of the county of Ontario. Before these gentlemen I adduced evidence tracing the dogs to the premises of their owners, and finding the dogs next morning bespattered with blood, and lolling in a gorged, exhausted condition. I also proved that the very next night, being the 25th November, one of said dogs made an attempt to destroy the residue of Mr. Willis's sheep, but he being on watch, allowed the dog to spring in among his sheep, and then hallooed him away, closely following the animal up to his master's dwelling-house. The counsel employed for defendants objected to the relevancy of this evidence, as it had reference to another person's sheep, and not to mine. This objection I was enabled to overrule, by proving that part of my sheep had been chased in among Mr. Will's's, and were there at the time the dog made his attack. Again, I proved that on the second night after the wholesale slaughter of the sheep, another of said dogs was scared away when he was within

some ten yards of the place where the remainder of my sheep were penned up. The moon being about full at the time, and the nights clear, the identity of the dogs was sworn to by various witnesses. Moreover, I offered to prove that said dogs were known in the locality as sheep-destroying dogs, but the Magistrates decided that this evidence was not in point.

"After hearing some minor items of proof, which I shall not detail, the Magistrates decided that in view of the evidence produced by me, they had no hesitation in avowing that defendants' dogs had destroyed my sheep, and therefore recommended defendants to kill their dogs, but as I had failed to produce direct proof that said dogs had worried my sheep, or were found in the act of worrying them, they could not help themselves under the enactments of the statute, but must give judgment against me with expenses.

Here, it will be observed, that the important class of evidence known as circumstantial, from which guilt or innocence is inferred in our criminal Courts, and on which life or death to a human being frequently hangs, was altogether put aside by the officiating Magistrates. By this means, they virtually placed the lives of four dogs, which they expressed their belief had destroyed my sheep, in a position of security which is denied to man himself To wriggle themselves out of this position, the worthy Magistrates averred that adjudicating under the new Act they were bound to accept of direct evidence only; for example, if Mr. Willis had patiently stood by the first night, and my hired man the second night, after the slaughter of the sheep, and allowed the dogs to tear and kill so many more, then that would have been considered good evidence against the dogs. But where, I would like to know, is the farmer to be found who would stand tamely by and see his sheep mangled by savage dogs? If it is to be an invariable rule to be laid down by Magistrates in adjudicating under the new statute, that none but dogs found in the act of worrying sheep, and which were actually seen to worry so many of them, are liable to conviction, then it follows, from the well known cunning of the dog, who usually chooses the select hours of the night to commit his depredations, that four-fifths of the entire sheep of Western Canada might perish without the owners having it in their power to convict a single dog of destroying sheep, or obtain a cent in compensation for their loss.

"It is tantalizing to have to add, that if no such Act had been in existence as the Act passed last session of Parliament, for the better protection of sheep, the officiating Magistrates admitted that my proof was competent to warrant conviction, and, as a matter of course, they would have decided the case in my favour."

Did this statement come from a less reliable source, we should find it difficult to believe that such a decision on such evidence could have been given by the three Magistrates who tried the case. They are all shrewd, respectable men, and we are utterly at a loss to conceive the grounds on which they arrived at their conclusions.

There certainly must be some mistake in Mr. Gordon's supposition that the Magistrates refused to receive circumstantial evidence, and would act on no less positive proof than the oath of a witness that he had actually seen the sheep worried. Assuredly there is nothing in the new Sheep Act or in the Common Law to prohibit the reception of circumstantial evidence. If the magistrates did indeed declare themselves satisfied that the dogs in question worried Mr Gordon's sheep, it was an utter mockery of justice to dismiss the case and throw the costs upon the plaintiff.

There must also be some great mistake in the supposition that but for the existence of the new Act, the Magistrates would have decided against the dogs, under the old law. The old law was merely the common law of the land—and it is now as much in force as it ever was, except in so far as it is altered by special provisions of the new statute. Now, the effect of the new Act was not to relax but to make more stringent and effective the recourse of the sheep-owner in seeking redress when his flock has been worried by dogs.

We would very much like to have some further light thrown upon this case. Either very great injustice has been done, or there is some defect in the new law which does not appear on its face. Can any of our friends about Whitby enlighten us as to the grounds on which the Ma istrates acted?

Annual Meetings of County Societies.

An esteemed correspondent asks us to say when the annual meeting of County Agricultural Societies should take place under the Statute—between the 14th and 21st of January, or in the third week, without regard to the day on which the year comes in? There can be no doubt on the point. The Statute fixes the "third week in January"—and clearly the meetings must be held during the third week, on whatever day the year commences. This year the meetings should have been held between Monday, the 11th, and Saturday, the 16th January.

Rules of the Agricultural Association of Upper Canada.

We have received a long letter from Mr. W. O. Buell, President of the South Riding of Lanark Agricultural Association, complaining of certain rules passed by the Provincial Association at its last meeting. He objects to Rule 7 as fixing the Annual Meeting on Friday of the Exhibition week, because it affords too little time for discussion and consideration of any disputed point. He thinks the meeting should take place on the second day of the Fair week, and that the Treasurer's Report, in detail, should be submitted to the meeting. Mr. Buell also objects to another Rule, which he thinks secures the Annual Exhibition to places only which provide very costly permanent structures. He thinks we should have "one Great Provincial Exhibition, including both Upper and Lower Canada, and foreign Exhibitors every third year only, to be held alternately at such places as say Montreal and Toronto, and that the resources of the Association be husbanded meantime, and that in the intervening years the Exhibition be extended to all parts of the Province where *reasonable* provision can be made."

Mr. Buell also objects very strongly to Rule 18, which he alleges almost renders the Association a close corporation.

Crops in the United States during 1863.

The yield of the great staples of agriculture throughout the United States for the past year compares well with the previous year, as will be seen by the following returns given by the Commissioner of Agriculture in his Report to the President:—

	1862.	1863.
Wheat in bushels.	160,993,500	191,068,239
Oats - - - - -	172,520,997	174,858,167
Corn - - - - - -	586,704,474	449,163,894
Hay, in tons - - -	20,000,000	18,500,000
Tobacco, in pounds -	208,807,073	258,462,413
Wool - - - - -	63,524,172	79,405,215

Corn and hay were injured largely by drought and frost.

Upper Canada Fruit Growers' Association.

The above association held its annual meeting, in the city of Hamilton, on Wednesday, January 20th, 1864, the President, Judge Logie, in the chair. After the reading of minutes, and reports of officers and committees, the meeting listened to the President's address, for which a vote of thanks was passed, and a copy for publication requested. On motion, Messrs. J. Freed and D. A. McNabb were appointed a committee for the city of Hamilton, to receive debts from old and new members; and Messrs. J. D. Humphreys and W. F. Clarke a like committee for the city of Toronto. The meeting then proceeded to the election of officers, with the following result:—

His Honour Judge Logie, of Hamilton, President; Jas. Taylor, Esq., of St. Catharines, First Vice-President; J. D. Humphreys, Esq., of Toronto, Second Vice-President, D. W. Beadle, Esq., of St. Catharines, Secretary and Treasurer.

Fruit Committee—Geo. Leslie, Esq., Toronto; W. H Mills, Esq., Hamilton; C Arnold, Esq., Paris; T. H. Graydon, Esq., St Catharines; A. M. Smith, Esq., Grimsby.

Publication Committee—The Secretary, Mr. W. F Clarke, and Mr. J. A. Bruce.

Notice having been by given Mr. W Holton, at the last meeting, of a motion to amend the constitution, that motion was now considered, and the second clause of Art III. was so amended as to read thus: "Two other General Meetings shall be held at such places as shall be determined at the January meeting, one on the third Wednesday of July, and the other on the first Wednesday of October in each year."

It was resolved that the meetings for this year be held at Toronto, on Wednesday, July 20th, and at St. Catharines, on Wednesday, Oct. 5th.

A committee was appointed to consider a communication received from the Secretary of the Board of Agriculture, relative to the prize list, which submitted a report that, after considerable discussion, was adopted, and the Secretary directed to transmit the same to the Board of Agriculture.

Mr. W. H. Mills exhibited some insects, and called the attention of the meeting to the importance of being able to recognize the various kinds, some of which are our enemies, eating the fruits, flowers and foliage of our gardens, fields and orchards; while others are our friends, preying upon the injurious species.

Very fine samples of apples were exhibited by Mr. W. H. Mills, of Hamilton; Mr. J. Hagaman, of Oakville; Mr Arnold, of Paris; and Mr. A. M. Smith, of Grimsby.

Mr. D. Murray, seconded by Mr. W. H. Mills, moved the following resolution, which was carried unanimously:—

Resolved,—That in the Canada Farmer, the first number of which is before us, we welcome a worthy successor to the Agriculturist, and consider it justly entitled to the support of this Association, and the duty of its members to send communications for publication in its columns.

Toronto Gardeners' Improvement Society.

Pursuant to notice given in our last issue, the above society held its annual meeting at the Board of Agriculture Rooms, on the 18th ult. A report of some length was read in which the objects of the society and the extent of its success in carrying them out, were set forth. Monthly meetings had been held throughout the year, at which papers were read and discussions held on subjects of mutual interest and practical importance, and choice plants exhibited. Leading horticultural journals had been furnished for the perusal of the members. It was determined to supply each member of the Society with the Canada Farmer for the present year. Professor Buckland delivered an able address on the "Relations of Science to Horticulture."

