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The Field.

Corn for Fodder.

It is very doubtful whether any other green forage plant can be named, which, in this climate, yields so large a product per acre as Indian Corn. For soiling purposes, its value is very great. Sown about the first of June, so as to incur no risk from frost, it grows with wonderful rapidity, its broad long leaves drinking in from the sun and air the nutriment suited to its nature. It is valuable too as a crop for fodder, but the difficulty is so to cure and stack it as to avoid mildew and rot. This, however, can be done by proper care and attention. In the first place, to have good fodder, corn must be cut before the leaves and stalks begin to dry up;—in fact while it is yet green. So soon as the corn is glazed, it may be cut without detriment to the grain. The proper time may easily be ascertained by this rule even when corn is sown broad-cast, as there will always be stray stalks around the edges of the patch, which will mature ears. The second step is, to put the stalks up in shocks. Where material, such as oat straw, &c., can be had for bands, the best way is to make the bundles of a handy size, and then stack them somewhat after the manner in which grain sheaves are made into shocks. After husking, if a crop of grain has been the main object, or in the case of broad-cast corn, when the stalks are pretty thoroughly cured, the third part of the process will need attention, viz: storing up for winter use. A great blunder is often committed, that of stowing away corn stalks after the fashion of hay in a mow, in the barn. This is infallibly to spoil the whole. No matter how dry corn fodder may appear, there is always enough moisture in the butt of the stalk after standing for weeks on the ground, to insure heat and mildew, when closely packed in a barn. It is better to make a stack in a convenient place close to the stables and sheds, and to build it in as loose a manner as is consistent with due protection from the weather. A good plan is to fix a stout pole some 15 feet long into the ground, and set the bundles around it, capping the whole so as to shed rain. Another good way is to make the stack entirely with corn bundles, first setting a row of bundles perpendicularly with the butts firmly against the ground, then a row on each side with the tops pressing firmly against the first row, and inclining at an angle of about 60 degrees. Next a tier on each side resting on the bands of the last row. Then begin at the ground again and carry up a tier on each side as before, taking care that the last row of each tier shall cap the rick. Put up in some such way as this, so as to expose the stalks to the air, and yet protect them from the rain, they will keep fresh and good, and when the snow is on the ground, and winter's reign established, they will be greedily eaten by sheep and cattle, for both of which they form very nutritious food.

Couch Grass.

A RECENT number of the *London Agricultural Gazette* begins its leading article by asking the question? "What is the plant which most occupies the attention and engages the interest of the British farmer?" Strange to say, this is the reply to the question: "It is *Couch Grass*." This question and answer not only indicate that British farmers are excessively troubled by this pest of the soil, but it is one of many proofs of that anxiety and diligence in regard to the extirpation of weeds, which many slovenly Canadian farmers would do well to take both as a rebuke and a lesson.

Couch grass is already very troublesome in many parts of this country, and the greatest pains ought to be taken in order to annihilate it. Yes, annihilate is the word; nothing short of utter extinction will do, and that is no easy task. The *Genesee Farmer* referring to this nuisance, speaks of a noted farmer who had had considerable experience with couch grass, and who was asked by a neighbour the best way to destroy it. With a merry twinkle of the eye, he replied, "Fork it up carefully, so as not to leave a particle of root in the ground. Then put it on the top of a stump, where the sun can scorch it. Then take a stone and hammer it out flat.—If the wind does not blow it off the stump, I think it will die in the course of the summer or winter following." In this jocose method, the wonderful tenacity of life which characterizes this species of grass, was well brought out. It can only be got rid of by a war to the knife of downright extermination.

Bones.

THERE is a wealth of manure of the best quality in bones, and they should by all means be preserved, and turned to good account. Even the small quantity comparatively, which is thrown away as the waste of the family kitchen, is by no means to be despised. There are various methods by which they may be prepared for application to the soil. Most bones may be broken up by a heavy iron hammer or mallet, but for immediate effect it is desirable to reduce them to a state of greater fineness, in fact, to bonedust. They may be burned, and then readily reduced to an impalpable powder. Piled up with wood, they burn easily, and it is said a wheel-barrow load of wood will burn a ton of raw bones, leaving a mixed white and coaly mass, which is very easily broken up. Bones may be prepared for use by fermentation. There are various ways of doing this. The bones, either whole or broken into large pieces, which is the better mode, may be thrown into a box, barrel, or hog-head, and let down into the ground in a moist place, where the drainage of the cow-yard, the urine from a privy, soap-suds, dish-water, or any water containing organic matter, liable to become putrescent, may keep them constantly moist. Any other refuse animal matter may be thrown into the same receptacle. In

default of a suitable vessel, a hole in the ground will answer the purpose. Let it be two or three times as wide as it is deep, and if the bottom be of clay, it will be all the better. A coating of fresh stable manure to the depth of eight or ten inches, will hasten the process. Some coal dust, or charcoal finely broken, put under the manure will absorb the escaping ammonia and prevent an offensive smell. In from four to six weeks, the hard bones will have become so soft, that a spade may be forced through them easily. They should now be mixed with loam, decomposed muck, or any well-rotted manure, and applied to the land. Another process is to pack away the bones in a hog-head or box, and mix good, unleached wood ashes with them, (about a bushel of ashes to a barrel of bones will do) pouring water or soap-suds over them. After five or six weeks, the water may be allowed to evaporate and a decomposed soapy mass will remain which may be dried, pounded up and applied to the soil. Or the bones may be collected in a pot, tight box, or barrel, and covered with lye. This will reduce them to a soft pulpy mass. Here you have precious stuff.—Dilute it and you will have the very best liquid manure. Or if preferred, it may be mixed as above directed, with loam or muck, and applied in that form. Every farmer and gardener, should rigidly economize the bones. Let none be lost. It is better to plough or dig them under, than do nothing with them. But by the above methods, all of which are simple and practicable, this valuable manure, so much of which is now wasted, may be turned into speedy and profitable use.

MANURE SPREADER.—An ingenious American has invented some machinery by which a load of manure can be well spread upon land, without hand labour. The waggon used for hauling it has a moveable bottom, and is provided with self-acting forks, which tear the manure to pieces and draw it upon a conical screen, by which it is regularly distributed upon the land. The *Scientific American* says that, "the machine forms a very efficient and convenient one for the purpose."

Hungarian Grass.

SOME farmers persist in ranking this product among the humbugs of the day, but there seems to be ample evidence going to show that on suitable soil, it is one of the most valuable of forage crops. A writer in the *Country Gentleman* who has raised this grass for four successive seasons, says he has never failed to have "tremendous crops." He adds, "I can show positively, that I have raised five tons of cured hay to the measured acre." He recommends it highly as a winter food for horses, and on the whole considers it the most valuable grass crop he can sow.

For the benefit of those who are disposed to try this comparatively new product we append some brief directions as to the mode of cultivation. Prepare

the ground as for oats, or spring wheat. Do all the dragging before sowing. Sow from 12 to 28 quarts per acre, as you desire your hay fine or coarse. After the sowing a very light wooden-tooth drag will do, but if the ground is in a right state (dryish) a roller is better. If the soil is fine and you can sow immediately before a heavy rain, neither dragging nor rolling is required. Sow whenever it is the right time to plant corn. It is like corn, and will not grow until corn would, and frost will kill it as quickly. Time of harvesting, ninety days from sowing. It will not do to sow it as a seeding crop for other grasses to follow, as its growth is so dense, as to overtop, shade and destroy every thing else, even weeds.

Flax Manufacture.

To the Editor of THE CANADA FARMER

SIR, Twenty years ago there was little or no word about growing flax in Canada. Then, and until lately, we could get any amount of cotton goods. This is all changed now Cotton is not only king but rules without mercy. He charges what he likes and gets what he charges. Cotton warp yarn was wont to be about one dollar and a quarter the bunch, now it is no less than three dollars and a quarter. Whether flax is destined to take the place of cotton to some extent time can only tell, but I have seen as good linsey-woolsey in Scotland as I ever saw cotton-wincey in Canada. The supply of cotton, hemp and flax should keep pace with the increase of population. Is it doing so? I rather doubt it. Only look at the population of Canada now and twenty years ago, and the rest of America besides. It cannot be supposed that the flax-growing countries of Europe are clearing new acres as the population of the world is going on. Hence we must grow flax whether we will or not. It is a common complaint in the mother country that enough of the raw material cannot be got. And it is not very much wonder since one town alone in Scotland, in 1839, imported no less than 52,462 tons of flax and hemp, and had 41 spinning mills in full blast, while young Canada has only yet one in embryo.

There is one fact which ought to have a good deal of weight in promoting the growth of flax, and that is the great expence of importing and exporting all the flax and hemp goods which the Canadian people purchase. In the first place the most of the raw material is imported from Russia into Britain. Then it goes into the hands of the wholesale merchant, he sells it to the mill spinner; the mill spinner sells the yarn to the cloth manufacturer, and he sells to the wholesale merchant again, who exports it to the wholesale merchant of America; and he again sells it to our storekeepers. Look at the expence thus caused, added to which is freight and transportation to our doors. I could buy for about five pence in the home market that for which I pay about a quarter dollar in Canada. Let us therefore both grow and manufacture our own flax.

JAMES BUIK

Nicholl, April 6, 1864.

Flax Prospects.

To the Editor of THE CANADA FARMER.

SIR,—Seeing the deep interest you have taken since you commenced the publication of your valuable agricultural journal, in furnishing your readers every item of information likely to be of interest to those disposed to attempt the growth and manufacture of flax, it will be encouraging for you to know that such information has not been without most beneficial results. From twenty to thirty new scutching mills are in course of construction in different parts of the Province, and many more parties are making preparations for raising flax the present season. Seed has been liberally offered by parties who intend to manufacture flax, to the farmers for sowing.

It is to be regretted that in many parts of the country farmers have been compelled to plough up their lands where they sowed fall wheat last autumn, in many cases owing to the openness of the winter and the effect of the frost in the spring. To those thus circumstanced I would say, such lands will be admir-

ably adapted for flax; and if they will only follow the instructions given from time to time in letters, written both in the papers and in THE CANADA FARMER, they will find their loss will be in a great measure made up.

The demand for seed has been so great this spring, that already many parties have been compelled to send to Montreal; and from what I can learn, a quantity has been brought from the States and offered for sale in Toronto. Last week a large meeting was held in Weston, when Mr. Walker delivered a lecture on this important subject. A number of the respectable and intelligent agriculturists of the Townships of York and Etobicoke were present. So much interest was manifested as to encourage Mr. John Dennis to prepare to put up a mill on the river, Humber, where he has an excellent water power. He has secured a hundred bushels of prime seed, and is distributing it on liberal terms to those who wish to make trial of this crop. The price of seed alone is, or ought to be, great encouragement to the farmers for sowing. At present it is \$2.50 per bushel, and the ordinary price after harvest is \$1.50, just double the present price for spring wheat.

J. A. DONALDSON.

Spring Mount, Weston. |
April 25, 1864. |

[NOTE BY ED. C. F.—The season has been so wet and backward, that it is not yet too late in many localities to sow flax on well prepared soil.]

Canadian Flax and Linen.

To the Editor of THE CANADA FARMER :

SIR, I wish to agitate the cultivation of FLAX, about which you have already written so much. I see from the papers, that in many parts of Europe, flax is manufactured to a large extent and very successfully, it being mixed with wool and cotton. Now that it has been shown that flax can be raised in this country, as well as any other part of the world, it seems very desirable that our farmers should turn their attention to it especially as Canada is so large a consumer, which the following statement from the public accounts for three years will show.

	VALUE	DUTY.
Importations of Linen for 1360	\$261,824	52,364.21
" " " 1861	341,942	68,323.27
" " " 1862	322,844	64,568.59
	\$926,610.	185,256.07

The value of flax in all its various fabrics throughout the civilized world, is estimated at twenty millions sterling per annum. What a source of industry and wealth to Canada, if the farmers generally were to give it a fair trial. If our Government were to give sufficient encouragement in importing scutching mills, and manufacturing machinery, I have no doubt but farmers generally would make the attempt on a small scale to raise flax, until by experience they could do so more successfully on a larger scale. If the agricultural societies of Canada were to petition the Government on this subject, I have no doubt but what reasonable assistance might be obtained from that source. The flax that was exhibited at the Kingston Exhibition last fall, was said to be equal to any that was imported, the fibres appeared to be as fine, as white, and as strong as the imported article. It may be impossible to manufacture the finest fabrics at present, yet the coarser kinds could easily be manufactured, for making bags, sails, bedticks, &c., much cheaper than the imported linens. I hope therefore, that this present season an attempt will be made to raise a large quantity of this staple article, if so, I have no doubt but means will be taken to manufacture it.

E. McG

Ottawa, April 14, 1864.

Mr. Blesard's Drains.

To the Editor of THE CANADA FARMER.

SIR,—Our district happens to be a very flat heavy clay soil, very wet, and at the same time almost destitute of draining material. Moreover we are very poor. It appears to us, however, that Mr. Blesard's suggestion contained in No. 6, might be carried out to some extent, if he would only favour us with a more minute explanation of his manner of constructing his wooden pipes. Is each pipe made with four

or only three sides? If only three, then of course we presume the 4th side of such a pipe will be the bottom of the drain. If he makes the pipes with four sides of wood, and bevels the one into the other, it appears to us, that the joints might become too close, and thus prevent the ingress of water. This may appear to Mr. B. and yourself, Mr Editor, a childish enquiry but the fact is we are childish farmers having been more accustomed to handle the shuttle, and the awl, than the spade and the plough. Instructions are much required and will be thankfully received.

D. & E. B.

Mornington, April 18th, 1864.

Wild Oats.

To the Editor of THE CANADA FARMER.