We would urge upon all who take an interest in gardening matters to attend the monthly meetings of this society. They are open to the public, and practical gardeners are always present, who will be happy to answer any questions that may be proposed, and give all the information in their power alike to professional and amateur horticulturists. We append to this brief notice the concluding portion of the Report, and regret that we have not space for the whole of it.

"A very pleasing feature of our meetings has been the exhibition of many new and rare plants, a list of which we have much pleasure in recording:—

Feb. 16.—Exhibited by Mr. G. Vair, gardener to D. L. McPherson, Esq. Azalias, Obtusa, Marginata, Louis Napoleon, also "Mezenia erecta," a beautiful and much admired Mexican shrub.

March 16.—Exhibited by Mr. C. Young, gardener to Judge Morrison. A select variety of Azalias and seedling Cinerarias, also an orchid—"Phalanopsis grandiflora."

May 18.—Exhibitied by Mr. Turner, gardener to Judge Harrison. Orchids—"Oncidium papillium, O. Warchita, O. Ampliatum, Epidendrum Cochleatum, Epidendrum Macrochilum. Cymbidium Sinensis, C Aloefolium, Brasria Hoggii, and Dendrobium nobilis.

June 15.—Exhibited by Mr. C. Young, gardener to Judge Morrison. Collections of Carnations, Picotees, and Pinks.

August 17.—Exhibited by Mr. James Fleming Collections of Gladiolus, Fuschias, and Asters, also a new Verbena named "Foxhunter." Mr. Turner showed a fine collection of Lilliputian Dahlias.

December 21.—Exhibited by Mr. Turner. Orchideous plants—"Barkeria elegans," Cyrtochillum Maculatum, "Catasetum Tridentatum," Vanda Coerulea and Epidendrum Vitellinum, also Passiflora Goutterii, P. Decasneana and Bignonia Vrunsia.

Exhibited by Mr. Vair. Camellia Alba Pleno. Camellia Jenny Lind Celosea aurea, Primula Sinensis, Correa Brilliant, Acacia Dealbuta, Epacris Salmonia, and E. Fire Ball.

FLAX MILL AT ST. CATHARINES.—The Novelty Iron Works, at the East end of the town, have been leased by Mr. Walter Arnold, and will be converted into a flax mill, the necessary change of machinery being now made.

FLAX COTTON.—A flax cotton mill is fitted up at East Toledo, Ohio, which is expected to consume 4,000 pounds daily of raw material, and produce 2,000 pounds of cottonized flax Eastern satinet manufacturers have agreed to take it all.

☞ THE CLYDESDALE STALLION "COMET," advertised in another column, was imported from Scotland in October last, by his present owner, Mr. Copland. He is of good pedigree, having been got by "Grey Comet" out of a Clydesdale mare by "Sir Charles Napier." Comet distinguished himself before leaving Scotland, as a prize-taker, and his owner has recently learned that out of 40 mares served by him last season, 38 have proved in foal.

☞ In the December number of the proceedings of the Royal Horticultural Society, Eng., is a very interesting article by James Bateman, Esq., of Biddulph Grange, upon the proper treatment of Orchids from cool countries. It would seem that it has required nearly thirty years of failure to teach the simple lesson that an Alpine Orchid, growing naturally among lichens, and never exposed to a temperature higher than 75°, nor lower than 45°, will not thrive when subjected to the intensely-hot *regime* of East Indian Orchids.

☞ The *Ayrshire Express* gives the details of a trial of considerable interest to old country farmers. Mr. J. Crawford ordered from Stephens & Co., of Glasgow, a ton of South American Guano, for which £7 10s. was charged. A sample of it was analysed and found to be worth only £4 per ton. Mr. Crawford refused to pay the price, and ultimately he and Mr. Stephens entered into an agreement to have the crop tested by other manures. That to which Stephens' guano had been applied proved very deficient, and Mr. Crawford persisted in refusing to pay the price charged. He was sued for the amount, and on the case being fully heard, the Court "found the pursuer liable to no part of the price, and assoilzed him with expenses."

MY FARM OF EDGEWOOD.—A very spicy book, full of country odour, common-sense, and flashes of genius. It is not a farm manual, yet it contains many practical hints that cannot fail to be of service to those actually engaged in agricultural pursuits. Its author, Donald G. Mitchell, better known as Ike Marvel, somewhat of a celebrity in the literary world, took to farming as a business without, it would seem, that tinge of the romantic, which generally spoils retired merchants, professional men, and *literati* for the prosy details of country life. He tells the story of his "farm experiences," "hinderances and helps," "profits and losses," in a very straightforward, yet genial way, and enlivens the narrative now and then with humorous touches and fancy sketches, such as make it a very agreeable, as well as useful, book.

MICHIGAN AGRICULTURAL COLLEGE.—This institution is now in full operation. Buildings costing $60,000 have been erected, and a farm of 676 acres is attached to them. The State Legislature has endowed the College with a grant of 6,000 acres of unimproved land, worth now $30,000, and sure to increase in value. By Act of Congress, public lands are granted to each State according to the number of its Senators and Representatives. From this source the College receives 240,000 acres of land, which, at the Government price, $1.25 per acre, will bring $300,000. The whole endowment therefore is at least $330,000, which, at 7 per cent. will give an income of $23,100 per annum This is a most liberal provision, and augurs well for the future of agricultural education in Michigan. The number of students in attendance during the session which closed in November last was 60. Each student is required to labour three hours a day on the farm or in the gardens. Some compensation is allowed, but daily work is regarded as part of the educational system, and is directed with special reference to illustrating the lectures.

☞ Mr. S. J. Lyman of Montreal, is lecturing in the Eastern Townships on "Rural Taste,"—with a special reference to the preservation and planting of shade and ornamental trees. He proposes the organization of "planting bees," as an easy method of ornamenting streets and public grounds: by no means a bad idea.

ROOT CROPS IN WHITCHURCH TOWNSHIP LAST SEASON.—The Secretary of the Whitchurch Agricultural Society has forwarded us a printed schedule embodying the Judges' Report of the root crops in that township for 1863. Details are given of 18 fields of Swede Turnips, 2 of White Turnips, 6 of Carrots, and 2 of Mangolds. The largest crop of Swedes was raised by Mr. W. Story, and gave 1039 bushels per acre. Quantity, four acres; land, clay loam; manured in spring with 10 loads per acre of barnyard dung; ploughed once in the fall and twice in the spring; seed sown June 16, 1 lb. per acre; rows 18 inches apart, plants 11 inches apart; scuffled twice and hoed twice. The second best crop was that of Mr. Charles Brodie: 4½ acres. 968 bushels per acre. The third best crop was that of Mr. W. Swales; 4 acres 827 bushels per acre. In White Turnips, only two patches of an acre each are reported, 763 and 703 bushels per acre. The best crop of Carrots was raised by Mr. Charles Brodie, 1085 bushels per acre. Quantity one acre,—land clay loam; ploughed twice in the fall and once in the spring; manured in the fall with 10 loads barnyard dung per acre; seed sown May 20, 1 lb. per acre; rows 18 inches apart, and 11 inches in the rows; scuffled twice, and hoed twice. The second best Carrot crop was that of Mr. George Lemons, 827 bushels per acre, soil sandy loam. The two crops of Mangolds were 1217 and 924 bushels per acre.

Veterinary Department.

THERE is obviously a very intimate connection between Veterinary science and Agriculture. The stock on a farm, whether kept for the profit to be made out of their growth and increase, or for the work they can accomplish, form an important and often an anxious charge. All animals are more or less liable to disease, and as they are incapable of attention to their own wants when disordered, they must depend upon the nursing and care which man is able to bestow upon them. In order to the intelligent treatment of disease, a knowledge of the anatomy and physiology of the animal tribes is necessary, and an acquaintance with the symptoms and modes of curing the various maladies to which they are subject. Much advantage may be expected to accrue from the co-operation of the farmer and the veterinarian As an example, in illustration, we may refer to the recent outbreak of small-pox amongst the flocks of sheep in several parts of England. On the recommendation of the veterinary profession, the owners of stock in the district affected, combined, and used the proper measures to prevent the spread of this disease, and were successful. In various other contagious diseases, the veterinary profession have been the means, in a great measure, of preventing mischief by checking their prevalence; for instance, glanders in the horse—a disease at one time very common in England, and on the continent of Europe. Horses to the value of thousands of pounds were annually destroyed in consequence of having become affected by this incurable and loathsome disorder. When found to be incurable, the late Mr. Percival, and other eminent veterinary surgeons, were indefatigable in their exertions to find out the exciting causes, and in the majority of cases, traced its origin to impure air and insufficient nourishment, combined with hard labour. Although glanders is a contagious disease, not one case in five occurs from that cause. It is generally brought about by the way already mentioned. Having found out the exciting causes of this terrible affection, they were the means of its prevention by adopting a simple, yet effectual, mode of treatment, viz., by attending to the proper ventilation of stables, allowing a sufficient supply of food, and keeping the animal in a high state of health.

Not only is it the province of the Veterinarian to direct the Agriculturist how to prevent disease arising from mismanagement in his stables, but it is equally his duty to endeavour to prevent diseases being bred with an animal; in other words, to check hereditary tendencies to disease. On this subject we shall have somewhat to say in our next.

Injury to the Fetlock Joint of a Horse.

On the night of the 29th Oct. last, the writer was called up to attend a horse who had that evening run away and was severely injured. On examination, we found the hind-legs very much bruised, the fetlock joint of the near hind-leg being lacerated, and one of the back tendons severed. After cleaning out the wound with tepid water, we brought the divided edges together by means of the metallic wire suture, and ordered fomentations of hot water to be constantly applied for several hours.

On visiting our patient next morning, we found him much fevered, and also so stiff that he could not move about in his stable. Gave a dose of laxative medicine, emptied the rectum of its contents by an injection of soap and water, and restricted his food to bran mashes; also, continued the fomentations. We now determined on placing him in slings, but, from the construction of the stable, this could not be done.

November 3rd, he was so weak as to be unable to stand. Lay down, and remained in the same position for two days. On the 5th, after administering stimulants, he was enabled to get upon his feet again. The wound was now discharging matter freely, and along with it, a mixture of synovia from the sheath of the ruptured tendons. Poultices made of flour and oatmeal were now used for several days, granulations began to spring up, and the discharges somewhat abated. By this time he had in a great measure regained his appetite, and slowly and gradually continued to improve. Nourishing and easily-digested food was given, and the parts daily washed and dressed with astringent lotions. By the third week the granulations were very unhealthy, and caustics and astringents had to be freely applied. The above treatment was continued for several weeks, changing occasionally the application. The tendon became united, and the wound gradually healed over. By the end of December he walked four or five miles, and is now as well as ever.

Shoeing Horses

W. JONES, a veterinary surgeon of London, gives the following simple rules for shoeing horses:—

"1st. After having taken off the old shoe, shorten the toe, and remove all the dead and loose parts of the hoof. Do not cut the sole or pare the frog, except when the foot has received an injury from a nail, or otherwise, when it must be cut out.

"2nd. Let the shoe be of equal thickness, or rather thinner at the heel. The ground and foot surface should be perfectly level. The shoe should be light on the heel. Too many nails are objectionable, and these should be kept as far as possible from the heels.

3rd. For the hind feet there is no objection to calkins, though they are of doubtful benefit. Horses travel better without them. The hind shoes are made thicker at the toes than at the quarters, the nails also can be put closer to the heels without causing inconvenience.

"4th. Side clips should be avoided, they destroy the hoof; the same is the case when the nails are too close together. The feet should never be rasped, as it destroys the enamel of the hoofs, renders them brittle, and causes sandcrack, and consequently lameness.

"5th. Expansion is a fatal error which has led to many abuses in shoeing, such as paring off the sole and frog, rasping off the hoof, etc. The elasticity of the foot, which is, however, very limited, exists only in the upper part of the hoof, principally round the cornet. On the lower part and the toe it is *nil*."

"LAMPAS" IN HORSES.—The horizontal bars in the roof of the horse's mouth are undoubtedly intended to aid the animal to retain food in the mouth while it is being masticated. They are abundantly furnished with blood vessels and nerves, and are therefore very sensitive. When colts are teething, the disturbance of the adjacent parts sometimes cause these bars to be inflamed and swollen. Then the animal cannot eat without pain, and unmformed persons have ascribed the apparent falling off of appetite under such circumstances, to a disease named "Lampas." To remedy the supposed ailment, it has been recommended and is still practised in some localities, to burn out the swollen bars with a red hot iron made for the purpose. The operation is an unnecessary and injurious cruelty. The portion of the mouth thus destroyed, can never be replaced, and thus the power of perfect mastication is impaired. The only surgical operation allowable in cases needing assistance, is to lance the inflamed parts, the same as a physician would treat the gums of a child in case of difficult teething. This can easily be done with a sharp pen-

knife. After the lancing, it is recommended to wash the mouth with two ounces of tincture of myrrh to a pint of water, or a strong solution of alum in water. Feed the colt on bran mashes and grass, withholding all grain until he eats without difficulty—*American Agriculturist.*

Horticultural Department.

The Value of Fruit.

We do not now refer to the money value as a farm crop, but to the home value for domestic consumption. We all know that a few acres of orchard will often yield more profit than all the rest of the farm, that one hundred dollars per acre is no uncommon return for good cultivation, but we call attention now to the comfort, healthfulness, and economy of having a full and constant supply of fresh and delicious fruit. The fruit consumed in a family is by no means so much extra consumption, but it serves to lessen the drain upon the meat and flour barrel, while the cost of production is considerably less. We can well afford to spend the time and labour necessary to enable us to have strawberries and cherries in the early summer, to be followed with raspberries, currants, pears, plums, grapes, and apples through the year until strawberries come again. Could we estimate the saving in other articles of food, could we express in dollars and cents the gratification in having such nice and delicious fruit continually upon our tables, and could we ascertain the extra saving by reason of improved healthfulness of young and old in the family, we are fully persuaded that the sum would more than balance by a great deal all that these fruits cost us. In many families living upon their own farms, the apple is about the only fruit that is used, unless such berries as the children may find growing wild for the reason that it is thought to be too much trouble to grow anything else Parties often express their astonishment at strawberries the size of a Wilson, at such raspberries as the Fastolff, and such delicious pears as the Bartlett, or Flemish Beauty, while we have only wondered that they could have been contented to live so long without them If they should once have them we are sure they would never dispense with them on account of the trouble and cost.

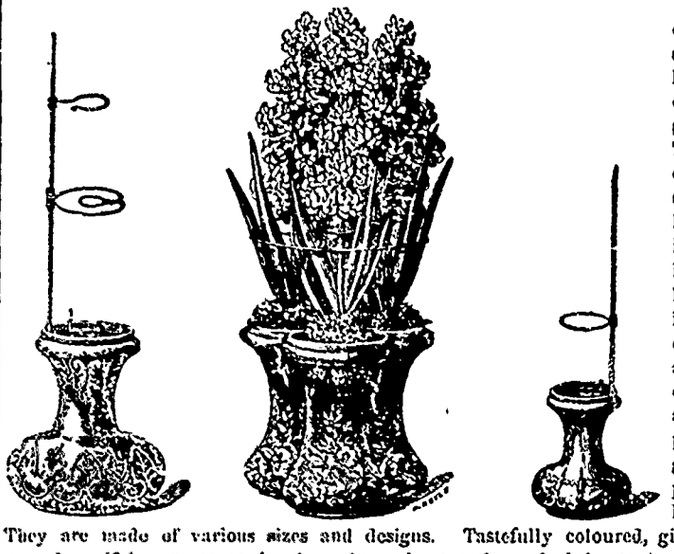
The Apple Bark Louse.

This insect is very prevalent in some parts of Canada, and is too well known to need description. Its close resemblance to a very minute oyster shell pressed tight against the bark has given it the name of the oyster-shaped bark louse So far as our observation has extended these insects are most numerous upon trees growing in cold, wet, badly drained land, where the tree has become stunted and sickly, and is ready to fall a prey to any enemy. We have never known them to attack a healthy and vigorous tree. It is however possible that they do, and if they should become numerous upon it they would soon render it sickly. The best remedy we have seen is the following :—

Boil tobacco in strong lye till it is reduced to an impalpable pulp, which it will be in a short time, and mix with it soft soap, (which has been made cold : not the jelly like soft soap,) to make the mass about the consistence of thin paint, the object being to obtain a preparation that will not be entirely washed from the tree by the first rains which occur, as lye tobacco water, and most other washes are sure to be The fibres of the tobacco diffused through this preparation cause a portion of its strength to remain wherever it is applied longer than any application which is wholly soluble in rain water can be. First trim the trees well, so that every twig can be reached with the paint brush, and apply this preparation, before the buds have much swelled in the spring, to every part of the tree. This will effectually remove the scales.

Waterproof Garden Walks—The London *Gardener's Weekly Magazine and Horticultural Cabinet* states that cement walks are becoming common in English gardens They are made as follows :—Procure a sufficient quantity of the best Portland cement, (hydraulic or water lime,) then turn up the path with a pick, and mix six parts by measure of clean screened gravel with three of sharp sand, and one of the cement, then work them thoroughly with a spade in the dry state Now add sufficient water to make them into a paste similar to stiff mortar, and lay it down on the walk, on a hard bottom, to a depth of two inches It is spread with a spade, and the walk made with a slight curve rising in the middle. In forty-eight hours it becomes as hard as a stone, and not a drop of water will pass through it. Worms will not work through, nor a blade of grass grow upon it.

BULB AND BOUQUET GLASSES.



There are no more beautiful decorations for the parlour or sitting-room, in winter, than hyacinths, crocuses, tulips, and other bulbs. They may be grown either in pots or glasses. They are cultivated with great ease, and with a little care, a succession of blooms may be had throughout the winter. It is more trouble to grow them in glasses, and some think the bloom scarcely so fine as when in pots; but they have a more elegant and tasteful appearance in glasses, and, being cleaner, are more adapted to a nicely-kept room. We append cuts of a recent style of glasses, which are a great improvement upon the prim, stiff-looking shapes in general use. They are made of various sizes and designs. Tastefully coloured, gilded and decorated, they are very beautiful ornaments in themselves, irrespective of their contents. They are by no means expensive and considering how long the season of winter is in this climate, every family should be willing to bestow a little expense and trouble in enlivening not only the best rooms of the house, but the commonest ones with plants and flowers. The smaller glasses are for single bulbs, and the large, central one is for three bulbs of different colours, which may be so assorted as to produce a very pleasing effect. The wire supports are useful in securing an erect growth. The same glasses may be used in summer as bouquet-holders. Looking at the two illustrations, it is difficult to say whether the winter or summer one is the prettier. Both are certainly very ornamental. Our friends, Messrs. Fleming & Co., of this city, keep them on hand.