SIR,—Mr. Burton's bill to prevent the spreading of Canada Thistles is indeed a good one, and well calculated to stop the progress of one source of great trouble to the farmers. It would be well if some patriotic member would bring a similar bill before parliament to prevent the spreading of Wild Oats, as they are much more to be dreaded and more prejudicial to the interests of farmers in the Township of Fullerton, and in fact to the farmers of a great part of the County of Perth, than Canada thistles, bad as they are. But, as there is no probability of a legislative enactment to prevent their growth and spreading this season, you Mr. Editor, would confer a great boon upon the farmers along the Thames road, and others no doubt, by giving the best directions, in your opinion, for their extirpation, and also by inviting the numerous readers and correspondents of the FARMER to write essays on the best method of eradicating them. Mr. Editor, perhaps you do not know how stubborn they are, some people say their roots will go to the depth of several feet into the ground, others say they will even grow after being boiled in a pot, this may be an absurdity, but one thing is certain, they go deep enough, and travel fast enough to be a dreadful nuisance. I would further ask what punishment ought to be inflicted upon the evil disposed person or persons, who sowed wild oats broadcast over the fields of a respectable farmer in this neighbourhood, while people slumbered and slept?

H. S. J. M

Fullerton, April 8, 1864

Vitality of Seeds.

To the Editor of THE CANADA FARMER :

SIR,—The remarks on the vitality of turnip seed on page 77 of the CANADA FARMER copied from the English Agricultural Gazette are all gammon.—I have sown turnip seed for 23 years and have annually proved its vitality by first sowing 100 seeds in a flower pot and the result has invariably been from 96 to 100 plants from 100 seeds of one year old; I have at the present moment sixty-eight plants from 100 seeds gathered in the year 1856, showing 68 per cent of vitality in turnip seed eight years old, a very different result from that given in the English paper. While on the subject of seed, I may observe that it is a common subject of complaint amongst farmers, gardeners, and florists, that dealers occasionally victimize them by selling seed that wont grow, or that grows very indifferently.—Whether the dealers are deceived by their suppliers, or whether they sell the remnants of previous years, the loss to the public is all the same, and the party who organizes a protection society to teach delinquents better manners, will be a general benefactor. For the information of your correspondent on page 88, I give my experience with sulphur. I dust the turnip seed early in the winter with sulphur, and allow three pounds of seed to the acre. I have never failed to raise a crop. Other successful growers will probably oblige by imparting their experience.

CINCINNATUS.

Sowing Plaster.

To the Editor of THE CANADA FARMER :

SIR,—I see in No. 6 of THE CANADA FARMER that Mr. John Blesard, of Otonabee, has a quantity of plaster to sow, and he would like to know if it can be done by a machine. The one you refer to in the Rural New Yorker will answer a good purpose, I dare say, but in case he does not go to the expense of that machine, I recommend to him a way I have seen tried with good success. It is to take a horse and cart, make a box the width of the cart, and have it about ten inches deep and twenty wide, with four legs, one at each corner, long enough to raise it nearly breast high. The legs should be cut with a slant at the foot, and be longer on one side than the other, to make it stand level in the cart. You can put half a barrel into it at once. With such a rig a man, with the aid of a small boy to drive the horse, can sow from twenty to thirty acres in a day. The sower must stand with his back to the horse, and sow with both hands behind the cart, as it moves along. In this way you generally escape all the dust, as you are going from it instead of to it on foot.

York Township.

G. W. D.

The Patch of Thistles.

To the Editor of THE CANADA FARMER :

SIR,—If a cat has nine lives, I think a Canada thistle has nine cats' lives. With your permission, I will give my plan of killing this inveterate weed :—1. The land must be in fallow. 2. It must not be ploughed in the fall but let the first ploughing take place in June, when the plant is nearly ready to blossom. 3. Plough again in the course of ten or twelve days; the sun will be hot enough to kill the most of them by that time. 4. I would not use the harrow, as it would surely encourage the thistles, by dragging the roots and dropping them some place where all they want is a good shower to start them into life again. 5. Neither would I mow them before the first ploughing, as I think they die quicker when the top is left on. Lastly, in the hottest weather in July, I would harrow, and harrow again as often as I thought fit before the third and last ploughing. There can be only one objection raised to the above mode of proceeding, viz.: heavy clay land will be hard at the right time for the first ploughing. The pasture of the field, both in fall and spring, will amply compensate for the trouble, and I can assure Mr. G. W. D., of York Township, that I killed as bad a patch of thistles on my farm, in 1862, by the above process as ever he killed by six ploughings of his land.

JOHN COLGAN.

Tecumseth, South Simcoe.

Rape or Colza.

This plant which belongs to the cruciferae, or cabbage tribe, has been brought into notice, within a few years past, by the high feeders of stock in England; more prominently perhaps by Mr. Horsfall, whose essays have been extensively published in this country.

Mr. Levi Bartlett, of Warner, N. H., has cultivated this plant for six seasons, and agrees with Mr. Horsfall, "that as yet I found no green crop equal to the rape for feeding cows in August and September." He publishes the results of his experiments in the Boston Cultivator. In the spring of 1854, he received the seed from the Patent Office. In consequence of a severe drought that season, and of the plants becoming infested with lice, the crop was a failure. Mr. Bartlett says:

The next year (1855) early in June, I manured a smooth piece of greensward, and turned over flat, and rolled it, then harrowed to a fine tilth, and sowed with a great variety of turnip, cabbage and cauliflower seeds, as also, a portion of the land with rape seed. All of the different varieties came up well and grew finely, none of them suffering injury from fly, lice, worm, bug, or "other creature" through the whole season. In July commenced thinning the plants (and fed them to my cows, morning and evening) till the plants averaged not far from two feet each way. This brought it up to sixty-five days from the time the land was plowed. In order to ascertain the amount per acre at that time, I cut at the surface of the ground every other plant on two square rods, being a fair average of the plot of ground. The lightest plant weighed three pounds four ounces, and the heaviest nine and a quarter pounds, the whole number averaging a little over five and a half pounds

per plant. There were fifty-six plants per square rod. But to be sure of not over-stating, I will call it fifty plants per square rod, which gives just twenty-two tons, (of 2000 lbs. per ton) per acre of the choicest kind of green food for milch cows, in less than sixty-five days from the time the ground was plowed.

That season, here, was very wet and cool, perhaps much resembling the climate of England, which is much more favorable to the cabbage and turnip tribe of plants, than our usually hot and dry summers.

The middle of June is early enough to sow the seed, which should be sown on well manured and prepared land the same for Swedish turnips, or cabbage, in drills, thirty inches distant, and the plants thinned to about the same distance. The young plants, like those of cabbage, can be safely transplanted. I have only failed one year in six in getting a good crop of this plant, but still, should not advise any one to depend wholly upon it for green feed for cows, during our usually dry months of August and September. Last Spring, I sent to a friend in Boston, to procure me some rape seed. He called at the fourth seed store before he could obtain any; at this he found some, it being kept for the feeding of cage birds. The seedman kindly sent me a few ounces, and it has proved as good in every respect, as that received from the Patent Office, several years ago. It cannot be grown here at the North for seed to manufacture oil from—it being a biennial plant, it will not withstand our cold winters, though, doubtless, some of the plants might be stored in a cellar and kept through the winter, and seed grown from them as is done from the cabbage and turnip.—N. E. Farmer.

Table of Quantities.

The following statistics gathered from reliable sources, and verified by some experience, are of course familiar to all practical men, but nevertheless may be useful to many readers :—

FARM SEEDS REQUIRED FOR AN ACRE.

Wheat 1½ to 2 bushels; Rye 1½ bushels; Oats 3 bushels; Barley 2 bushels; Peas 2 to 3 bushels; White Beans 1½ bushels; Buckwheat ½ bushel; Corn (broad cast) 4 bushels, do in drills, 2 to 3 bushels, do in hills 6 to 9 quarts; Potatoes 8 to 15 bushels; Beets 3 pounds; Carrots 2 pounds; Swedish Turnips ½ pound; Clover (white) 4 quarts; Clover (Red) 8 quarts; Timothy 6 quarts, Mixed Lawn Grass 1 to 2 bushels,

QUANTITIES OF GARDEN SEED TO PLANT.

Asparagus, 1 ounce produces 1000 plants; Bean, 1 quart will plant 125 feet of row; Beet, 1 ounce sows 140 feet of row; Broccoli, 1 ounce gives 3000 plants; Brussels sprouts, Cabbage, and Cauliflower, the same as Broccoli; Carrot, 4 pounds to an acre, 1 ounce sows 140 feet of row; Celery, 1 ounce gives 8000 plants; Cucumber, 1 ounce plants 150 hills; Lettuce 1 ounce gives 7000 plants; Melons, 1 ounce plants 100 hills; Onion, from 4 to 5 pounds to an acre, 1 ounce sows 180 feet of row; Parsley, 1 ounce sows 200 feet of row; Peppers, 1 ounce gives 2000 plants; Peas, 1 quart of the smaller sorts sows 120 feet of row, the larger 100 feet; Radish 1 ounce sows 100 feet of row; Spinnage, 1 ounce sows 180 feet of row; Squash, 1 ounce sows 70 hills; Tomato, 1 ounce gives 2000 plants; Turnip, 1½ pounds to an acre.

W. S.

Woburn.

Experience in Growing Flax.

JNO. ANDERSON, of Henry county, Ill., writes us as follows :—As the season for sowing flax is near at hand, and many farmers are no doubt debating in their own minds the propriety of engaging in this new enterprise, I will give my experience for their encouragement.

Last spring I obtained 60 lbs. of good clean flax-seed, prepared by good deep ploughing a little over two acres of tolerably dry, though flat prairie, harrowed and rolled several times, until the surface became perfectly fine and smooth. I then sowed my seed and gave it a light brushing. I cut it with a machine, threw it off in gavils and let it lie until dry. I then thresh it by horses tramping over it, on the barn floor. I cleaned up from this one bushel of sowing, thirty-five bushels and forty-nine pounds of good clean seed. I had about two tons of the straw, which after threshing I hauled out and spread over the newly-mown meadow, and after being properly dew-rotted I collected together and sold for eight dollars per ton to Mr. Thomas, an enterprising gentleman who is buying large quantities for a Chicago firm that designs putting up machinery in this place to clean it,

Flax-Growing.

A LANDED proprietor and agriculturist of skill and experience in Scotland writes us as follows :—

"I wanted to tell you about my success in flax-growing this season, which I hope may be an inducement for farmers to begin to grow it as a crop that will remunerate them much better than wheat, or indeed any crop at the present prices, and should we have a Continental war, of which there seems to be every prospect, we must be shut off from any lint or linseed from the Baltic. Dundee will be brought to a standstill, like Manchester, for want of the raw material. We send out seven millions, I believe, chiefly in gold, for these articles, all which we might keep at home, as there are thousands of acres that will yield good crops of flax. I sowed one quarter of an acre of good land worth £3 an acre, and the produce was eleven bushels of seed. Putting it at the lowest price that linseed can now be got—viz., 10s.—an acre of seed alone would be worth £22. The seed is beautiful, much better than any foreign seed I could get, and I have all the straw, which I intend to dress as soon as the weather permits; but it ought to be worth, deducting all expenses, from £12 to £14 an acre. The seed I sowed cost 18s. per bushel."—Scottish Farmer.

FLAX CULTIVATION IN IRELAND.—The movement designed to promote the extension of flax cultivation and the establishment of manufactures in the south of Ireland is being vigorously prosecuted—landed proprietors, merchants, and others uniting in giving effect to a scheme which will unquestionably benefit all classes. Efforts are making to establish a Flax and Linen Company in Cork, under the Limited Liability Act, with a capital of £60,000, divided into shares of £10 each, in order to bring it within the reach of all classes of capitalists; and the promoters state only half the above sum will be required to be paid up to afford sufficient means to erect the requisite buildings and machinery and to purchase raw material to keep 5,000 spindles at work. Other influential towns in Munster are also moving in the matter, and idle buildings of ample size for factories and with every facility for manufacturing purposes, are pointed out as being easily convertible into spinning or weaving establishments.—Irish Farmers' Gazette.

ON SOWING SEEDS.—Seeds should be intrusted to the ground in dry weather, though it is of great moment that they should be visited soon after with gentle showers. The dryness at the time of sowing is essential to enable the operator to keep the ground open and porous on the top; for by trampling and raking it while wet, the seeds would be shut up, as it were, in a prison, and would not germinate at all readily. The advantage of subsequent rains is to soften and swell the different parts of the seeds, burst its integument, and assist in developing its vegetative powers. It is remarkable that seeds which have to lie a long time in the ground before the occurrence of congenial weather, never produce such fine or healthy plants as those which develop themselves immediately under favouring influences. And this fact should teach the cultivator to calculate as accurately as he can the state of the weather which will follow his sowings, and even to put off any sowing which may be deemed necessary at a particular time until a prospect of suitable weather arrives.—Scottish Farmer.

CULTURE OF THE MANGOLD WURTZEL.—This crop like the carrot requires deep culture, and if the field for it has not been recently subsoiled it should now be done and the ground thoroughly pulverized. In order to get the greatest yield sow about the middle of May in drills two and a half feet apart, and cover according to the texture of the soil, the average depth being about one inch; thin the plants to twelve or fourteen inches. Good crops are frequently raised sown a month later. A dressing of six or eight hundred pounds of salt is recommended in addition to other manures.

On all farms where the Mangold Wurtzel is grown, there should be a sufficiency of Swedes and other turnips raised for the cattle during the early part of the winter. Mangolds are not suited for early use, as they contain a peculiar acrid principle when freshly taken out of the ground, which exercises an injurious effect on cattle, producing a very laxative state of the bowels; but which, in the course of a month or two, entirely disappears, or undergoes such a change as renders them harmless.