Hedge Plants.---The Berberry.

Inquiry is often made for a hedge plant that will endure our climate, and can be easily kept, and yet sufficiently strong to make a good fence. Many efforts have been made to introduce the English Hawthorn, but we know of no instance in which the attempt can be said to have succeeded. Other plants have been tried and among these the Osage Orange; which whatever may be said of it in the South-Western United States, has been found too tender to endure this climate The Honey Locust has also been tried, and any one who is desirous of seeing a hedge of this plant will be cheerfully welcomed at Mr. Beadle's residence near St. Catharines, where he can show him a field of twenty acres enclosed with it. But we have found this plant not easy to manage and that it requires too great an expenditure.

There are many, however, who think the Berberry will prove to be just what is wanted, and we now call attention to it in the hope that those who have made any experiments with it, will give us all the benefit of their experience, and that the plant may be thoroughly tested for this purpose. It certainly seems to possess many very desirable qualities in a Hedge Plant, some of which we will enumerate. First then, it is perfectly hardy, never suffering at all from the most intense cold. Second, it does not sucker or sprout from the root; this we know from an experience of fifteen years with the plant in cultivated ground Third, it sprouts every year from the crown, throwing up numerous streng shoots which serve to thicken the bottom of the hedge as it grows older. In most other plants there is a continual tendency to die out at the bottom, but the Berberry, on the contrary, is growing stronger at the bottom every year. Fourth, it will require very little trimming to keep it in place, its natural height being only seven or eight feet, and its habit of growth being quite compact. Fifth, the old wood does not die out, at least has not in fifteen years, so that with each succeeding year the whole fence is only becoming more dense and strong. Sixth, the bark is so bitter that mice will not eat it, and probably no other animal, and the plant is sufficiently thorny to make it unpleasant to break through. Seventh, it is very ornamental both when covered with its graceful pendant yellow flowers in summer, and in the autumn and all the winter when covered with its beautiful festoons of scarlet berries.

In planting a hedge of it we would recommend setting the plants in a single row, nine inches apart, and keeping the ground on each side clean and free from weeds for three or four years, after which it might no doubt be put down with grass if desired.

THE ENGLISH HAWTHORN.

The following, written by Mr. Vick, himself an Englishman, with a just and natural love for the trees and plants so closely linked with early associations, will shew what may be expected of the Hawthorn as a hedge plant in Canada :—

"Very much rejoiced would we be to know that the *English Hawthorn*, the *Quickset* of the farmer, and the sweet *May-Flower* of the merry children,—with its beautiful green, glossy foliage, its fragrant flowers, its bright red winter berries, its dense, living wall, could be grown as well in this country as in England, but for this we cannot hope. The Hawthorn seems perfectly at home in the moist climate of England,

flourishes in any spot where it has a chance to take root, makes perfec hedges, as secure against man or beast as a stone wall, and beautiful ornamental trees, to be found on every lawn. In this country the *Thorn* makes a beautiful, small tree, and is somewhat planted, but not as extensively as its merit deserves. The *White, Double White, Pink Flowering, Scarlet* and *Double Red* varieties, are valuable small trees, which we recommend to every one planting shrubs or trees. But we have little hopes that it will suc ced as a hedge, over a large extent of country. The borer attacks the plants and destroys many, and the *Aphis* injures the leaves, stops the growth, and by a little after midsummer, a Hawthorn hedge is a sorry sight indeed. Still, we know of some that do well."

THE BUCKTHORN.

This plant is a native of Northern Europe, Asia, and North America, and as it is found growing wild in Siberia might naturally be expected to have, what we in fact find it to pos s, a hardihood that will enable it to resist the most intense cold of our Canadian climate. Among its other very valuable qualities as a hedge plant, is the abundant supply of fibrous roots with which it is furnished, so that it is transplanted with the greatest ease, scarce one plant in five thousand failing to grow, and when once established it is very vigorous and thrifty. The leaves and bark are offensive to most insects, including the borer and Aphis; to cattle and to mice. The plants will thrive in all soils, and in all situations, in moist and springy places or dry and sterile spots, under the shade of trees or in the full sunshine; they are not liable to disease, no plant will bear shearing better, and with proper treatment will make a dense and long lived fence. The Buckthorn has not what can properly be called thorns, but the ends of the shoots are hard and spinous, and the number of these spines increases with age and continued clipping.

In forming a hedge, the plants should be set in a double row, not opposite to each other, but alternate, a foot apart in the row and six inches between the rows, and cut back so as to stand not more than two inches above the ground. For the first three years the soil should be kept loose and free from weeds. The next Spring after planting the hedge should be cut back to within six inches of the ground, but after this a foot of each season's growth may be left at each clipping until the hedge has attained the desired height.

Nothing is more ornamental on a farm than a live fence, and we hope that it will yet be seen that in the Buckthorn or Berberry, one or both of them, we have a plant with which the Canadian may hedge himself about at a reasonable outlay, and in time make our Canada homes and scenery as sweet and enticing as any of us have left on the other side of the Atlantic.

On Planting Apple Trees.

To the Editor of THE CANADA FARMER.

SIR,—There is room for great improvement in the mode of planting Apple Trees. It may be premised that in the greater part of the settled Townships of Canada, the land is no longer new, the soil is no longer fit to produce luxuriant crops of any kind, and in this, of course, must be included a crop of apple, or other fruit trees, without good culture and abundance of fertilizing matter.

In a large part of Canada the depth of the soil is limited. We come to hard, dry, cold soil, or stiff clay, and it is obvious that if we would not send the roots away down into this cold and ungenial region, we must plant shallow. Even if the size of the tree is such as to require a pretty deep aperture, rather let a small mound of good friable loam be made around each tree than have its roots put away down in the cold subsoil, where it so speedily becomes stunted, and ultimately dies. It is also necessary before planting, that the large tap root be closely pruned back and the side roots well spread out at somewhat more than an angle of forty five degrees, or rather precisely as the chicken sets down its foot, so that instead of having its roots directed right down, they branch out horizontally along the rich cultivated soil, where they can get air, and heat, and moisture, and plant food. This is nature's own method, and we should always imitate nature. Here, at least, we can neither reform nor improve. For even were the rich soil greatly deeper than it is, no tree or plant of any kind can thrive with its roots beyond the reach of atmospheric influences. Go into our natural forests and we see immense trees having their roots spread around, many quite on the surface, where in early growth they were simply mulched with leaves.

And not only is shallow planting a great desideratum, but heretofore the *distances* between trees have been far too great. It has been usual to plant out orchards with the trees 30 to 35, and even 40 feet apart; this takes from 35 to 50 trees per acre. It would be a great improvement to plant only 18 feet apart each way, and this takes 135 trees to the acre. If a man only wants to plant out 40 or 50 trees, he need not occupy an acre. He can do it quite as easily on a quarter or a third. But if good crops of fruit are wanted, it may safely be affirmed that *all* the fertility will be required for this purpose. If trees are intended to thrive and produce a remunerative crop, then the *entire soil* and *all* the manure that can be devoted to its enrichment must be reserved for *it alone*. A crop of weeds, of grass, or of cereals, simply divides the produce with the trees, and, as a rule, takes the lion's share. Root crops are less injurious; but even to grow roots in an orchard is the poorest possible economy. Let a quarter, a half, or a whole acre, as may be desired, be exclusively devoted to producing fruit, at the rate of 135 trees per acre, and at the end of twenty years it will have paid more than quadruple what could have been realized for all the different crops put together which could have been obtained from the same land with wide planting. Moreover, they will then be in the prime of luxuriant growth and fertility: whereas, according to the other method, visible signs of premature decay will be everywhere apparent. There are yet other strong reasons in favor of close planting. When only 18 in place of 30 to 40 feet apart, in a very few years the trees shelter one another; but not before fifteen to twenty years can there be any shelter in an orchard with trees 30 to 40 feet apart. Indeed none whatever until that shelter is useless. The trees are tossed about with tearing winds, and at the fruiting season much of it blown off, bruised and spoiled. This evil is almost entirely prevented by close planting. Again, after a few years planting, if the roots are not away down dwarfing and starving in the cold barren subsoil—they become so intersected and spread about that ploughing near them for any description of crop, bruises and tears them in all directions, and thereby inflicts incalculable injury upon the trees. It is true root pruning is beginning to be recommended in order to promote early fruiting, but this is very different from indiscriminately bruising and tearing up the roots. A root cut with a sharp knife will speedily produce fibrous rootlets in abundance—whereas tearing and bruising only causes speedy decay. For these reasons, I say let the ground planted be wholly devoted to the fruit crop—consequently a space of 18 feet apart each way is quite abundant. Should the branches threaten to obstruct, this can be guarded against and remedied by judicious pruning. Should it become necessary even cut out a tree occasionally altogether. By this method the crop per tree will be very much greater. Were there in maturity only three barrels in place of two, on each tree, and this is a very moderate estimate, the entire increase would be so obvious as to need no comment. Say for an acre:

By *old method*—
30 to 50 trees at 2 barrels each—60 to 100.
By *new method*—
135 trees at 3 barrels each—405.

Four to one for one year! This continued for a series of years is surely conclusive as to the value of the suggested improvements—shallow and close planting—and of devoting the land *exclusively* to a fruit crop. I have *tried* these methods to some extent during the past five years and have no hesitation in recommending them to others.

I am, &c., W. S.