The best way is to feed the soft turnips first, and the Swedes next, which should last till January, when the Mangolds will be ready for use. The change from turnips should be gradual with all animals, to prevent their producing the laxative effects alluded to.—Ohio Farmer.

MILLET.—We think our farmers will do well to give more attention to raising millet. It is one of the best and most profitable hay crops we have. If cut when in full bloom, it is considered by good judges to be

equal to the best timothy, while it yields a much heavier crop on the same land. If the seed be allowed to ripen, the quality of the hay is not quite as good, and it of course is more exhausting to the soil. But in the latter case the hay is still of good quality and will be relished by all kinds of stock.

An excellent plan is, to plough the ground, and manure well, sow about the usual time for the spring grains, and cut about the middle of June. As soon as the crop is off, plough, manure, and sow as before. The second crop will have ample time to ripen its seed before the heavy frosts in the fall. By pursuing this plan, two heavy crops can be taken from the same land, and seed for next season secured. Two cuttings will give on good corn land, at least four tons per acre of good hay. One peck of seed per acre will do, but if double the quantity be used, the hay will be finer, and therefore preferable for ordinary feeding. If sown thick, weeds stand no chance at all—the millet entirely covering and monopolizing the ground.

Forage crops will be worth looking after this year, and we advise our farmer readers to try some millet. It is easily raised, and is most certainly a cheap crop for feeding. Try a patch of it.—*Plowman.*

A subscriber living in Belvidere, Boone Co., Illinois, writes:—I am anxious to see dissertations on flax culture, as I think it is becoming an important staple. With the improvements which are and will be made in machinery, I hope to enjoy the luxury of a real linen shirt some day, and perhaps a set of tow bags to remind me of (if nothing more) the old fashioned days of domestic tranquillity.

My crop of flax last year consisted of three and one-half acres. My expenses were—

For seed.....	\$9 00
Ploughing and sowing.....	7 00
Harvesting and thrashing.....	8 00
Total cost.....	\$24 00
I had 10 bushels seed per acre, \$2 75.....	\$27 50
Have about 5 tons straw, say \$10.....	50 00
Total.....	\$140 25
Cost.....	47 00
Net proceeds.....	\$93 25

I have never realized that amount from wheat, corn, or oats in proportion. Expect to do much better this year both in seed and straw, by using land better adapted to its growth and in seeding.—*Prairie Farmer.*

MANAGEMENT OF PASTURES.—At a late meeting of the Wapping (Mass.) Farmer's Club, the neglect of home pastures was the subject of discussion. One thought no branch of farming was neglected so much as pasturing, and no part of the farm would produce greater profit. Farmers began to realize the importance of this, and great improvements had been made within a few years. He knew of a pasture which ten years ago, was valued at \$10 per acre, but by cutting the brush, and sowing plaster and ashes, it is now valued at \$40 per acre. Another pasture has been greatly improved by the application of ten bushels of ashes, eight bushels hen manure, and seven hundred pounds of plaster, thoroughly mixed, and sowed in May, on 14 acres, and the pasture would keep twice the number of cows it would before this method was adopted. It seems to be the general opinion that plaster was the principle renovator, but some thought the beneficial effects of plaster depended very much upon the soil. One member had applied it to a light stony soil with but little benefit, but on clay soil its effects were lasting. One stated an instance of plaster being sown on a clay side-hill, and the effect was perceptible at quite a distance for several years.—*Rural American.*

Rural Architecture.

Suburban Villa or Farm House.

THE accompanying sketch is a study for a simple suburban or farm house of a moderate size, and can be built with either brick, wood or stone, without interfering with the design.

The best situation for a house of this style is an elevation with a southern aspect, but for country houses the design requires to be adapted to the location, as it is impracticable to make the natural scenery subservient to the architectural composition; but in all cases particular attention should be paid, in selecting a cheerful, airy situation, and one capable of perfect drainage.

The ground plan of the house is irregular, having a hall 7 feet

on the same side is a commodious room 14 feet wide by 19 feet long, having a fire-place in the centre of one side, with the projection to the exterior, thus leaving more space in the room, and adding effect to the exterior. The window in the front will be a casement opening out on the verandah. On the right

house, which could be heated by using the flues of the main building. A green-house thus placed would add much to the beauty and comfort of the house. The kitchen at the rear is sufficiently large for the size of the house, viz., 17 feet wide by 18 feet long. It has a stair-way leading to the servants' rooms above,



FRONT ELEVATION.

which can also be used for a back stairs to the main building, as the landing of the main stairs will be on a level with the servants rooms, with a door connecting with them. At the end of the kitchen is a pantry and scullery, with door entering the wood shed. The cellars will be under the kitchen, &c.

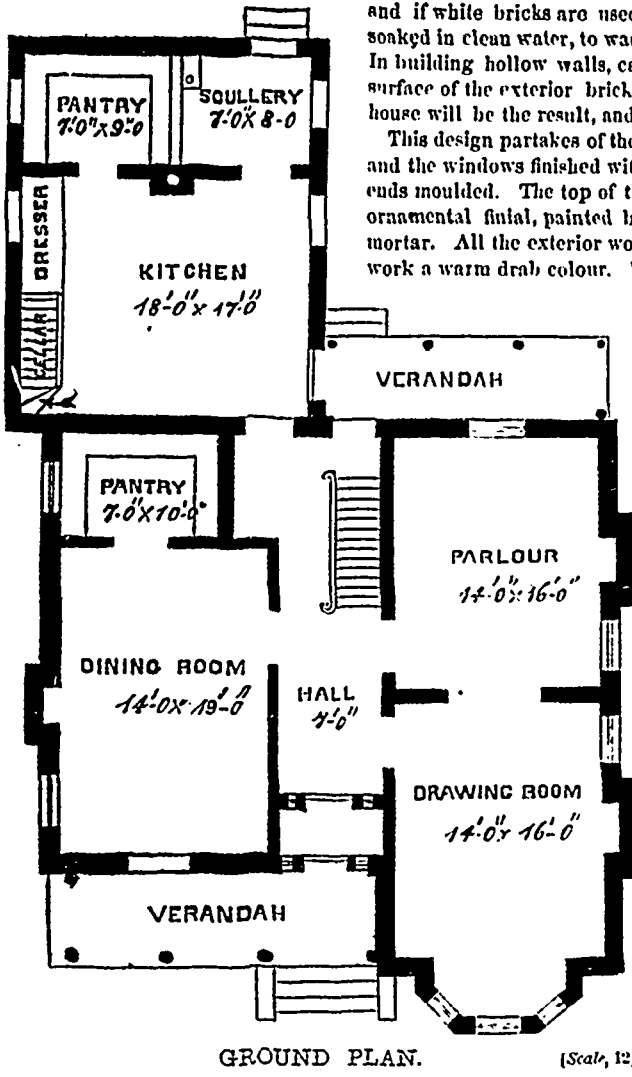
In the main building are five good sized, airy bedrooms, the ceiling in the centre being 10 ft. high, and the sides five feet six. There will be no dormer win-

wide running through the centre connecting with the kitchen, and having a door under the stair-landing leading to the back verandah. On the left of this hall is a large pantry 7 ft. x 10 ft., situated between the dining-room and kitchen, and connecting with the kitchen by a small door, so that articles can be brought from the kitchen to the dining-room without having to come through the hall. The dining-room

side of the hall is a parlour, or "library," and drawing-room, projecting 7 feet from the dining-room wall, and having a handsome bay window, with the ceiling the same height as the room ceiling, viz., 11.0 feet. The two rooms can be thrown into one by opening the sliding doors, thus getting a clear length of 37 feet. The windows on the right-hand side of these rooms are intended to open into a proposed green-

dows, as there are gables carried up with good-sized windows in them.

For cheapness, this house could be erected of red or white brick, with 11-inch hollow walls standing on stone foundations 16-inch thick, and the stone work carried 12 inches above the ground level, hammered and neatly pointed. Care should be taken to select the bricks of a uniform colour for the exterior,



GROUND PLAN. [Scale, 12 feet to 1 inch.]

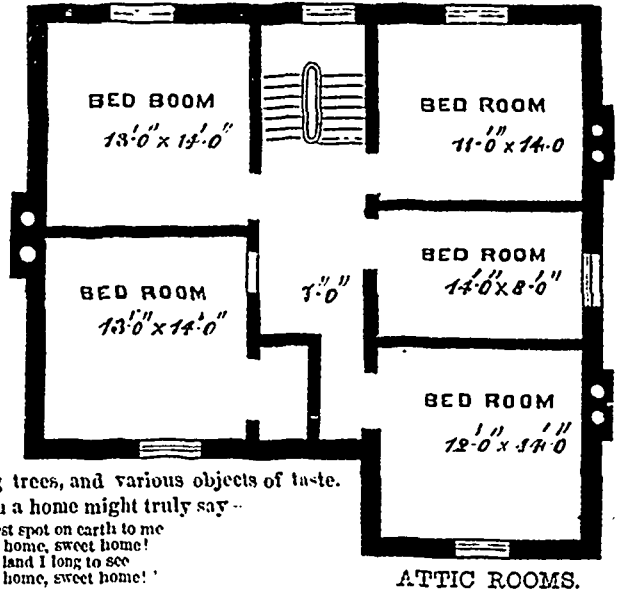
and if white bricks are used, the joints should be beaded. The bricks, before being laid in the walls, should be well soaked in clean water, to wash off the dust and prevent their absorbing all the moisture from the mortar after it is set hard. In building hollow walls, care should be taken to tie the out-side and inside bricks every fourth course. The interior surface of the exterior bricks should be well plastered as the walls are built. If this is carefully done, a warm and dry house will be the result, and the walls will not require to be lathed on the inside, but may be plastered on the bricks.

This design partakes of the early English character. The ends are finished with steep gables, having ornamental tracery, and the windows finished with moulded drips. The parlines project about 12 inches from the face of the walls, with their ends moulded. The top of the gables have carved ornaments, and the main front gable is finished with a wrought iron ornamental finial, painted blue, and tipped with gold. The roofs are intended to be covered with shingles laid in hair mortar. All the exterior wood work should be painted a warm stone tint, the roof of the verandah green, and the wood work a warm drab colour. The probable cost of this house, built as described, with stone and brick, and finished plainly inside, would be about \$1,800. This house, if built with timber and finished in the plainest manner inside, but keeping the same exterior, might be erected, when the materials and labour are cheap, for about \$1,200.

Now, how much better it is to build a house, intended as a home for our children, with taste and skill, instead of putting up a square box such as those we see springing up everywhere, without the slightest apparent desire to make them agreeable objects in the landscape. The lack of taste perceptible all over this country in small buildings, is a great drawback to healthy and social enjoyment.

The extra cost of erecting a tasteful cottage would bear no comparison with the many advantages to be obtained. The roof might have a good projection, and be neatly finished. Some kind of simple porch might be added. The chimney might be simply ornamented; the rest would then depend on colour and proportion. The building might be surrounded with creepers, flowering shrubs, young trees, and various objects of taste. The man possessing such a home might truly say—

“The dearest spot on earth to me
Is home, sweet home!
The fairy land I long to see
Is home, sweet home!”



ATTIC ROOMS.

Entomology.

HOW TO DESTROY CORN WEEVILS.—The *Courier de la Drôme* gives an account of a new method for destroying weevils, all the plans hitherto adopted for that purpose having proved fruitless. The calculation is that in France one-tenth of the crops of corn is destroyed by these insects, the mischief being caused by them—not when they have attained their full growth, for then they do not eat the grain—but when in a state of larvæ. The new destructive process consists in attracting the females to deposit their eggs in the same spot, instead of on the grains of corn; and a sort of hive of the eggs is so formed which can be destroyed at pleasure, with all the larvæ they contain. The mode of proceeding consists in placing at certain distances in the corn loft pieces of fermented dough having a semi-spherical form and partly hollow. In the course of a few hours those pieces may be removed, when they will be found literally covered with those insects; and if the dough be examined with a microscope, a vast number of eggs will be seen on them. Five sous worth of this will suffice to destroy all the larvæ in a place containing 110 quintals (224 lbs. each) of corn.

ANTS AND THEIR COWS.—The cunning ants keep cows in their stables. Almost every anthill, belonging to one variety, has a beetle in it, who lives, rears a family, and dies among them, a welcome and honoured companion. When the ants meet him they stroke and caress him with their antennæ; in return he offers them a sweet liquid that oozes out under his wings, and of which the little toppers are passionately fond. So great is their attachment to the odd confectioner that they seize him, in times of danger, and carry him off to a place of safety; the conquerors of an invaded nation spare the sweet beetle, and what is perhaps more surprising, his maggot and his chrysalis, though themselves utterly useless, are as safe among the wise hosts as if they also possessed the luscious honey. Other ants, again, keep countless aphides, that sit on the tender green leaves of juicy plants, as on green meadows, and suck away so lustily that their delicate little bodies swell like the udders of cows on rich spring pasture. At that season the ants have to feed

their young with more delicate food than their own, they stroke and caress their tiny milch cows, gather the nutritious liquid that pours forth under their sagacious treatment, and carry it drop by drop, to their nurseries.

HOW TO OUIT THE MOTH.—The following has more real virtue in it than any of the so-called scare aways of the moth, which has yet met our eye. Only be careful that there are no moths in furs when put away, and it will be impossible for them to get in if the necessary care is taken. But to the advice:

Most of our insects are very hardy, caring little for wind or weather, and will never die of aromatic pain. We once packed some small skins in the centre of a cask of tobacco leaves and stems, but the miller went there and deposited her eggs and the furs were ruined. This shows that they are frequently constructed with the idea that the rather pleasant odour of cedar is sufficiently disagreeable to the moth to keep her away from articles of clothing deposited there. This is a mistake. The strongest instinct prompts the miller to seek the means of perpetuating its kind, and no trifling impediment will prevent it. But the preservation of furs, or articles of clothing is perfectly simple, cheap and easy. Shake them well and tie them up in a cotton or linen bag, so that the miller cannot possibly enter, and the articles will not be injured, though the bag is hung in a wood-house or garret. This is cheaper than to build cedar closets, and better than to fill the bed clothes and garments with the sickening odour of camphor, tobacco, or any other drug.