Woburn, Dec. 24, 1863.

NOTE BY THE EDITOR OF THE CANADA FARMER.—Such communications are always welcome. The *experience* of Fruit Growers in all the different sections is just what is needed to enable us to plant suitable varieties and in a proper manner. That trees planted 18 feet apart will yield more bushels per tree than if planted forty feet apart is a new idea to us. Yet it may all be true in Scarboro.' We commend the subject to the careful consideration of those residing in the colder sections particularly. Close planting may prove of great service in resisting the severities of the climate.

☞ It is stated that linens of a coarse kind are now manufactured in Ireland that are not only relatively but absolutely cheaper than cotton.

☞ COCHINEAL insects have been imported into England alive, and have been placed in the Horticultural Gardens in Kingston.

Poultry Yard.

Poultry-Keeping.

To the Editor of THE CANADA FARMER.

SIR:—Taking you at your word, let me trouble you with a few lines touching the subject of poultry. Not many years ago, a strange disease seized the public mind. It was a kind of mental hallucination or hen-on-the-brain. The patient who was afflicted with that disorder could be seen any sunshiny hour of the day, surrounded by strange looking bipeds, "Brahma pooh-poohs," "Shanghighs," &c., listening with a strange delight to a sound very unlike the clarion ring of the chanticleer. I can bear testimony that the disease was full of danger, having taken it myself, and received for the price of ten dollars, a "Patriarch" of the breed, a costly prescription, which in my case soon brought health. This creature could stand on the ground and eat grain with the greatest ease off the head of a flour barrel.

MY HEN HOUSE.

Convinced that poultry-keeping to be made profitable, must be gone about in a common sense way, I set my wits to work to devise a suitable structure for a fowl house. The result was a small building of rough lumber, which any farmer with a fair amount of mechanical skill, and half a dozen tools, could easily erect. I began by planting 4 feet deep 14 feet long cedar posts, 6 feet apart, so as to have a house 18 by 12 feet, with a plate of 6 by 2 inches, on which was placed rafters with a quarter pitch, boarded and shingled, having a foot projection, with a plain facia and water trough. The cedar posts were mortised on the outside, to receive 2 by 4 inch scantling horizontally round about the bottom and the centre. The plate served at top. To these, perpendicular 1 by 12 inch rough boards were nailed and the joints battened over with ½ by 3 inch stuff. The boards were nailed horizontally to the posts on the inside of the house, and the intervening space filled with ashes clay, and tan-bark; making a very comfortable domicile. The building has a water-table of 8 by 2 inch stuff, and a similar piece at top under the roof projection between which the inch boards were sawed to fit. The house contains four hinged windows, two in each end, set in a rough frame rebated The interior was equally divided by partition, with centre door, and two slide traps about 4 feet up from the ground on each side of this centre door, with ladders for hens to pass through from one division to the other, and a similar contrivance for egress and ingress to yard and garden together, with a narrow door at either end for a person to pass through the building. I had by this arrangement two apartments of 9 by 12 feet each; the one served for roosting, the other for feeding, laying, and hatching. The north half was divided into two roosting divisions, with a passage of 2 feet 6 inches wide between the poles for passing through and cleaning out the droppings. These poles were let into sockets 18 inches apart, made in the riders or strings, which were so placed on an inclined plane from the gable and plate to the centre partition, that a person could comfortably pass under and lift off any chicken required. The south half contained tiers of laying boxes, so constructed that the hens could pass behind, and secretly enter into any box; for privacy and darkness are an essential condition, both in laying and hatching. A feeding hopper is placed in this department, supplying standing room for 24 hens at a time while feeding, and holding 4 bushels of grain that supplied only just so fast as required, and without waste or loss by rats, mice, or chickens.

MY BIRDS.

Now for my hens! I have succeeded in rearing about 100 per annum of the pure blood Black Poland, with white top-knot. They present a very beautiful appearance after retiring for the evening, sitting on those roosting poles in an inclined plane, one against an other, with their rich black plumage, crowned with a royal head-gear of white. It is a sight to be proud of. These fowls lay a greater number of eggs in a season than any other I know of. It is a beautiful thin-shelled, pure white egg, with a light coloured yoke, extremely delicate for the table. But they will not sit and hatch their eggs well. Their flesh is delicate, white, tender, rich and juicy. This breed is superior to the Dorking, except in fullness of breast and hatching propensities. I improved my stock in three years by making a proper selection of the male bird, and by a judicious selection of the finest form and texture of eggs out of many hundreds. Too much cannot be said in favour of this method of improvement. In fact I scarcely know where the standard of excellence can be placed, for domestic fowls are just as susceptible of

improvement as the hog, sheep, cow, or horse. But several years of strict attention have taught me that a cross between the Poland and Dorking is most desirable for all purposes. To prove this, I would have to enter into detailed statements, too long for this article

But allow me to say that whenever hens are forced to lay in the winter season by artificial means, it is at the sacrifice of summer laying. I am satisfied that farmers by a trifling outlay could make the rearing of poultry much more profitable than in the loose, slovenly way they now have of allowing their chickens to roam about, dropping their eggs where they please, scratching up the new-made garden to the annoyance of the thrifty house wife—making dirt generally, and bringing up sickly, mongrel broods that are not fit for the table. If I were a farmer I should be disgusted with such a sight about my premises. Those were good practical directions in your last number, and not much can be added but an easy plan and specification for a simple building. With a little energy on the part of the farmer, it is, as you observe, quite easy to make the rearing of poultry profitable and pleasant.

Yours respectfully,
A FANCIER.

Notes by Ed. C. F.—We are glad to receive communications such as the above. One good effect of them is to awake friendly discussion. The best judges admit that the Brahma and other Chinese breeds have many excellent points, and that their diffusion has had a beneficial effect on the commoner kinds Though the feat of which our correspondent speaks, was a sort of standard at one time, the best breeders prefer a style of Brahma, &c., *not* "high" in the "shank." A low, compact, well balanced bird of these breeds is by no means an unsightly object. The Polands are no doubt an excellent breed of fowls. They are fair layers, but the eggs are below average size, and, both in weight and number, are surpassed by the Spanish, Dorkings, and even by the "Shankhighs." Marian Doyle conducted experiments very carefully for two years with an equal number of Shanghaes Spanish Dorkings, and Polands, with the result above stated. As a *fancy* variety, the Polish rank high, and it is very much in their favour that they improve in appearance for several years, and do not fade and look rusty like some other varieties.

It is undoubtedly a mistake of our correspondent to regard winter-laying as a species of forcing brought about by "artificial means" If fowls are well kept, they will lay all the year round except at the intervals caused by sitting, moulting, &c. The means requisite for winter-laying are such as put them as nearly as possible into their natural condition, and supply them with food essential to the formation of yolk and shell. It is doubtless more natural for some breeds to lay in the winter than others. We have thoroughly tried all the leading breeds and find that the Brahmas and Shanghaes are unsurpassed as winter layers.

Profits of Poultry-keeping.

To the Editor of The Canada Farmer.

Sir,—In your first No. you have an article on "a profitable stock of fowls" which makes out the profit of keeping 17 fowls for 11 months to be $60 25, besides all the eggs consumed by a family of eleven persons. To make this balance in favour of the fowls, the cost of feeding is put very low for so large a number, while the sales made were at the most exorbitant rates. An average of 18 cents per dozen for eggs, and over 50 cents a-piece for chickens, are prices never realized in Canadian markets. The question for us is, will poultry-keeping pay here in Canada? I am Sir, yours, &c.,

IN DOUBT.

Toronto, January 20, 1864.

Note by Ed. C. F.—The article referred to by our correspondent was from the *Boston Cultivator*. Prices always rule high at Boston as compared with Canada. Just now, eggs sell wholesale there at 31 cts., and retail at 33 cents, and chickens are from 12 to 17 cents per lb. There is nothing marvellous in the story quoted, when the difference between the meridians of Boston and Canada is taken into account. Correcting the estimate all round to Canadian figures, there will still be a margin in favour of the fowls. We are quite aware that many are "in doubt" as to the profitableness of fowls, especially when all their food is purchased. But often mere guess-work is made on subjects of this kind. We invite balance sheets as to poultry-keeping from any of our readers who may have been at the pains to keep them.

The Household.

To the Editor of The Canada Farmer.

Sir,—I send you a few receipts which I have tried and know to be good, thinking they may be acceptable to your Household Department:

Cottage Pudding.—1 Cup sugar, 1 cup milk, 2 spoonfuls melted butter, 2 cups flour, 1 teaspoonful cream tartar, one-half teaspoonful of soda. Bake one hour. To be eaten with sauce.

Pork Cake.—1 lb. pork chopped fine, 1 lb. raisins, 4 cups sugar, 2 cups milk, 8 cups flour, 1 teaspoonful saleratus, cinnamon and nutmeg.

To Clean Black Silk or Ribbon.—To 1 pint vinegar, add 1 teaspoonful strong coffee, and one-half teaspoonful gum arabic, disolved in vinegar. Roll the silk in a cloth. Press before thoroughly dry, using muslin between the silk and the flat-iron.

E. A. H.

Hamilton, C. W., Jan. 21st, 1864.

To the Editor of The Canada Farmer.

Sir,—Feeling deeply interested in the progress of your Canada Farmer, I send you a few recipes for the Household Department:

For Cleaning Kid Gloves.—Dip a piece of white flannel in sweet milk, then rub on it white Castile soap. Gently rub the glove while on the hand.