The Wire-Worm.

To the Editor of THE CANADA FARMER:

SIR,—The importance of a good growth of turnips, for home consumption, has been often brought before the notice of farmers, and especially of those who make a practice of rearing stock. Now, of all the insects which infest roots, Fly excepted, the “Wire-worm” is the most destructive. This worm is the larvæ of the “Click Beetle,” belonging to the species Coleop-

tra it is generally known as the “Wire-worm.” The beetle lays its eggs, from 20 to 50, in the soil. From these eggs are hatched our enemies, small white worms, with ringed bodies. They have 7 legs; 6 of these are feelers, the seventh a proleg. This last is situated under the tail of its body, and serves to push him along whilst feeding under ground. At certain intervals, they change their skins, each time throwing off the old covering, to make way for a larger, and thus constantly increasing in size. They are supposed to live as larvæ for 4 years. About July the grub makes a hollow for itself in the ground, and there lies in the form of “Pupa” or “Chrysalis,” until it becomes transformed into the perfect “Click Beetle”, it then transfers its ravages from the bulb to the leaf. Now, you will always find the “Wire-worm” in rotting turnips whether he rots the turnips or goes to the rolling turnips, is an undecided point. It is against the larvæ that we must wage war. Flooding the fields has been tried but with no success, water seeming not to affect the insect; drainage is a great preventative; moles are their natural enemies. Common weeds, grasses, and clovers, are attacked by the young worm, but when the turnips are in the ground, they forsake all for this their favourite food. The use of superphosphates, lime and soot, is very beneficial; but the Wire-worm’s enemies and the farmer’s friends are small birds. When you see birds (especially Rooks in England,) hovering over your turnips, and constantly diving their beaks into the bulb, depend upon it, they are in quest of the worm.

Before concluding, I would mention, that the Wire-worm often commits great ravages amongst the roots of wheat and barley. The remedy, in this case is simple: cut your stubble short. It exposes the insect not only to the attacks of its enemies, small birds, but also to the influence of the atmosphere. Long stubble does not as some suppose, protect the clover, but prevents it from gaining that strength which is necessary to stand “killing seasons.” Cross ploughing, or roughing, also greatly exposes this insect.

AN OLD-COUNTRYMAN.
Glandford, April 22, 1864.



The Breeder and Grazier.

The Royal Dublin Society.

THE Spring Show of this venerable Society, which has been in existence for upwards of a century and a quarter, appears to have been more than ordinarily successful. In the cattle sections there were 323 entries, 171 of which were Short-horns, a class that contained many superior animals. The entry of draught horses was very deficient. It would appear that the breeding of horses of every description, which has so long formed a most important department of Irish rural economy, has of late years very visibly declined. The young bulls of the Durham and other breeds, comprising many excellently bred animals, were in rather low condition, a fault certainly on the right side. These are exhibited more with a view to the effecting of sales than the obtaining of prizes; and in this way the Dublin Shows have served, more than anything else, to secure the distribution of well-bred animals through the country. The miscellaneous breeds comprised Scotch-poll'd Herefords, Downs, Kerries, Ayrshires and Alderneys; in all which there were animals of decidedly superior quality. In fat cattle, a Hereford carried off the palm, and a Short-horn came second.

The show of sheep was not very extensive, but it is described as being very select. Among long-woolled sheep the Leicesters seem to have taken the precedence, Cotswolds coming next. The Shropshires comprised many fine specimens. The Cheviots were few in number, although there are several extensive localities in Ireland well suited to this esteemed breed. An important feature of this meeting was the reading and discussing of a very elaborate paper, based on experiments by the well-known English agriculturist and chemist, Mr. J. B. Lawes, on "The Science of Feeding, as applied to the Production of Meat and Manure," a synopsis of which we may prepare for our readers in a future number.

Since writing the above, we have received reports of the Irish National Horse Show, which appears hardly to have come up to public expectation. There were 370 horses on exhibition, exclusively blood and half breeds—heavy draught horses not being admissible. Of course, there were several really good animals among this large number, but the grand result clearly showed that there is too much reason for the common belief that Irish horses, both in quality and number, have of late years deteriorated, especially for hunting and cavalry purposes. The Royal Agricultural Society of Ireland has been active of late in collecting facts and devising remedies in relation to this important matter; and with this view the recent show, exclusively confined to blood, carriage and saddle horses, was projected; the tendency of which cannot prove otherwise than beneficial. We think that something more is required here in Canada with regard to horses, whose improvement, on the whole, has not kept pace of late years with that of our other domesticated animals. More pure blood is among the principal desiderata.

At the Cremorne Dog Show, last month, 625 animals were exhibited, and £717 sterling distributed in prizes. *The Field*, for April 23, contains a fine cut of the dogs that took prizes in the Setter, Mastiff, Pointer and Skye-terrier departments.

Donkeys vs. Mules.

To the Editor of THE CANADA FARMER.

SIR,—“N. T.” wants to know about donkeys. Well, perhaps it is from sympathy, but I do know something about them. In Ireland they are very useful, being chiefly used by the poor for carrying loads in panniers. In this way they can travel over the bogs and muddy “boreens,” *Anglicæ* lanes, of that country far better than horses could. A good jack can be bought for about 20 or 25 shillings, at least that used to be about the figure. They cost nothing to keep there, but I suppose here they should be fed in winter.

As to mules, I do not think that their introduction would answer any good purpose. I suppose “N. T.” knows that they do not propagate, therefore, in the first instance the young mule costs as much as a genuine foal, the loss of the time of the mare being the same. At best, they are only like poor, obstinate, vicious horses, not so hardy as the ass, and of course much more expensive to keep. Being wonderfully sure-footed they are of use in rough mountainous countries, but I do not think that they are required in Canada. I have had no experience of what I believe is improperly called a jennet, i. e. the produce of a she ass and a horse; but I have heard that they are far superior to the mule, and of course the dam being the least valuable animal, they are not expensive to breed. There are, however, I believe some difficulties in the way, arising from prejudice on the part of the horse, that sagacious animal not yet having, except in rare instances, shewn himself a convert to the miscegenation doctrine.

I hope “N. T.” will take my advice, and go in for donkeys in preference to mules.

Saugeen, Co. Bruce.

F. H. L. S.

N.B.—It should be remembered that the milk of the ass is considered extremely nutritious, and of great service to weak or consumptive people. Many persons at home turn the she asses to great account in this way.

Mottle and White-faced Herefords.

To the Editor of THE CANADA FARMER:

SIR,—In No. 7 of THE CANADA FARMER, you give Mr. Benj. Tombkins credit for improving the breed of Hereford cattle by a cross with two cows purchased at a Fair in Wales. In regard to the cross, you are correct; I am aware that they are a cross breed. I have heard that his son advised him to make the cross as stated. Excuse me for saying that you are in error in stating that the present breed of Hereford cattle so highly appreciated, originated from the cross made by Mr. Tombkins.

Mr. Samuel Tully, of Huntington, near Hereford, and Mr. Benjamin Tombkins, of Wellington Court, in the same county, were formerly the two principal breeders in the county. Mr. Tombkins, as above stated, made a cross in his stock, in consequence of which the Tombkins breed have mostly mottle face. Mr. Tully continued to keep the blood of his stock perfectly pure, which is the reason that the Tully breed of white-faces are in such high repute. The two breeds are described in the County of Hereford as the Tombkins breed and the Tully breed. The mottle-faces are not patronized at the Agricultural Exhibitions of the present day, when in competition with the white-faces.

Being related to both Mr. Tully and Mr. Tombkins, I considered you would excuse the liberty I have taken in sending you my opinion in regard to the pedigree of the Hereford cattle.

A SUBSCRIBER TO “THE CANADA FARMER.”
Kingston, April 23, 1864.

THE GALLOWAYS.—We are indebted to Mr. Thomas McCrae, of Guelph, for an account of the Annual Show of the Galloway Agricultural Society, which took place at Castle Douglas, on the 21st March last. This was the most successful show ever held under the auspices of the society, and evinced a growing interest in the Galloway breed of cattle. The first prize bull is described as a splendid animal, four years old, 7 feet 8 inches in girth, massive fore quarters; deep well barreled ribs, square hind quarters, short legs, long and silky hair. After the prizes had been awarded, the annual sale took place, when 54 animals were sold at an average price of over sixteen guineas—the highest figure ever reached for this breed. The Galloways are evidently looking up in their native haunts.

Are Mules Profitable?

To the Editor of THE CANADA FARMER:

SIR,—In answer to the inquiry made in your issue of the 15th, if it is profitable to raise mules for farm work, I would say yes, if bred from a good jack. For, 1st. Mules will work at two years old. 2nd. They will get fat on feed that horses will hardly eat. 3rd. A great many of them will eat thistles. 4th. They are never balky. 5th. They never shy. 6th. They can work more hours per day than horses. 7th. They are easier to breed than colts; mares can work up to the time of foaling, with but little inconvenience, as the foal is so much smaller. 8th. They live longer than horses. A good jack can be had in London, England, for about three sovereigns.

COCKNEY.

Co. York, April 20, 1864.

Large Yearling Durham.

To the Editor of THE CANADA FARMER.

SIR,—I have just taken the first prize at the Bayham Cattle Fair on a Durham bull, which was calved on the 22nd April, last year, and on the 20th April, this year, it was weighed before several parties and found to be 964 lbs weight. The bull was two days less than a year old.

JOHN PEFFCY.

Middleton, May 2, 1864.

THE LATE MR. LAWFORD'S HERD.—The Short-horn herd of the late Mr. Lawford, of Southcott, near Leighton Buzzard, was disposed of by auction on the 14th ult. *The Mark Lane Express* states that:—“It was more of a milking herd, and in nice saleable trim, but not brought to the post.” Still there was a good average of £38 Gs. 6d. for seventy-eight females, and £64 18s. 2d. for eleven bulls, giving a grand total of £3,703 7s., and an average of £41 12s.” The highest figures reached were 300 guineas for a bull and 240 guineas for a cow. One lot was bought for Canada.

FREAK OF NATURE.—A correspondent of the *Maine Farmer* communicates the following to that paper:—“Sylvanus Damon, of Buckfield, has a two-years old heifer which dropped a calf April 2nd, which was alive and well, and perfect in every respect, except being entirely without legs or signs of any. The supposed cause is that the heifer, about eight months previous, was much frightened at a dog rolling over on the ground. The body, in the act of rolling, being only visible to her, constituted a mental impression sufficiently strong to produce the result.”

GIVE your swine charcoal. Its nutritive qualities are such, that they subsist on it for weeks together without other food. Geese, when confined so as to deprive them of motion, and fastened on three grains of corn per day, and as much charcoal as they can devour, have become fat in eight days. Hogs eat it voraciously after a little time, and are never sick while they have a good supply. It should be always kept in the sty, and fed to the inmates regularly, like all other food.

BOILING FOOD FOR HOGS.—At a recent meeting of the Farmers' Club, Prof. Mapes made the following remarks in regard to boiling food for hogs:—“The proof of the saving of food by boiling has been given here, and, as it can be stated in very few words, we may as well have it. Mr. Mason was a watchmaker in Camden, N.J., and among other fancies he liked to keep hogs. He has his hog-pen just back of his shop so that he could sit at his window and watch his hogs. Every spring he bought some pigs and fed them through the season. Just opposite to Mr. Mason was the store of Mr. Van Arsdale, and every pound of food that Mr. Mason gave to his pigs he bought at this store. At the end of six months he got his bill from Mr. Van Arsdale, and he always slaughtered his hogs at that time, so that he knew exactly how much his pork cost. For several years it figured up about 13 cents per pound. At length some one advised him to boil his corn. He accordingly got a large kettle and cooked all the food which he fed to his pigs. Then his pork cost him 4½ cents per pound. We also had the experience of Mr. Campbell, which was about the same as Mr. Mason's. Henry Elsworth made some extensive experiments in the same thing, and his statement is that 30 pounds of raw corn make as much pork as 15 pounds of boiled corn.”

FEEDING HORSES CHEAPLY.—A correspondent of the *Genesee Farmer* says he does not feed his horses either grain or hay. He keeps five horses, and gives them a bushel of mill-feed twice a day, with cut straw, and occasionally a carrot or two. The mill-feed costs him 25 cents a bushel, so that besides the straw his horses cost him only 10 cents a day. If fed hay alone they would eat at least 30 lbs. each per day, which, at \$15 per ton, is worth 22½ cents. He puts his straw into the racks and lets them pick out what they will, and uses what they leave to litter them with. The cows pick over the litter, and in this way he manages to get out all the nutriment there is in the straw.

CANADIAN HORSES.—I see an inquiry for farm horses in the last number of your paper. With regard to the merits of the Vermont and Conestoga, I know but very little, but of the Canadian I can speak from experience. They are the best class of farm horses in the country, and admirably adapted to work on clay land. They are easily kept. Their average height is 14 hands—their weight is from 800 to 1,000 pounds. There are a great many of them owned in this country, but it is a poor place for any one to come to purchase, as anything in the shape of a horse commands a high price, and farmers who wish to buy generally go into St. Lawrence county or Canada. In St. Lawrence Co. they can be purchased for \$150 to \$200 per pair. A good stallion of that breed is worth \$300. As to colour, they can be found of all shades, though black and sorrel seem to predominate.

LEWIS COUNTY FARMER, in Country Gentleman.

RULE FOR ESTIMATING THE AMOUNT OF FEED.—Careful experiments show that nearly all domestic animals consume an amount of food about in proportion to their weight. A large horse or cow eats more than a small one. An elephant weighs four or five times as much as a horse, and consumes four or five times as much food. If a cow has the weight of five sheep, she will eat five times the quantity of food. There are, of course, some variations or exceptions, and individuals differ, but this is a fair general rule. This quantity is usually from two and a-half to three per cent, when the food is hay, with a small proportion of grain. A cow digests more thoroughly than a horse, and requires only about two and a-half per cent; a horse three per cent. A cow weighing eight hundred pounds would therefore need about two and a-half times eight, or twenty pounds of hay a day. A horse weighing one thousand pounds would require thirty pounds. One and a-half per cent. will keep a cow alive or on her feet; but to be properly nourished so as to grow or increase in flesh, or give milk, she must have nearly double. The water used is not included, nor does the rule apply to green food.—*Annual Register.*

A PIG STORY.—*Wallon's Journal* is responsible for the following pig story:

"A young man commenced house-keeping as young married people used to do, with a cow to supply milk and a pig destined for a winter's supply of pork. He took good care of the animals, feeding the cow liberally with hay, and the pig with a mash of bran, &c., adding straw for the pig's bed. Soon he observed that the straw regularly and unaccountably disappeared from the pig-pen—in fact so much so, that he had to replenish it daily. Finally he determined to detect the thief, and concealed himself for that purpose, after the pig had been furnished with clean straw. Speedily came the denouement. Piggy seized a mouthful of the straw, stirred it in the mash till it had become well coated, and then planting his fore feet upon the top board of the pen, he tempted the cow with the morsel, she yielding, nothing loth, until pig and cow had thus disposed of all the straw. Now send us a better pig story if you can, and let it be true—as this is. That pig had some sense. Perhaps, indeed he was a wag. Undoubtedly he wagged his tail in sympathy with the well-pleased cow. For the credit of the cow we add, that on the death of pig she mourned for it as she would have done for her calf.

A COW KILLED BY A CAT.—On Thursday last a cow owned by Mr. Marshall Morrison, of Port Dalhousie, Canada, was quietly taking her noon *siesta* on the street near his residence, "chewing the cud of sweet and bitter fancy," when some boys who were playing near by conceived the idea of having some fun by tying a cat to the animal's udder, and catching a cat, they proceeded to put their scheme into execution. As soon as the cat was fastened the boys left, and the cat endeavoured to follow their example, when the tension on her tail caused her to scratch the cow, which immediately jumped up and commenced running and bellowing at a fearful rate, the cat all the time scratching and biting the udder and legs, and this continued until the cow fell down with exhaustion and cut in a most fearful manner, when the cat was liberated. The cow died the next day, Friday. The owner threatens to sue the parents of the boys for damages, as he considers it unjust that he should lose the value of the animal through the mischievous pranks of the lads.

Sheep Husbandry.

More about the Buckwheat Controversy.

The *Irral Intelligencer*, an agricultural journal published at Indianapolis, Ind., inserts the letter of Mr. Ferril which appeared in our fifth number and comments on it as follows:

"If Mr. Ferril had prosecuted his investigations a step further, he might have solved the vexed question which seems to have troubled our Canadian neighbours so much. Plants of the botanical order *Polygonaceae* are often poisonous, because they all contain oxalic acid in greater or less quantities, either free, or in combination with lime. If the acid is uncombined the plants are poisonous—if in combination with lime or potash they are not injurious. Lime your land well, and your buckwheat, both straw and grain, will be wholesome food for man and beast. If your land be deficient in alkalies your buckwheat will be unsafe food.

Many farmers sow buckwheat on their poorest land, because they are sure of a crop. They put it in land that is entirely exhausted, especially of lime or ashes, and because it produces a crop cheap they consider it clear gain. But where persons and cattle eating of the crop become sick, and some die, it proves the old adage true of "stopping the spigot and letting out the bung hole." There is no economy in it. Better cultivate your land on the principle that you owe it something, and give it what is its due,—a dressing of manure every year."

Sheep Poisoned by Eating Laurel Leaves.

SHEEP that have eaten laurel leaves will die, unless the poisonous effects of these leaves upon them are speedily counteracted and neutralized. But we very luckily have a good many cures for this poison that destroys so many sheep for drovers and others in our mountain regions. Thus, for example a strong tea, made of the bark and leaves of the *Sweet Fern*—a plant that grows wherever you find laurel—is a good and almost certain cure, if given to the poisoned sheep in due time. So a tea made of the bark and leaves of the *Poison Ivy*, sweetened with molasses, will effect a speedy cure. So a handful of fine salt, or a corresponding amount of salt water, drank by each sheep or poured down its throat, is also an un-failing cure of this poison. So a quart of a pound of melted lard and a half a gill of whiskey, put into a half a pint of sweet milk, and well mixed, and poured down the sheep's throat moderately warm, will also cure it. So half a teacupful of raw white beans, ground fine in a coffee mill and well stirred up in a teacupful of water given to each poisoned sheep, will also cure it. Indeed, a dose of sweet oil or any kind of active purge will answer this purpose. So sheep poisoned by eating *St. Johnswort*, *lobelia*, or wild indigo, are also curable by giving them a mixed drink of sweet milk and whiskey.

Sheep-Shearing Exhibition.

To the Editor of THE CANADA FARMER:

Sir,—I notice in the *Ayr Observer* that a rather novel exhibition is to be held in that village on the 26th instant. It is called a "Sheep-Shearing Exhibition," the object being to bring into contact the different breeds of sheep, and to determine which breed is the most profitable for the Western farmer to raise. Prizes are offered for the heaviest fleeces, without distinction of breed, and a sweepstake for the most valuable sheep, estimating the carcass and fleece together at current market rates.

As there are in this and the neighbouring townships large numbers of Leicesters, Cotswolds, Southdowns and Merinos (Spanish and French), there will probably be a keen competition. I notice that the wool is to be washed, "or the usual deduction made." Will some of your correspondents inform me, through your valuable paper, what is the usual deduction on unwashed wool; also, what is the average difference of price between Leicester, Southdown and Merino wool? RUSTICUS.

North Dumfries, May 10, 1864.

NOTE BY ED. C. F.—The usual deduction on unwashed wool is one-third.

Is Buckwheat Injurious?

To the Editor of THE CANADA FARMER:

SIR,—This question lately agitated in your columns should have been (as it probably has been) settled long ago. May not the rough particles from the decayed blossoms of the buckwheat cause the soreness about the ears of animals? Is it a fact that buckwheat cakes cause skin diseases, when eaten by man kind? If so, may not the soda or saleratus, which is daily added to correct the acidity of the batter, be the real offender? What says the chemical editor of THE FARMER?

FAGOPYRUM.

Large Grade Lamb.

To the Editor of THE CANADA FARMER:

Sir,—Having seen in your paper at different times, notices of large sheep, hogs, &c., and thinking I have a ram lamb that cannot be beaten, I would like to see it in your columns also. It is from a very inferior grade ewe; the ram is also a grade of the Leicester breed. When it was one day old, I had the curiosity to know the weight and size of it, which are as follows: Weight, 17 lbs.; height, 17 inches; length of body, 21 inches; girth, 19 inches. Now, if any of the numerous readers of your paper can beat it, I would like to know who it is.

S. B. CHARLTON.

Rose Bank, South Dumfries, }
April 23, 1864. }

A Heavy Fleece.

To the Editor of THE CANADA FARMER.

SIR,—I have a buck, a cross between Lincoln and Leicester, which was purchased at Kingston some year and a-half since. The wool is of medium quality, and about one foot in length. The fleece clipped this spring, which is the second shearing, after being thoroughly washed, weighed sixteen pounds and three ounces. Wishing to get the very best sheep possible, if any of my farmer friends can beat that I shall like to hear from him.

ELIAS HOOVER.

Rainham, Haldimand Co., April 9, 1864

PROLIFIC SHEEP.—Mr. Jno. Groesbeck, of Bethlehem, has three ewes that "dropped 10 lambs. All of the little ones are strong and doing well. They are the common sheep of the country. Two of the four dropped by one ewe are being raised by hand.—*Country Gentleman.*

TO MAKE A EWE OWN HER LAMB.—Our friend J. S. Delano, a large sheep proprietor of Mount Vernon, Ohio, writes us:—"When you write another book on sheep, please record the following fact. If a ewe diavows her lamb, rub the hand on the latter, or scrape a little slime from it, put it in the ewe's mouth, and then leave her. She will go instantly to licking the lamb.—*Rural New Yorker.*

BUTTERMILK FOR LAMBS.—Thomas S. Steele, of Shushan, Washington Co., N.Y., says he raised two casset lambs last year on buttermilk—one receiving nothing else from the beginning—the other previously fed four weeks on new sweet milk. The last lamb did not do as well on the new milk, and became costive two or three times. It took to buttermilk after a few feedings, and thenceforth grew finely. After learning to eat the latter, it would refuse sweet milk. Both lambs grew up large and strong. Mr. S. has tried the experiment once before with the same result. He "would prefer of choice to raise a valuable motherless lamb on buttermilk than on sweet milk."

CURE FOR SCAB IN SHEEP.—*Irish Farmers' Gazette* gives the following recipe for a wash which it says is an effective cure for scab.—"2 ozs. white arsenic, 2 ozs. corrosive sublimate, 2 ozs. sal ammoniac, 1 lb. starch, 1 lb. nitre, and 1 quart of spirits of turpentine, mixed in 15 to 20 gallons of tobacco water."

A CABINET OF WOOLS.—The Agricultural Department at Washington is forming a cabinet of wools, which is intended to exemplify the effects, of climate, food and treatment. Specimens are desired from all parts of the country, but these specimens should be accompanied with statements descriptive of the locality, the food, the mode of treatment, and the origin of the sheep, and such other matters as may tend to give the wool a comparative value.



The Dairy.

The Cheese Trade with Britain.

We are indebted to Mr. Adam Brown, of Hamilton for the following letter on the cheese trade, addressed to that gentleman by Mr. Charles Taylor, a New York dairy merchant:—

New York May 1st 1864

Adam Brown, Esq.,
Hamilton, N. Y.:

MY DEAR SIR,—I am much obliged for the copy of THE CANADA FARMER, in which I saw your letter on dairy products. I see no reason why butter and cheese should not be made as well in Canada as the United States. It is only a few years ago that all Ohio cheese was much inferior to New York State, but since the making in factories has begun in Ohio, there are two dairies there that have sold for a higher price in London than any made in this State this season. Cheese-making can be reduced to a certainty with the aid of ice or a cold spring of about 45°. There are plenty of cheese-makers from about home in this State, whose system is a success, and whose cheese would be ready to ship in about forty days from the time of making, in the hottest weather. This is a great advantage cheese has over butter; the latter often spoils if moved in hot weather, to say nothing of the far greater profit in making cheese. It is proved that 10 lbs. of new milk will make 1 lb. of cured cheese, which is selling here for 17 or 18 cents per lb. in currency; while white butter is only worth 29 cents. The milk that will make 1 lb. of butter will make 2 lbs. of cheese. There is a good shipping demand for cheese, but none for white butter. It is 17 years ago since I landed here. A few days after I began to ship cheese, and paid 4 cents per lb. for the best I could find in October, when there was a fair stock. There was a duty then of 5s. per cwt sterling, which is not on now. At that time one half was inferior, one-quarter fair, and one-quarter good. We shipped for a number of years little short of 100,000 boxes of 50 lbs. each from this country to England improving in quality each year, until those farmers who could make a choice article began to take milk from their neighbours (charging one cent per lb. for the trouble), making good cheese for them all, and obtaining two to three cents per lb. for the extra quality. This plan was soon adopted by others hence the great factory system now in operation. I understand 50 new ones have started this season. The most suitable size for shipment is about 90 to 9 lbs., pressed in hoops 11 inches by 18 inches. These suit most markets. By far the greater part is landed in Liverpool, and used in Lancashire and Yorkshire. The shipments for the year ending Sept. 30, 1863 amounted to 676,681 boxes of 50 lbs. each, and from that time to April 26, 1864, 497,047 boxes, showing an increase of 126,665 boxes over the same time last year. There is nothing in this market that sells so readily as cheese—the demand never ceases. It can be shipped all the year in steamers, and for several months in sailing vessels; the voyage mellow and ripens it, so that the cheese made here in April is fit for use in England before their own make is ready.

The numerous well ventilated steamers aid this trade much; without them we could not ship in safety in July and the three following months. There are often 12,000 to 20,000 on a steamer in the fall. We are now producing fine cheese which sells for higher rates than some English made, but improvements are yet to be made to equal Stilton, Cheddar, Cheshire, Double Gloucester, and other fancy brands of English manufacture.

I think there is a great field in Canada for improvements in the dairy. Your cows on white clover pastures and pure water, with cleanliness and suitable buildings near a cold spring, are things you have, the knowledge of the factory plan you can soon obtain. You could also make the best pork from the whey and meal of peas, oats or barley.

I trust something may be done in this matter. I shall be very glad to aid any of your friends to the best of my ability.

I am, dear sir yours truly,

CHARLES TAYLOR.

Packing Butter—Suggestions to Country Merchants.