Rich Plum Pudding.—One-fourth pound beef suet chopped fine, one-fourth pound raisins, one-fourth lb. currants, 2 eggs, 1 cup sugar, cloves and nutmeg. Flour to make quite stiff—boil 4 hours.

Soda Loaf Cake.—1 cup sugar, 1 egg, a piece of butter the size of an egg, 1 cup sweet milk, 1 teaspoonful cream of tartar, one-half teaspoonful soda, three-fourths pound flour. Season with lemon.

LOUIE M.

Hamilton, Jan. 22nd, 1864.

What Young People Should Know.—Under this head, the *Register of Rural Affairs*, for 1863, makes the following practical suggestions:

Every Farmer's Boy should know how,

1 To dress himself, black his own shoes, cut his brother's hair, wind a watch, sew on a button, make a bed, and keep all his clothes in perfect order, and neatly in place.

2 To harness a horse, grease a waggon, and drive a team.

3. To carve and wait at table.

4. To milk the cows, shear the sheep, and dress a veal or mutton.

5. To reckon money and keep accounts accurately, and according to book-keeping rules.

6. To write a neat, appropriate, briefly expressed business letter, in a good hand, to fold and address it properly, and write contracts.

7. To plough, sow grain and grass seed; drive a mowing machine, swing a scythe, build a neat stack, and pitch hay.

8. To put up a package, build a fire, whitewash a wall, mend broken tools, and regulate a clock.

There are many other things which would render boys more useful to themselves and others,—these are merely a specimen. But the young man who can do all these things well, and who is ready at all times to assist others, and be useful to his mother and sisters, will command far more respect and esteem, and be more inwardly happy, than if he knew merely how to drive fast horses, smoke cigars, play cards, and talk nonsense to foolish young ladies at parties.

Every Farmer's Girl should know how,

1. To sew and knit.
2. To mend clothes neatly
3. To make beds.
4. To dress her own hair.
5. To wash dishes and sweep carpets.
6. To trim lamps.
7. To make good bread, and perform all plain cooking.
8. To keep her room, closets, and drawers, neatly in order.
9. To work a sewing machine.
10. To make good butter and good cheese.
11. To make a dress and children's clothes.
12. To keep accounts, and calculate interest.
13. To write, fold, and address letters properly.
14. To nurse the sick efficiently, and not faint at the sight of a drop of blood.
15. To be ready to render suitable aid and comfort to those in trouble in an unostentatious way.
16. To receive and entertain visitors when her mother is sick or absent.

A young lady who can do all these things well, and who is always ready to render aid to the afflicted and to mitigate the perplexities and troubles of those about her, will bring far more comfort to others and happiness to herself, and be far more highly esteemed, than if she only knew how to paint, dance, simper, sing, and play on the piano.

Clove Cake.—Three pounds of flour, one pound of sugar, one pound of butter, one ounce of cloves. Wet with molasses enough to roll out thin. Bake quick.

Delicate Cake.—One half pound of butter, one pound of sugar, one pound of flour, one teacup of milk, the whites of seven eggs, one teaspoonful of cream tartar, one-half teaspoonful of soda.

Frozen Pumps.—Almost every one knows what a vexation it is to have a pump frozen solid on a cold winter morning. This may be obviated by setting a headless barrel around them and filling it with horse manure mixed with strawy litter. A little care in this particular will save much time spent in "thawing out."

Family Jars.—Jars of jelly, jars of jam,
Jars of potted beef and ham,
Jars of early gooseberry nice,
Jars of mince-meat, jars of spice,
Jars of orange marmalade,
Jars of pickles, all home-made
Jars of cordial, home-made wine,
Jars of honey, superfine;
Would the only jars were these
That were found in families!

Smoky Chimneys.—A correspondent of the *London Builder* gives the following cure for a great and common evil:—"A smoky chimney and a scolding wife are two of the worst evils of domestic life," says an old proverb, and to obviate the first evil, ingenuity is ever racking its brain. Hence Regent street and every part of the metropolis has its house tops bristling with pipes, and deformed by cowls of every conceivable variety. Now, I have built many chimneys in all possible situations, and found one simple plan everywhere succeeded, the secret being only to construct the throat of the chimney, or the part just above the fire-place, so small that a man or boy can barely pass through it. Immediately above, the chimney should be enlarged to double its width, like a purse, to the extent of about two feet in height, and then diminish again to the usual proportions. No chimney that I ever constructed thus, smoked."

The Right Way to Cook a Beefsteak.—Let the steak be perfectly fresh. Unless very tender pound it well, by which we mean to pound it until the fibres are well separated. Season it with pepper only. Be certain not to put a grain of salt on it until it is cooked. Have your pan ready with enough boiling water to partially cover the steak. Cut up a good sized lump of nice fresh suet. Put the steak and suet into the pan together. Let them boil for five minutes, turning the steak once. Pour off the water and reserve it for the gravy. Spread the small pieces of suet on the bottom of the pan, and lay the steak on them. Fry the steak according to taste. Lift it when done, and make the gravy with a little browned flour, adding the water in which the steak was boiled. Season the gravy well and salt the steak properly, before the gravy is poured over the meat. If these directions are properly observed, it will require a good judge to tell it from broiled steak. It is an easy, quick, excellent, and economical method of preparing a steak. Try it, but be certain to stick closely to the directions.—*The Culturist.*

Markets

Toronto Markets.

"Canada Farmer" Office, Feb. 1, 1864.

During the past few days the supply of grain and produce has been very limited, and all advance of price has been for the time arrested. The breaking up of the sleighing is preventing provisions from coming to Toronto market. Fall Wheat has been active, but to-day it showed symptoms of a less degree of firmness in price. Spring Wheat is very active and rising. Barley is in little request, but the price is steady. Pork is active, and getting dearer.

Flour—Superfine at $3 75 for shipment per brl; $4 to $4 10 for home consumption; Extra, $4 25 to $4 50; Fancy, $4 10 to $4 20; Superior, $4 75 to $5; Bag Flour, $4 per 200 lbs.

Fall Wheat, 85c to 98c for common to choice per bushel; $1 00 to $1 03 for good to choice; $1 05 to $1 08 for Extra.

Spring Wheat in good demand at 7[illegible] and 85c per bushel; one load brought [illegible] per bushel.
Barley at 70c to 77c per bushel
Oats at 38c to 41c per bushel.
Peas 45c to 57c per bushel.
Hay $9 50 to $10 00 per ton.
Straw $5 to $6 per ton.
Bran $10 a ton at the mill.
Shorts $13 to $15 per ton.
Hides (green) at 5c to 6c per lb., the latter price for extra.
Calfskins at 7c to 9c per lb.
Sheepskins at $1 25 to $1 75.
Lambskins at $1 25 to $1 70.
Pelts—Plucked 30c to 40c each.
Coal $7 25 to $9 per ton.
Wood $4 25 to $5 50 per cord.
Provisions—*Hams* $9 50 to $10 per 100 lbs. *Bacon* $6 50 to $7 per 100 lbs. *Cheese* $9 50 to $10 per 100 lbs. wholesale; 12½c to 15c per lb. retail.
Beef, by the quarter, from farmers, 3½c to 3¾c for fore quarters; 4½c to 5c for hind quarters. In the market, inferior 3½c per lb.; second quality, 4c to 4½c per lb.; extra 5c per lb. wholesale; 3½c to 6½c per lb. for ordinary; 6½c to 7c for superior, retail.
Calves scarce at $4 and upwards.
Sheep at $4 50 to $5 50 each, according to size and quality.
Pork—Dressed $4 50 to $4 75 for common to good; $4 75 to $4 90 for good to choice; occasionally some extra choice heavy hogs bring from $5 to $5 25.
Butter—Fresh, wholesale, at 11c to 15c per lb; retail, 15c to 25c per lb. Tub butter, dairy packed, 16c to 18c, according to quality. Tub butter, common, 11c to 15c per lb.
Eggs 16c to 25c per dozen, wholesale.
Chickens plentiful at 25c to 40c per pair.
Ducks 30c to 45c each.
Geese 30c to 55c each.
Turkeys 55c to $1 50 each.
Salt $1 75 to $2 per brl.
Water Lime $1 50 to $1 60 per brl.
Potatoes 25c to 40c per bushel, wholesale; 50c to 62½c per bushel, retail.
Fresh Fish 17c and upwards each.
Apples—Common to good, $2 to $2 75 per barrel; extra, $3 per barrel.
Coal Oil 40c to 45c for Canada; 45c to 65c for Pennsylvania.
Wool scarce at 35c to 37c per lb.