VERY large quantities of butter are received weekly in New York, from country merchants who have taken it in barter for goods. Perhaps it would not be too much to say that the majority of butter sold at this port, for home consumption and for shipping, comes through these channels. From want of skill or of care in preparing it for market, the prices usually realized are far less than might be obtained. It is very unsatisfactory to producers to read in the published price-lists, "butter 23 to 27 cents per lb.," and then have only 15 to 20 cents offered in goods at the store, and they cannot credit the statement of the merchant that he can only get that figure for what he sends to the city. Yet such is often the case, and for reasons which might be obviated, some of which are indicated in the following suggestions:—

It is unjust as well as bad policy to pay a uniform price for all butter brought in, as is customary with many dealers. No doubt it is not pleasant to tell a customer that his or her butter is worth less than some neighbor's; but if the same price be paid for all, it is in effect offering a premium on carelessness, and only a second rate article need be expected. It is essential that butter should be of uniform quality and color. To this end it should be stored as received, and that of similar character packed together. Most of it will need working over to take out the butter-milk, which in "store butter" is usually from two to three per cent. in weight. It should be put in the tubs or firkins at once, as soon as worked; and if here be not enough to fill the package, the top layer should be covered with a strong brine. When the package is full, the top should be made even and smooth, a clean piece of muslin, dipped in brine, be laid over it, and salt sprinkled on the top of the cloth. The head of the firkin should not touch the butter. The actual weight of the firkin when empty should be plainly marked on the head—two pounds additional are allowed in this market for what the keg will soak. Nothing is gained ultimately by marking a false tare; the deception is sure to be discovered in time, and the dishonest party loses credit thereafter. The kind of vessel in which to forward butter to market, depends considerably upon distance from the city, and the time of the year. Early in the season, or fresh butter intended for immediate use, or from sections near market, the half firkin tub (the same as a firkin sawed in two), is generally preferred. Under other circumstances, kegs holding about 100 lbs. are best, and indeed these are almost always salable for shipping abroad, or for keeping any length of time, none others will answer. The best size and shape are, 22 inches high, 16 inches diameter of bilge and 12 inches diameter of head, outside measurement; well made of white oak, with smooth, round hickory hoops; the flat-hooped firkins of ash are not liked. The hole should be bored, nor plug put in the head or bottom. The firkins or tubs should be thoroughly oiled in brine, and the sides and bottom rubbed with fine dairy salt. Those who are receiving any considerable quantity of butter, should have a cool well-ventilated cellar in which to store it while awaiting a market. No fish, onions, or other strong flavored articles must be kept near it, as butter very soon absorbs any rank effluvia, and its quality is injured. It is generally found most profitable to send butter forward regularly through the season, while it is fresh and sweet. This, however, will depend upon the rates of the price current. Western butter is the principal supply for shipment during the warm months, and it usually brings better prices than, than if held back until cold weather, when better grades are in market and Western is not so much sought after. In the winter, store butter ordinarily sells at higher figures in the original rolls, with a clean piece of muslin wrapped around each, and nicely packed in barrels.—*American Agriculturist.*

Milking.

In milking, as in all other things, there is much to be learned. There are three things to be observed: regular milking; fast milking, and clean milking.

A cow, like a hen, must be undisturbed, to produce well. If worried with dogs, or driven fast by rude boys, or frightened in any way, there will not be as much milk given as when the cow is quiet, and well treated. Regular milking comes under the head of good treatment. It further gets up a habit, which has much to do with giving milk. For instance, a cow milked early; say when two years old, or less; will be a more copious milker than when begun late; say three years. When not milked till four years old, there will be little milk. Perhaps the reader can

bring to mind such cases. We have never known a successful case; and we have known a number. To milk regularly, and at equal hours, part, is to get up a habit, and an equalized strain on the udder. To milk at sunrise and sunset, will not do in summer, as the days are so much longer than the nights that the bag will be strained full out of proportion. This is hurtful to the udder. Milk, so as to draw an equal quantity of milk at every milking; and do it regularly.

Next, fast milking, experience tells us, is best. It yields more milk; doubtless, on the principle that when milk is let down it should at once be drawn away; and if neglected, it will be absorbed, or partially become caked. This latter is the case, so say those who have examined it. All good dairymen urge fast milking. And they also urge clean milking; for what is left in the bag is partly absorbed or clotted, affecting the membrane with which it comes in contact. When these three rules are carefully observed, all the milk that can possibly be got away will be had.

Mild, quiet treatment for milch cows. This is the testimony of experience. Dogs should never be permitted to bring the cows, unless they do it moderately, and the cows are unexcited by it. Fetching the cows from a distance, is positively bad, as the churning exercise will hurt the milk and the bag. In such case walk them very slowly. Go half an hour sooner after your cows. Mild treatment is the thing for milch cows; but quick, clean, regular milking.—*Dairyman, in Valley Farmer.*

Correspondence.

Stock Sales by Mr. Snell.

To the Editor of THE CANADA FARMER.

SIR,—I send you a statement of my sales of cattle during the month of April:—

To Mr. John Acrow, of Etobicoke, County of York, the short-horn bull "Ariel," 1000, Upper Canada Stock Register, and the Short-horn heifer calf "Annie," 1066. To Mr. Robert Cromar, of Pilkington, County of Wellington, the Short-horn bull "Alto," 997. To Mr. W. C. Beatty, of Trafalgar, County of Halton, the Short-horn bull "Stanley," 732. To the Agricultural Society of the Township of Southwold, County of Elgin, the Short-horn bull "Friar John," 733. To Mr. Robert Auld, of Warwick, County of Lambton, the Galloway bull "Robert Bruce." This bull, at 16 months old, weighed 1,100 lbs. To Mr. Thomas Crawford, of the County of Peel, the Galloway bull "Duncan."

JOHN SNELL.

Edmonton, May, 1864.

New Flax Mill.

To the Editor of THE CANADA FARMER.

SIR,—I would inform you of another monster flax mill just commencing in this neighborhood. It is being put up by Mr. W. Hendrie, and will be equal in size and on a like principle to that of the Messrs. Perine, at Conestoga. Mr. Hendrie is giving out flax seed to the surrounding farmers. I believe from 300 to 400 bushels have been spoken for. This new mill when in operation will be of great service to the farmers in these parts.

D. M.

12th Con., Normanby, April 30, 1864.

MORE MODEL HEN HORSES.—"Canadian Thistle" and "Amicus Gallina" are informed that their plans of poultry-houses are under consideration.

CIDER VINEGAR.—A subscriber wishes to know what is the best mode of making cider vinegar. Perhaps some of our readers can give the desired information.

PATENT WANTED.—"Frederick J. Payne," of Talbotville Royal, is advised to write to N. F. Laurent, Patent Clerk, Bureau of Agriculture, Quebec, for the information he requires.

FLAX YIELD.—Mr. A. Munro, of Nichol, mentions that a neighbour of his, Mr. John Moore, raised, last season, six acres of flax. For the straw he obtained ninety dollars. He had fifty bushels of seed unsold at the time of our correspondent's writing, for which he expected at least \$2 per bushel.

Eggs for Hatching.—"A Poultry Fancier," in Pleton, wishes to know where he can obtain eggs of the Musk or Brazilian Duck, and the Black Poland Fowl, for hatching. Parties having either eggs or birds for sale, will do well to advertise.

Grafting.—Mr. Joseph A. Phiggs of Grafton, writes "Would you, or some of the readers of the FARMER give us some information in the art of grafting fruit trees, size of limbs to graft on, and receipt for making grafting wax."

Ans.—Will some of our readers who are in the frequent practice of grafting in the tops of trees, favour us with an answer?

REMARKABLE FERTILITY OF EWES.—"John Anderson," of Blue Lake, South Dumfries, writes to say that he has "a ewe of the Leicester breed that dropped two lambs on the 5th of April, and exactly a week after, viz. on the 12th, she dropped two more, all alive and full-grown."—Another correspondent writes: "A ewe belonging to Mr. James Thomson of Springfield, Scarborough, gave birth the other day to no less than four fine lambs, all with the mother doing well. Can Stone or Snell match this?"

HARROWING AND ROLLING.—A correspondent sends the following queries: "Will it benefit fall wheat to harrow with a light harrow and roll in spring, when the ground just gets dry? Will it revive old pastures to harrow and roll in spring? Also, what time is best to roll land that has been sown in spring?"

Ans.—Very careful harrowing with a light harrow quite early in spring would doubtless be beneficial to fall wheat. Rolling also will do good when the ground is quite dry. The same may be said of old pastures. Land sown in Spring should be rolled immediately after the harrowing in of the seed.

CURBED SPAVIN.—J. Overholt, of Clinton, writes:—"Would it be asking too much of you or your readers to state in THE CANADA FARMER whether a curbed spavin can be cured, and if so, how? I have a four-year old colt that is curbed, and although I have not noticed any lameness yet, some of my neighbours tell me they think it will lame him if it is not cured."

Ans.—The affection known as curb on horses arises from a strain of the posterior straight ligament of the hock, and, like other sprains, is best treated by rest, cold applications, and in some cases blistering. Regarding the case referred to, we would advise our correspondent to take the opinion of a competent veterinary surgeon.

THE ANTI-CANADA THISTLE BILL.—"W. D. K." who by the way forgets to tell us whence he writes, says: "In this part of the province, we hail with delight Mr. Sturton's proposed bill to prevent the spread of Canada Thistles, and sincerely trust it may become as fixed as the laws of the Medes and Persians. There is no question but if once clothed with the sanction of parliament, it will confer a lasting blessing upon the country at large, for it will increase the value of property in many localities at least fifty per cent. It is almost impossible to ascertain the amount of loss sustained throughout the country, caused by the presence of this most hateful weed. It monopolizes the choice portions of the land, and feeds, as it were, on the vitals of our farms."

THE WIRE WORM.—"D. H." of Logierait, says: "Some farmers in this neighbourhood have been very much hurt these few years past by the wire worm. They are especially bad on old pasture fields that have been recently broken up, and have occasioned severe loss to many, even after having summer-fallowed and sowed to wheat. By giving a short article on the subject, pointing out a preventive, you will confer a great boon on many in this part."

Ans.—Some recommend ploughing it before winter as a likely method of abating this nuisance, but the opinion of many is that they can only be eradicated by patient and persevering hand labour in connexion with some hoed crop. More on this subject hereafter under the head of Entomology.

SALT FOR MANURE AND THISTLE-KILLING.—"ONE" writes: "In your article 'Salt for manure,' in your last, you advance an opinion that by adding a sufficient quantity of salt the ubiquitous Canada Thistle may be destroyed, but that every other thing vegetable in the land would be destroyed with the Thistle.

Could you, or any of your correspondents, state on good authority or from experiment what quantity of salt per acre would be sufficient?"

Ans. We are not sure that we understand the question. If it be what quantity of salt per acre is considered sufficient as a manurial application, we must refer our correspondent to page 98 for a reply. If it be the exact quantity per acre that will render vegetable life impossible, we cannot quote any "good authority" or "actual experiment" for a reply.

QUERIES ON GRASS SEEDS, SEED WHEAT AND BARLEY.—"Simplex" asks:—(1.) Can you publish in your next, what you conceive to be the proper quantity of Timothy to sow per acre, on a light soil, and what quantity of Clover you would mix, as I find practice widely differs—stating your opinion of what is known in Canada East, as the "Rawdon Clover," which is higher priced than the "Western Clover."

(2.) As the China Wheat is becoming a favourite, I should be glad to have your views—in comparison with the "Black Sea Wheat," which in Lower Canada answered in 1863, far better on the average than the Scotch Fife.

(3.) Winter Barley is advertised; where can a fall crop of Winter Barley, treated as we should Rye or Fall Wheat, be seen as a specimen of a much to be desired new fall crop.

Ans.—(1.) The common quantity of grass seed per acre is eight pounds of Timothy and four of Clover. In light soils, six lbs. of each would be preferable. The Rawdon Clover, known also as the Vermont and Pea-Vine Clover, is a large, late variety, flowering at the same time as Timothy, and therefore good to sow with it. On strong land it is rather coarse in the stalk.

(2.)—We can give no opinion of China Wheat, but perhaps some of our readers can. In Canada West, the Fife Wheat has quite superseded the Black Sea variety.

(3.)—We do not know where our correspondent will find a sample Barley field such as he speaks of, but perhaps some of our readers can tell him. Fall Barley is grown very successfully in various parts of Canada West.

The Canada Farmer.

TORONTO, UPPER CANADA, MAY 16, 1864.

The Weather and the Crops.

This is unquestionably a very late Spring, with an unusually low temperature and heavy falls of rain. A few warm days, at the beginning of the month produced a very sensible effect on vegetation, indicating that the vernal season had arrived. Since then the weather has been cold and wet, keeping all kinds of agricultural and gardening operations very much behind. On the drier and warmer lands peas, wheat, and other grains have to some extent been sown, but by far the larger portion of land has yet to be sown at the date of our present issue; and it will take many days of fine weather before wet and flat lands can be touched. We hear various reports of winter wheat, and fear that in too many localities it has suffered severely, in some places that we have seen, it is almost an entire failure. From other parts we learn the winter wheat has not looked so promising for several years. It is everywhere backward, and therefore more liable to the attacks of rust and the midge, which of late years have made such sad havoc with this crop. In all situations, where the snow continued late, the wheat is more or less strong, and to all appearance encouraging. The clover plant, too, under such conditions, wears a strong and promising appearance. Live stock have been carried through the winter generally in a healthy condition, but grass is much wanted at present.

By the way, we may in this connection just observe that in such a spring as this the benefit of draining the land is most striking. We saw two large fields adjoining each other yesterday, of precisely similar soil; one thoroughly drained and the other not; the

drained field was quite firm and dry, and the crop (peas) peeping promisingly through the ground; while the other is full of water holes, and will require at least a week's fine weather before a team can be taken on it. The difference in the temperature of these two otherwise similar soils six inches from the surface was found by careful experiment to be more than seven degrees! Farmers of Canada! think on that fact as connected with well drained land, besides being more easily worked, with a clear gain of two or three weeks in the spring, and a still a greater gain generally in the crop at harvest. So true is it that on all wet lands draining is the *Alpha* and *Omega* of all successful and advancing cultivation.

Since the above was put in type a correspondent in the Township of Hay, County of Huron, has sent us the suggestion that if we had a trustworthy correspondent in every township throughout the country, who would send *monthly* during the growing season, a brief account of the weather and the appearance of the crops, it would form a very interesting and useful column in our journal. We are obliged to our correspondent for the hint, and also for the example he gives us of the way in which the thing should be done. Will he please to regard himself as our "weather and crop correspondent" for the Township of Hay, and will others of our readers be kind enough to send us from month to month, brief notes like the following which we quote from the letter alluded to above? "Township of Hay, May 10, 1864. We have had a very backward spring here, so far. The last month has been cold and wet. Seeding is scarcely half done. Our clay soil has not been in trim for the harrow this spring. Fall wheat badly winter-killed in all exposed situations, especially so on stubble summer fallows. Looking well on old sod fallows, and where the wheat had been top-dressed in the fall, with coarse manure."

The Hog Embargo.

The war order issued by the United States Executive, prohibiting the export of live hogs, is still in force, and we learn that Mr. Adam Brown of Hamilton, who has recently been to Washington, had some conversation with Mr. Secretary Seward on the subject, and ascertained from him that the order was irrevocable. Our readers are aware that a distinction is made between dressed and live hogs. The former are allowed to come into Canada, but the latter are forbidden to do so. It is difficult to see the reason for this distinction. Dressed hogs are more of the nature of army supplies than living ones, and the wonder is that the prohibition did not "go the whole hog," alive and dead. As it is, the thing operates very unfavorably upon our trade. Our curers and packers do not want the dressed article: it is inconvenient in winter and of no use at all in summer, and the result is that this branch of business has been very much curtailed. Considerable disappointment and loss have been occasioned to those who had gone to large outlay in fitting up premises and providing facilities for pork-packing; and others who designed embarking in this business have been prevented from doing so. We hear that but for this prohibition three additional pork-packers intended commencing next fall in Hamilton alone, and doubtless others were contemplating the same thing elsewhere. There is a striking moral and valuable lesson in this affair, which our farmers ought to heed. It surely teaches us the wisdom and duty of self-dependence. We ought not to lean down on others for what we can do for ourselves. Canada is well able to supply its own pork and bacon factories; and, on the whole, perhaps we ought to be grateful to Uncle Sam for compelling us to be more self-reliant. We hope Canadian farmers will go more vigorously and extensively into pork-raising, since there seems little reason to doubt that it will be a steady and profitable business. In conclusion, we quote part of a communication which appeared in the *Hamilton Spectator* of the 7th inst., written by Mr. Samuel Nash, pork-packer, of that city:—

"Canada will have in the future a good and steady market at home for her pork, and can, in consequence of its superior quality, secure just as much of the English bacon trade with America, as it desires to keep, amounting in the aggregate, say to twenty million dollars annually. Our farmers will see there is every encouragement for them to feed hogs, and

should the Reciprocity Treaty be continued they will have a double advantage over us in having an open market in the States to sell live hogs, which is shut against us to buy; and, on the other hand, in event of the abrogation of the treaty altogether, they need have nothing whatever to fear in regard to an over-supply, for the demand will be sure to keep pace with it, and lead, if found necessary, to the erection of a range of pork houses stretching along the Canada shores of Lake Ontario and the river St. Lawrence, from Hamilton to Montreal. Examples are almost numberless of causes apparently less important than the prohibition in question having effected radical changes and revolutions in the relations of commerce, as well as in politics and in the destiny of nations; and who can tell but this very act of the Lincoln Administration may stand on record as an evidence of their short-sighted and unwise commercial policy. About 35 years ago Ireland manufactured its first ham that was fit to eat; nine years ago Chicago was undreamt of as a pork market, now it is without comparison the greatest in the world. We are only beginning.

Provincial Exhibition of Upper Canada.

We have much pleasure in calling the attention of our readers to the accompanying Circular, which has been addressed to the officers, &c., of Agricultural and Mechanical Societies by the President of the Association. We understand that the Prize List, containing full particulars of the regulations, &c., will shortly be published, and may be obtained of the office-bearers of the various Agricultural Societies and Mechanics' Institutes throughout the Province.

A trial of Reapers and Mowers will take place at the proper seasons, in the vicinity of Hamilton, the precise time of which will be duly announced. Persons intending to compete with these articles at the Exhibition, must submit them for previous trial, and the awards will be made known when the other premiums are declared during the Show-week. The Board of Agriculture will defray the cost of freight of all Reapers and Mowers transmitted for trial. As this is a matter of great practical importance, both to manufacturers and purchasers, it is to be hoped that it will receive proper attention from all parties. The prospect of a show that will be honorable to Upper Canada is highly encouraging, and a more convenient spot for such an occasion could not be found than Hamilton. We trust that our farmers will make timely and adequate preparation:—

STENOGRAPH, LONDON, C. W., April 9, 1864.

Sir,—I beg to inform you that the Annual Exhibition of the Provincial Agricultural Association of Upper Canada will be held this year at the city of Hamilton, on the 26th, 27th, 28th, 29th and 30th of September 1864. The Prize List for the year will exceed in amount any previously offered by the Association (with the exception of 1860, on the special occasion of the visit of the Prince of Wales) amounting \$12,500.

The Prize List, with the rules and regulations governing the Exhibition, will be published soon, giving full particulars. Several important alterations have been made in it, additions also, and I would beg to call attention thereto. In the meantime, allow me to bring before your notice some of the changes made, viz:—

IN THE SEVERAL CLASSES OF SWINE evidence must be given that they were shorn later after the 1st of April of the year in which they are exhibited. And a class for Shropshire Down has been added.

IN CATTLE.—From the continued practice by too many of feeding up breeding cattle for exhibition, which is so objectionable, the Board of Agriculture have deemed it necessary to give power to the Judges to reject such as in their opinion have been over fed.

An additional class has been added for Angus Cattle.

The Prince of Wales' Prize of \$60, will be given this year for the best portable steam engine, not less than six-horse power, suitable for agricultural purposes—the Association giving a second and third prize of \$30 and \$20. These engines will be required to be set in motion on the ground, and be ready to be applied to any implement which it may be desirable to test the working of.

An additional section has been added to Class 29 in Wheat, and several alterations made in the class, as well as the following classes, as also in the several classes for horses, cattle, sheep, poultry, fruit, &c.

An important feature of the forthcoming Exhibition will be the GRAND PROGRESSIVE MARCH, which is to take place on the Tuesday of the week. The first prize will be a first class Combined Reaper generously given by Mr. JOSEPH HAZZ Ochawa valued at \$150. The second, third and fourth prizes added by the Association, viz. The second prize, the iron plough which takes the first prize at the Exhibition. The third, the wooden plough which takes the first prize. The fourth, a set of harrows.

Alterations have been made in the list of the Arts and Manufacturing Department, which will be brought to your notice through their Journal. These are principally the striking out a few trifling prizes, and adding others of a more important character, such as for Native Rosin, Tar, Turpentine, and two prizes of \$60 and \$40 respectively, for not less than six varieties of LUXE GOODS, manufactured in Canada, from flax, the product of the Province.

Favourable arrangements will be made with the Railway Companies and Steamboat proprietors for the conveyance of articles, &c., to and from the Exhibition.

The citizens of Hamilton are determined to do everything in their power to accommodate the visitors to the Exhibition. An

efficient local committee of gentlemen is organized, and are making preparation for the safe keeping and care of the property of exhibitors. And I am assured and feel confident that the arrangements will be in every respect complete. And now it remains with the farmers, breeders, mechanics and all exhibitors, to do their part, and make the forthcoming Exhibition the best, in every sense, that has ever been held, not only in Canada, but on this Continent. Come forward one and all, be up and doing, East against West, North against South, in honest, spirited rivalry, and show to the world what can be done in this noble country of ours, when her people are aroused and put forth their energy. Let me also urge upon intending exhibitors to be ready in good time, and have their stock and manufactures on the ground, and in their places, properly arranged, sufficiently early to allow the Judges to commence their duties at the hour appointed.

You will oblige me by giving as much publicity to this Circular as in your power.

I am, Sir, your obedient servant,
JAMES JOHNSON,
Pres. of the Prov. Agr'l. Association of U. C.

THE FORTHCOMING "CANADA SHORT HORN HERD BOOK."—The following circular has been addressed by the Secretary of the Provincial Board of Agriculture to the breeders of improved stock, and we insert it that as much publicity as possible may be given to the information it contains.

BOARD OF AGRICULTURE, Toronto, April, 1864.

SIR,—I beg to inform you that it is the intention of the Board of Agriculture of Upper Canada to publish, as soon as possible, a Herd Book, containing the full pedigrees of all the Short-horned or Durham Cattle in Canada, so far as they can be obtained, up to the present time. It is intended to make the work a thorough Book of Reference for Canadian breeders, affording all the necessary information relating to the descent of their cattle, without the necessity of consulting either the English or American Herd-Books.

The importance of such a work for this Province will be apparent to every intelligent breeder. No man can breed to advantage, or with any guarantee of obtaining a definite desired result, without a careful study of the pedigrees of the animals he proposes to breed from, in their various collateral sources of derivation, as well as in the direct line.

At present the information necessary for such a study can only be found scattered through the pages of the English and American Herd Books, consisting of upwards of twenty large and costly volumes, and, moreover, the publisher of the English Herd Book will not any longer receive pedigrees of cattle for insertion, except of those bred within the British Islands. But the CANADA SHORT-HORNED HERD BOOK will contain all the information relating to Canadian cattle, up to the present time, in one compact volume and will be offered at a moderate price, not exceeding \$4 per copy.

The pedigrees of animals of which certificates of registration in the Upper Canada Stock Register have been obtained and paid for by the owners, will be entered in the Herd Book without additional charge. For all others, the charge will be half-a-dollar each.

Breeders who desire to have portraits of their animals inserted, are requested to communicate with the Board of Agriculture at once, who will send a competent artist to sketch the same on condition of the owners paying the cost of such sketching. The portraits will be executed in the best style of lithograph engraving of the present day.

The work will be printed in the autumn of the present year, and pedigrees will be received for insertion up to 1st July next. If you desire to have any of the pedigrees of your stock inserted, I have to request that you will forward them without delay, together with the necessary amount. The form of writing pedigrees of Short-horned cattle is well known to breeders, and is very simple; but to prevent any mistake, I give the following information in regard to it.—The following particulars must be given, viz. the name of the animal, the colour, the date of birth, the name and residence of the breeder and of the present owner, then the name of the animal's sire, with his Herd Book number; then the name of the animal's dam and her sire, with his Herd Book number; then of the animal's grand dam and her sire, and so on, tracing directly back through the female side, and giving the name of the sire of each dam, with his Herd Book reference number. If any sire mentioned has not been recorded in the Herd Book or Stock Register his pedigree must be given in full and paid for separately, when it will be inserted in its proper place in the Herd Book as an independent entry. Every pedigree must be traced back to a Herd Book dam, or till at least the name of five Herd Book sires have been given. The following is an example from the Upper Canada Stock Register.—U. C. S. R. meaning Upper Canada Stock Register; A. H. B. American Herd Book, and E. H. B., English Herd Book.—"Young Flamboro' (bull), light horn, calved February 9, 1863, bred by Mr. Thomas Stock, East Flamboro'; the property of Mr. John Gibbs, Ops. Co. Victoria, C. W.

Got by Garibaldi, 535, U. C. S. R. dam Lazze, by Wentworth, 541, U. C. S. R. S. d. Empress, by Prince Albert, 74, U. C. S. R. S. d. Beauty, by Duke of Wellington (55), A. H. B. S. g. d. Victoria, by Agrioola (1814), E. H. B. S. g. d. Beauty by Snowball (2647), E. H. B. S. g. g. S. d. —, by Lawnsleeves (365), E. H. B. S. g. S. g. S. d. —, by Charles (127), E. H. B."

The number of copies of the Herd Book to be printed will be limited to suit the probable demand. If, therefore, you desire to secure a copy you will please to fill up and return the accompanying blank order as soon as convenient.

I am, Sir, your obedient servant,
HUGH C. THOMSON, Secretary

MAI APPROPRIATION OF AGRICULTURAL SOCIETY FUNDS.

J. Rothwell, of Emerald, complains that at the usual dinner after the Annual Fall Show of the Amherst Island Agricultural Society, the extra liquor used by the guests was, by a resolution of the directors, decided to be paid for out of the surplus funds of the society. Our correspondent states that the six directors were equally divided in their vote on the resolution, and that the decision was made by the president's casting vote. We hope there is some mistake here, as we can hardly believe the officers of an agricultural society would make so glaring a misuse of public funds.

OUR VILLA ILLUSTRATION We beg to call special attention to the department of Rural Architecture in the present number. It is enriched with a beautiful engraving, representing a most desirable dwelling, with surroundings of a very attractive character. We take the opportunity of remarking, that these architectural wood-cuts are designed and engraved expressly for THE CANADA FARMER, and those of our readers who have cultivated taste, and live at a distance from first-class architects, will find them, we doubt not, exceedingly valuable and useful. A like remark may be made of our engravings in general, which are almost wholly original, and the work of our own artists.

THE CANADA THISTLE AT RED RIVER.—This nuisance has become so prevalent and so serious in the Red River Settlement, that the *Nor' Wester*, of March 31st, devotes its leading editorial to a discussion of the question what shall be done. The article is headed, "Shall the Settlement be Abandoned?" and the statement is made that the evil has assumed such proportions as to "menace the existence of the Settlement." The editor says:—"We have heard of some who are convinced they cannot on this account remain on their farms more than a year or two." The *Nor' Wester* strongly urges upon the legislature of the colony the passage of a remedial measure forthwith.

Veterinary Department.

Hoven or Tympanitis in Cattle.