New York Markets.—Feb. 3.—*Flour.*—Receipts, 11,776 barrels; market 5c to 10c better, with fair demand; sales, 6,200 barrels at $6 50 to $6 65 for superfine State; $6 95 to $7 10 for extra State; $7 10 to $7 25 for choice do; $6 55 to $6 75 for superfine Western; $7 05 to $7 70 for common to medium extra Western; $7 40 to $7 60 for common to good shipping brands extra round hoop Ohio. Canada Flour 5c to 10c better; sales 400 barrels at $7 00 to $7 25 for common—the latter an extreme figure; $7 30 to $8 90 for good to choice extra. Rye Flour steady at $5 50 to $6 60. *Grain*—Wheat—receipts, none; market 1c to 2c higher; with only limited business; sales, 41,000 bushels at $1 55 to $1 59 for Chicago spring; $1 56½ to $1 61 for Milwaukie Club; $1 60 to $1 62½ for amber Milwaukie; $1 66 to $1 70 for winter red Western; $1 71 to $1 73 for amber Michigan. Rye and Barley quiet. *Corn*—receipts, 7,792 bushels; market 1c better, with active speculative demand; sales 56,000 bushels at $1 24 to $1 26½ for shipping mixed Western in store, closing heavy at about $1 25 *Oats* quiet and firm at 85c to 88c for Canada; 86c to 89c for State, and 87c to 90c for Western.
Cattle Market.—Feb. 1.—The great weekly market for Beef Cattle, which opened this morning at Forty-second street and Fifth avenue, proves to be one of the hardest for drovers that they have met with this winter. The rates, which range from 7c to 12½c a pound net, are estimated at 1c to 2½c less than last Monday. Owners of first-class cattle report them at $10 to $15 a head less than a week ago. Last Monday the price of many cattle was equal to 12½c to 14c per lb. To-day it is 11c to 12½c. Some salesmen say that they have sold cattle at $90 to $95 a head, which were just as good as some sold last week at $110 to $115 each. The number of fresh cattle on sale to-day is a little over 4,100. The *Hog* market is lightly supplied this morning, and prices better than last week. They are selling at $7 50 to $7 90 per cwt., live weight. The *Sheep* market is overstocked and very dull. It will be hard to make any droves average over 7½c. per lb., live weight, and it will be quite impossible to sell out all there are in market before more arrive.

Montreal Markets.—February 1.—*Flour*—Pollard's, $2 25 to $2 50; Middlings, $2 70 to $2 90; Fine, $3 50 to $3 70; Superfine No. 2, $3 70 to $4 00; Superfine No. 1, $4 35 to $4 40; Fancy, $4 60 to $4 75; Extra, $5 00 to $5 15; Superior Extra, $5 25 to $5 50. Bags, $2 30 to $2 40. *Wheat*—U. C. Spring, 90c to 93c, ex cars; U. C. Winter, 95c to $1. *Oatmeal*—$5 00 per barrel of 200 lbs. *Barley*—70c to 75c per 50 lbs. *Peas*—Good, 65c to 70c per 66 lbs. *Oats*—About 40c per 32 lbs. *Butter*—Fair to choice from 14c to 19c. *Pork*—Mess, $14 50 to $15 50; Prime, $11; Prime Mess, $12. Market firm, with upward tendency. *Dressed Hogs*—$6 00 to $6 30; scarce and in demand. *Lard*—Firm; barrels 9c to 9½c; kegs 9½c to 10c. *Tallow*—8½c to 9½c. Fair business doing. *Cut Meats*—Hams, sugar-cured, canvass, 10c to 12½c. *Ashes* per 100 lbs., Pots, $5 45; Inferiors, $5 50; Pearls, $5 60 to $5 55.—*Witness.*

Buffalo Markets—Feb. 1.—The market for the week has ruled steady, with moderate business doing in *Pork* at $21 for heavy mess; $20 for light mess; $19 for prime mess; $18 50 for old mess. *Lard* firm, with good demand at 13¼c to 13¾c. *Smoked Meats*—hams, sugar-cured, firm and in good demand at 12½c to 13c; shoulders 9c to 10c. *Prime Mess Beef* nominal at $12 to $12 35. *Dried and Smoked Beef* in fair consumptive request at 12½c to 13c. *White Fish*, in ½ barrels, at $6 00.

Guelph Markets.—Feb. 1.—*Fall Wheat*, per bushel, 80c to 97c; *Spring Wheat*, 70c to 80c; *Oats*, 40c to 41c; *Peas*, 45c to 52c; *Barley*, 70c to 80c; *Pork*, per barrel, $1 50 to $5 12½.

Chicago Market—Feb. 2.—*Cattle*—Good demand and limited receipts; sales at 3c to 3¼c for medium to good. *Hogs*—Firm. Live 5¼c to 5¾c for medium to good. Dressed advanced 25c to 30c per 100 lbs. in bulk. Sales at 7c to 8c for lots dividing on 200 lbs. *Wheat* ¼c higher. Sales No. 1 at $1 17, and No. 2 at $1 10¾c to $1 11. *Corn*—Sales of old at 77c to 79¼c, and new at 90c to 91c. *Oats*—Sales at 64¾c to 65c. *Rye*—Sales No. 1 at $1 01 to $1 05. *Barley*—Neglected.

Hamilton Markets—Feb. 2, 1864.—The unfavourable weather during the past week has naturally affected the supplies, and prices have advanced in certain cases. *Grain*—Fall wheat 85c to $1 00; Spring do., 80c to 85c. *Barley* 75c to 80c. *Buckwheat*, 37½c to 45c. *Peas*, 50c to 55c. *Oats*, 40c to 43c. *Corn*, 70c a 75c. *Oatmeal* per brl. $5 00. *Provisions*—*Potatoes*, 50c to 62½c per bush. *Butter*, per lb., 25c; do. in firkins, 12c to 15c. *Eggs* very scarce, at 20c to 25c per dozen. *Chickens*, per pair, 37½c; *Ducks*, 50c; *Turkeys*, 70c to 75c. *Mutton* per lb. 3c to 4c. *Cheese* per lb. 10c to 12½c. *Firewood*—No. 1, $4 50 to $4 75; Nos. 2 and 3, $3 to $3 50. *Hay*, per ton, $7 to $10, according to quality.—*Spectator.*

London Markets.—Feb. 1, 1864.—*Grain*—*Fall Wheat*, per bushel, 95c to $1 05; *Spring Wheat*, 78c to 81c. *Barley*, per bushel, 75c to 80c. *Oats*, per bushel, 39c to 40c. *Peas*, per bushel, 48c to 50c. *Corn*, per bushel, 50c to 52c. *Buckwheat*, per bushel, 30c to 35c. *Rye*, 56c. *Dressed Hogs*—Very few offering, and prices quiet at $5 to $5 25.—*Free Press.*

Albany Cattle Markets.—Feb. 1.—*Beeves.*—The market this week is a "blue" one for the sellers. Supply very large, demand light, prices on the decline; 25c per 100 lbs. decline on extra, and on middling and inferior grades 35c to 50c per 100 lbs., live weight. Extra, $6 15 to $6 50; first quality, $5 20 to $5 60; second quality, $4 to $4 50; third quality, $2 75 to $3 25. *Sheep*—Supply double what it was last week, but in fair demand, especially extra fine wooled. Prices remain about the same. *Hogs* dull. Prices from 6¾c to 7¼c per lb.

Advertisements.

THE CANADA FARMER:

A Semi-Monthly Journal of Agriculture, Horticulture, and Rural Affairs,

PRICE, ONE DOLLAR PER ANNUM.

GEORGE BROWN, Proprietor and Publisher.

OPINIONS OF THE PRESS.

From the Rural New Yorker, Rochester, N. Y.

The Canada Farmer.—Some weeks ago we stated that Hon. George Brown, of Toronto, was about to commence the publication of a semi monthly Agricultural Journal entitled The Canada Farmer. The initial number of this journal is before us, and is highly creditable in both contents and appearance. The several departments are well filled, and comprise an unusual variety—a better *melange*, we think, than the editor and contributors will be able to present in each subsequent issue, when time to prepare matter will be limited. Mr. W F. Clarke, of Guelph, is the chief editor A number of able contributors are announced—among others Mr Geo Buckland, Professor of Agriculture in Toronto University, who takes charge of the Live Stock Department, and D W. Beadle, Esq , of St. Catharines, who takes charge of the Horticultural Department. We cordially welcome The Canada Farmer, and wish it much success

From the Christian Guardian.

"The enterprise of the Publisher and the ability of the Editors give assurance of a respectable agricultural paper , and this first number is full of useful matter."

From the Peterboro' Review.

We have received the first number of this new publication, issued by Mr. George Brown, of Toronto, and have great pleasure in recommending it in the most unqualified terms to our agricultural friends. * * It will be disgraceful to the farmers of Canada if The Canada Farmer is not well sustained."

From the Quebec News.

Judging from the contents of the first number, we are convinced that it will, if sustained, prove a most valuable acquisition to agriculturists in all parts of the Province."

From the Brant Expositor.

"The number before us is a good one, containing a large amount of useful information. We predict for this new publication a large support, as it is just the thing the farmer requires."

From the Dundas Courier.

"Under such auspices, we imagine it cannot but prove in every way successful. The number before us is a fair specimen of what we may expect in this journal, and it is alike creditable to the Proprietor and the Province."

From the Sherbrooke Gazette.

"We have little doubt that The Farmer will soon obtain a large subscription list, and become the agricultural paper of Canada."

From the Belleville Intelligencer

"At length we have an Agricultural journal which has some claim to the patronage of Canadian Farmers."

From the Smith's Falls Review.

"This publication, so anxiously looked for by farmers and others, is now issued The high expectations formed of it are amply justified, both as regards the appearance and contents. As the only Agricultural Journal in Canada, its claims, irrespective of its merits, are greater than any other, and we advise farmers in this vicinity to come to our office and examine a copy, and we will answer for the rest."

From the London Free Press.

"There is ample room for such a publication, and if it is conducted as we expect it will be, will prove of immense value to Canadian farmers."

From the Quebec Gazette.

"Judging from the contents of the initial number of this publication, we are convinced that it will, if sustained, prove a most valuable acquisition to agriculturists in all parts of the Province It is promised that all party and political questions will be studiously avoided, the desire of the publisher being to establish a journal which farmers and horticulturists of all parties and creeds can support with confidence, and through which they can send their views to their brother agriculturists throughout the Province We sincerely wish an extensive circulation to The Canada Farmer."

From the Waterloo Chronicle.

"Such a journal has become a necessity to the Canadian farmer, and we are glad, too, that the task of supplying it has been undertaken by one likely to bring it to a successful issue. The first number is very creditably got up."

From the Pembroke Observer.

It is very neatly got up, and as nothing will be spared to make it a first class journal, we trust it will meet with the encouragement which it deserves. As it is the only agricultural journal now published in Upper Canada, it should be in the house of every farmer in the land."

From the Guelph Mercury.

"The arrangement of the articles and selections is good, the contents varied and interesting, and the information conveyed of a valuable and useful character The Canada Farmer deserves, and will no doubt secure a very large circulation among the farmers throughout Canada. '

From the Quebec Chronicle.

"The first number, which we notice elsewhere more fully, is a highly creditable production."

From the Kingston B. American.

"This new periodical will prove an invaluable acquisition to the farmers in Central Canada, and will meet a want not fully realized until supplied The first number is replete with valuable information and matter of interest to the ruralist, promising well of its future character, and with a due share of the attention of the enterprising publisher, it will speedily secure an extensive circulation, and enter upon a career of usefulness and profit."

From the London Advertiser.

"Typographically it is very neat while the selections and editorials are just such as the farmer will profit by attending to."

From the Ingersoll Chronicle.

"Most of the articles are original, and are more particularly intended for the benefit and instruction of the *Canadian* farmer—something we have hitherto been without. We need scarcely say that we wish The Canada Farmer unbounded success, as it is a work every way worthy of support."

From the Bradford Times.

"Our farmers are thus supplied with a want long felt in this country, and they have now the opportunity afforded them of supporting a paper which cannot fail to be interesting and valuable to them in the highest degree."

From the Lindsay Post.

"We have received the first number of this new Agricultural journal. Judging from its appearance and contents, it promises to become—what it aims to be—a first class agricultural paper."

From the Oil-Springs Chronicle.

"In every respect it far surpasses our expectations, and we can only wonder how Canada has done without such a paper till now. It is replete in every department. In fact it is a want supplied which every intelligent farmer in the Province should avail himself of, and we feel assured that it has only to be known to receive the patronage justly its due."

From the Perth Courier.

"We say emphatically and with confidence, that this is just the paper for every farmer in Canada—one that will give him every information he desires about farming and its connections. We have looked carefully over it, and feel assured that every farmer who does the same, will feel convinced that he cannot do without it, and subscribe at once."

From the Owen Sound Advertiser.

"The first copy of this new Journal has been received by us, and we must confess our high approbation of its merits, and urgently recommend our friends to subscribe for it. The editorials are extremely well written, and particularly interesting and instructive."

From the Newburgh North American.

"It contains a rich variety of valuable news and information to Agriculturists, Horticulturists, Florists and Mechanics, and should receive a generous support from the parties it is intended to benefit."

From the Norfolk Messenger.

"We are very much pleased with the general appearance of the publication. The articles appear to be written by men well acquainted with the subjects upon which they write, and we have no doubt The Canada Farmer will prove a valuable ally to the agriculturist, thorticulturist, and stock raiser."

From the Paris Star.

"It is well printed, and reflects credit on the publisher and editors alike. We wish the proprietor success in his undertaking."

From the Prescott Telegraph.

"It is admirably got up, and its rich and varied contents are well adapted to the requirements of the class amongst whom it is intended to circulate. Every farmer should subscribe for it"

From the Barrie Spirit.

"It is got up in neat style. It will secure a large circulation. Send your orders at once."

From the Brockville Recorder.

"It is well printed, on fair paper, and contains a large amount of matter interesting to the farmer. It is the only agricultural paper published in Canada West, and ought to be well sustained."

From the St. Catharines Journal,

"The first number of this paper has been issued, and is decidedly the best attempt ever made in Canada to produce a readable Agricultural paper. * * The Farmer must meet with success, as it richly deserves it, and we believe the Canadian farmer is not so dead to his own interests as to neglect or refuse to patronize a paper of its character."

From the Picton Times.

"It is very well printed, on good paper, and contains a great variety of short, interesting articles on important subjects connected with the Agriculture of this country. The Editorial Department gives promise of being well conducted. The articles are written in an easy and natural style, which we hope will be persevered in."

From the Chatham Union.

"It is the only paper of the kind published in Upper Canada, and fully comes up to the promise made in the prospectus of a first class Agricultural Journal. It is a large, well conducted, neatly printed periodical, and should be in the house of every farmer in the land."

From the Woodstock Sentinel.

"It is what we expected it to be, and it will not be creditable to farmers if it does not succeed in establishing itself as a permanent organ of the Agricultural interests of Canada."

From the Galt Reporter.

"The first number of The Canada Farmer has been received, and appears to give satisfaction to our agricultural friends. The paper is neatly got up, in a handy form for binding, and the articles are well written."

From the Niagara Mail.

"The first number of The Canada Farmer looks exceedingly well, is a credit alike to the Publisher and the Province, and exhibits a variety of articles well suited to the farmers of Canada generally—Upper Canada particularly."

From the Milton Champion.

"It is neatly got up, and is in every respect a vast improvement May the enterprising publisher find it a profitable undertaking."

From the Brampton Times.

"The first number contains a vast amount of interesting reading matter, which is admirably selected and placed under separate headings We wish The Canada Farmer long life—prosperity it will from its own merit command. It is beautifully printed, and embellished, and is sent to the world in such a form that every year's numbers can be bound and kept for future reference."

From the St. Catharines Post.

"We confess that when we first read its prospectus, we had some misgivings as to whether it would come up to that standard of excellence which would enable it to compete successfully with American publications which now circulate widely in this Province. * * We are most agreeably disappointed. The Canada Farmer contains sixteen large quarto pages. Its typography is neat and clean , its arrangement is judiciously made ; and its illustrations are well executed. * * Our conviction is that The Canada Farmer will widely circulate in this Province, and soon drive all other competitors from the field."

From the Dundas Banner

"We admire The Canada Farmer as a paper calculated to supply a want long felt in the country."

From the Belleville Chronicle.

"It contains sixteen pages of three columns each, and in point of style, extent and variety of information, and adaptability to the wants of the Canadian farmer, is highly creditable. One dollar per annum for a paper of this size, published once a fortnight, places it within the reach of every farmer and husbandman."

From the London Prototype.

"It presents a most respectable appearance, and contains a vast fund of valuable and useful matter well suited to the farmer, and in fact to the public generally."

From the Cobourg Star.

"A good beginning has been made, and we hope the enterprise of the publisher will receive the support and encouragement which it merits. Our Agricultural Societies, we have no doubt, will gladly render every assistance."

From the Canada Christian Advocate.

"The first number of this publication has been received, and, we believe, fully redeems the promises made respecting it in the published prospectus. The gentlemen who have been engaged to contribute to its pages are thoroughly practical and scientific, and our farmers and gardeners could not do better than send a dollar to the publisher, requesting him to place their names on the subscription list. We wish The Farmer unbounded success."

From the Omemee Warder.

"It is a credit to Canada, and will be of great value to the farmers of the Province The able *corps* of writers announced is alone a guarantee that it will be a work which will command the confidence of agriculturist or horticulturist, and we strongly recommend it to both."

From the Toronto Freeman.

"The original articles and the matter quoted, as far as we can judge, are practical and convey much useful information to the class of readers for which the publication is intended."

From the Markham Economist.

"We have received the first number of this valuable paper, and have no hesitancy in pronouncing it a most excellent journal—well suited to the wants of the farming community."

From the St. Mary's Standard.

"It is really a neat looking and well printed serial, destined, we think, to become popular with our Canadian people."

From the Prescott Messenger.

"The first number of Mr. Brown's new Agricultural paper is at hand, and it is really a most creditable production. It is printed with beautiful new type on fine paper. The engraving is very excellent ; its articles, both original and selected, show its *corps* of editors well up in both the theory and practice of agriculture. In point of cheapness it will vie with any of the American periodicals."

From the Bowmanville Statesman.

"Its contents are well prepared and selected, and the first number gives promise of a very valuable auxiliary to the agricultural community. We have already, by advertisement, published the terms of the paper ; and can now assure farmers that they will be well repaid by subscribing for The Canada Farmer."

From the Perth Standard.

"It will have an immense circulation."

From the Toronto Irish-Canadian.

"The first number of this agricultural serial has been received, and we must say that nothing superior, either in the selections, the illustrations, the quality of the paper on which it is printed, or the beauty of its typographical execution, has come under our notice in this Province or the United States. It runs over in every column with matter of the most useful and instructive character to the farmer, the gardener, the stock-breeder and the horticulturist. Every farmer in Canada should, and no doubt will, have it in his family."

From the Windsor Record.

"Its contents embrace articles of practical utility in every branch of agriculture, and we hope The Canada Farmer will be productive of much good to the farming community."

From the Norfolk Reformer.

"Its contents are varied, and are interesting not only to the farmer, but to the general reader. We hope that the Canadian public will give The Canada Farmer a support that will make it a permanent institution It is too bad that Canadians should be obliged to rely solely upon American agricultural papers to supply their wants. The Farmer is cheap at $1 a year, and is free of postage."