As its name indicates, this disease consists in the distention of the rumen, or paunch, with gas, and is one of the most common diseases to which cattle are liable. It is produced by various causes. It may appear as a sequel of choking, or arise from chronic indigestion; but it chiefly occurs from changing animals from poor to rich, succulent food, such as clover, tares, or vetches, especially when they are wet or covered with dew. Another cause is eating diseased or frosted potatoes. Within the past month several cases have come under our notice, arising from the last mentioned cause. Regarding the nature of tympanitis, it is generally unaccompanied by inflammation, and is considered due to a suspension of the functions of the stomach, owing to the food being of a kind to which the stomach has been unaccustomed. The consequence is, that the muscular bands of the rumen cease to act, and the food, by exposure to heat and moisture, undergoes chemical changes, by which gas is evolved.

The chief symptom is swelling of the left flank, and this to such a degree that the swelling will be higher than the loins. When struck gently with the hand, a dull resonant sound is emitted. As the disease progresses the respiration becomes disturbed, owing to the distended stomach pressing on the diaphragm, the animal moans heavily, the head becomes affected, and the patient appears stupid. There is great pain, and if it be not relieved, the animal gets down, or stands with hind legs placed forward under the belly, and the back arched, and death ensues either from rupture of the walls of the stomach or of the diaphragm, or from asphyxia.

When the tympanitis is severe, the treatment must be prompt and energetic. If the animal is attacked while at pasture, and the case not very bad, friction to the abdomen and walking about will often remove it. If medical treatment is required the best medicines are laxatives and stimulants. The stimulants operate by exciting the stomach to perform its proper functions and inducing the muscular pillars to act. The evolution of gas ceases, and that already evolved is got rid of by eructations. A useful and convenient medicine to give is linseed oil. About one pound combined with three or four ounces of sulphuric ether. Oil of turpentine, whiskey or gin may be administered. In many cases a powerful dose of epsom salts is beneficial, along with some active purgative, as croton oil, ten to twenty drops. Having tried such treatment as recommended, if there be

no appearance of the patient getting relief, but signs of it gradually becoming worse, the only chance is to puncture the paunch, which must be done on the left side about equidistant from the last rib, the prominence of the haunch and the lumbar vertebrae. The puncturing is generally done by practitioners with a trocher and canula made for that purpose. When such an instrument is not at hand the operation can easily be done with a well sharpened table or pocket knife, either of which is preferable to a penknife. In fact, in all cases when the swelling is great and the animal becoming stupid, we would advise to puncture at once, as in many of these cases if immediate relief is not given, death will soon take place.

Animals that have been affected with tympanitis should, for several days, be fed on a soft and easily digested diet; and if the bowels appear constipated, a dose of purgative medicine should be given.

Murrain.

To the Editor of THE CANADA FARMER :

SIR,—Around where I live there is a disease very prevalent and very destructive among cattle, called murrain. It comes on suddenly, and almost invariably kills them within twenty-four hours after the attack. There are no apparent symptoms prior to passing of blood with the urine. I have read THE FARMER pretty attentively, and have not once seen it mentioned, when most of the other diseases which afflict domestic quadrupeds have had something said about them. This leads me to think other localities are not scourged so with the murrain as the one in which I reside. It is no uncommon thing for it, when it commences its ravages in a herd of cattle, to destroy one-half of them within a year. Various remedies have been tried, but they have generally proved ineffectual. What is the cause of it remains a mystery. Some profess to say they have seen leeches in the livers of beasts that have died with the murrain, but I never saw any; others say it is an herb they eat that causes it, but that also I disbelieve, for they die in the winter as well as the summer. I never saw but one beast cured of the murrain, and that was by giving her lumps of salted butter and drenching her with buttermilk, but that cure proved useless with the next ones tried. Any information on this disease will be thankfully received.

WILLIAM.

Brooke, April 14th, 1864.

NOTE BY EDITOR CANADA FARMER.—We have not, in this country, had an opportunity of meeting with a case such as our correspondent designates Murrain. In Britain the disease known as Murrain effects the mouth and the whole alimentary canal of cattle and also the feet. It is sometimes described as the mouth and foot disease, and in general is not fatal in its character, although a great many animals become affected by it. The disease referred to in the above communication, is possibly that designated Red-water, as we are informed it is not uncommon in many parts of Canada, although personally we have not met with any case of the kind.

A more particular account of the symptoms attendant on the disease our correspondent mentions, is necessary to enable us to arrive at a correct conclusion regarding the real nature of the malady. The most characteristic symptom of the disease known as Red-water is the increased discharge of urine, containing the colouring matters of the blood. When occurring in a milch cow, there is a gradual diminution of milk, which is very thin and watery, and has a peculiar frothy appearance. As the disease advances, the animal gets emaciated, and the urine changes its colour, at first to pink, gradually becoming darker and darker. The pulse becomes quickened and weak, there is also palpitation of the heart produced by extreme weakness. The animal gets weaker and weaker, and at length dies through sheer debility.

Among the causes of Red water are first, certain grasses, especially those growing on limestone and less sandy ground, the plants or twigs of certain trees, as the oak, &c., also removing cattle from poor land to luxurious pastures, more especially when the days are hot and the nights cold.

The severity of Red-water differs considerably. Some cases recover in a few days, whilst others run on speedily to a fatal termination. Red-water in general is best treated by administering in the early stages a dose of purgative medicine, as one-and-a-half pounds of Epsom salts, combined with some carminative. When the bowels are freely moved the animal may be considered tolerably safe. It is also necessary to change the food—to give linseed, or oil cake, bran mash, gruel, and also allow as much cold water as the patient chooses. If there is much weakness a quart of good beer ought to be given several times a day,—and as the disease advances some of the compounds of ammonia are beneficial.

Red-water may usually be prevented by good feeding,—allowing plenty of common salt. In Britain, and more especially in Cheshire, at one time considerable tracts of dairy land were useless for cattle on account of their developing Red-water. These lands by draining and dressing with artificial manures, have since been rendered perfectly healthy.

LIABILITY FOR PLACING DISEASED HORSES NEAR A PRIVATE STABLE.—In the Superior Court (General Term) the case of Wilkes vs. the Harlem R. R. Company was argued. The action was brought to recover damages for turning out their horses infected with farcy and glanders in a meadow adjoining the stable of the plaintiff, whereby his horses took the diseases, and many of them died. Edwin James, who had obtained a verdict before a jury for the sum of \$5,000, argued the case of the plaintiff, which came up on appeal. The question is one of considerable importance. It was contended by the defendants' counsel that they would have been liable to an indictment if injury happened by the public exposure of their horses in such a condition; but they disputed their liability to a private individual. We do not appreciate this distinction, and if damage has been sustained by an individual, upon every principle of law and justice he ought to have a remedy.—*Wilkes' Spirit.*

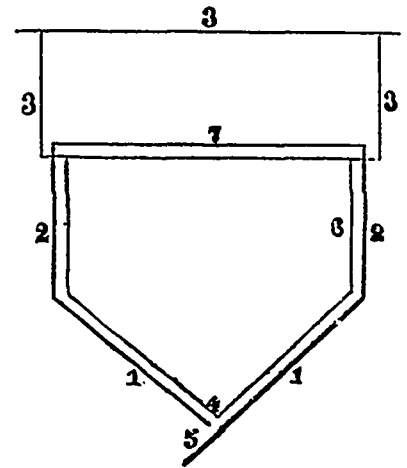
The Apiary.

Extracts from my Bee Diary.

To the Editor of THE CANADA FARMER :

SIR,—The first day of January, 1861, I brought home four stocks of bees in good condition, having moved them 50 miles or more, they remained unsettled the rest of the winter. When I placed them on their summer stands I found them much reduced in numbers. I adopted Mr. Grant's plan of making artificial swarms, as recommended by, Rev. J. G. Wood, in his treatise on bee management. Made my hives 12 inches front, 12 inches rear, and 13 inches deep, with bars across the top of the hive from front to rear as guides for the bees to build their combs on; had a moveable top to all my new hives. Result of first season's operations, a complete failure as regards artificial swarms. Cast two swarms in the natural way, one went to the woods, one we saved, they left us some surplus honey. March 20th 1862. Placed my bees on their summer stands. One of the old stocks died during the winter. Had wintered them in a tight board box, they came out in good condition. Depended upon natural swarming this season, cast the first swarm the 20th June. The old stocks cast from two to five swarms each. Put from two to three after-cast swarms into one hive. At the end of the swarming season I had 14 hives of bees all in seeming good condition. We will see what my Journal says, 1st, March 1863. Lost all my old stocks and some of the new ones, leaving me five to begin the season with. The loss was not an entire one for they left us about 300lbs. of honey. The loss I sustained caused me to attempt to discover why I failed. The attempt to make artificial swarms in the summer of '61, taught me that the queen bee will not leave the main hive to inhabit a hive placed at the side or top. The loss in '62 was I think caused by placing my hives too close together; they stood side by side, entrance facing to the east, in fact they became queenless. Another fault was that my hives were too small, I find bees kept in small hives more inclined to swarm than in large ones. In August 1862, I obtained a copy of Langstroth on the hive and honey bee. Made during the winter of '62 and '63 hives No 2, and an observing hive as per diagram, and two of my own plan for trial as per diagram. Transferred a stock of bees and comb into a Langstroth hive from a common one, the first week in May 1863. It filled the main hive and 40lbs of surplus honey

in boxes. Practiced artificial swarming last summer as recommended by the above named treatise. One of the artificial swarms filled two boxes of 16lbs. each of pure honey, besides their winter supply. To sum up the result of last years work with bees. I have now this 12th day of March, 1864, ten good stocks of bees, lost two in the winter, one had a drone laying queen, which I did not discover until it was too late to help it, the other perished for want of food



To understand the accompanying diagram, you must imagine a hive of this description to be sawed in two halves, from front to rear, 1-1, bottom of hive, 2-2, sides, 3-3-3, cap to cover boxes for surplus honey, 4, entrance for the bees to pass in and out of hive, 6-6, comb frame, 5, alighting board, 7, honey board. The advantage of a hive of this description is, that the honey moth when thrown out of the comb by the bees falling on an inclined surface, must go out of the hive. **DIAGENES.**

TREATMENT OF THE STING OF BEES.—The organ with which bees inflict their sting consists of two barbed or rather serrated darts issuing from a sheath and placed back to back, so as to leave a groove between them. The sheath is encased in nine cartilaginous scales provided with muscles, eight of which perform the duty of pushing the weapon out, while the ninth draws it back. To increase the pain caused by the mechanical action of the dart, a poison is secreted from two bladders situated on both sides of the intestines, and it is this poison which causes the formation of a small pimple on an erysipelatous redness. This generally disappears in a few instants, but sometimes when several stings have been inflicted at a time, or when even a single one has injured a nervous filament, the inflammation is rather severe. In such cases, Dr. Latour proposes the following treatment:—1. To pull out the sting which generally remains in the wound. 2. To foment the place with iced water, or else extract of saturn or ammonia. 3. To apply an impenetrable coating of colodion, rendered elastic by the addition of one-tenth part of castor oil, whereby the production of heat in the living tissue is prevented and inflammation avoided. —*Scientific American.*

BEES AND HONEY OF GREECE.—The honeys of Hybla and Hymettus are at this day almost as celebrated as they were in the time of the classical Greek poets; the honeys of Cerigo, of Zante, and many other places, continental and insular, are all fine, and each has its admirers. The honey of Leucadia is, perhaps, almost as good as any, and the descendants of the bees that fed Ulysses deserve some consideration. I was interested, then in the little beegarden on the site of the city of Leucas. It was a rocky, barren-looking spot, and did not at first sight seem very promising, for the whole ground for a great distance around looks naked and without vegetation. But it is not really so. Every little crevice or interval between two stones, whether large or small, and not a few holes made by vegetation in solid rock itself, contain some little flowering plant especially patronized by the honey bee. Rosemary and sages abound. I was not much surprised, therefore, to see the bees, but the hives rather puzzled me at first. They consist of small oblong boxes placed on end on a low stone, each box being covered by two or three tiles, evidently to keep off the heat of the sun in summer. Two round holes, each about half an inch in diameter, sufficed for the bees to enter and emerge, and it did not seem to matter much where these holes were pierced. The boxes were constructed in the roughest manner, and seemed to have not 2 feet apart, and each box was about 20 inches high, and 9 inches square. The bees were exceedingly busy and perfectly good-tempered.—*Austed's Ionian Islands in 1863.*



How to Plant Fruit Trees.

In planting an orchard it is advisable first to plow the ground into lands as wide as the distance between the rows of trees. The furrows should be turned towards the centre of each land, and the lands run in such a direction that the ditches left by the plow shall carry off all the surface water. The trees are to be set out along the centre of each land. The holes should be dug sufficiently large to allow of the roots being placed in their natural position, that is spread out as they grow, and not bent or doubled up in order to get them into the holes. It is well to dig them some six inches deeper than is needed to receive the tree and fill in again with well pulverized surface soil, thus forming a bed into which the young roots may grow. All bruised, broken or injured roots, should be pared smooth with a sharp knife, and the tree placed in the hole so that it will stand at the same depth in the ground when the earth becomes settled as it stood in the nursery. The mellow surface soil should be carefully worked in among the roots, in such a way that every root will be in contact with the soil and no vacant spaces left, and thus the hole filled up, gently pressing down the earth with the foot when there is no danger of injuring the roots. The top of the tree should also be pruned back, for in removing it from the nursery some of the roots are necessarily injured and others cut off, and it is desirable to restore the balance between the top and root by cutting in the branches. It is a good rule to cut back all the branches of the previous season's growth to within four buds of the base, besides taking off entirely, all that are not wanted. After the trees are planted the surface of the ground should be covered with partially rotted straw, leaves, or coarse litter, to the depth of from four to six inches, as far around each tree as the roots extend. It has been recommended to use manure for this purpose, but strong manure is not a safe article. It certainly should never be put into the holes among the roots, and there is danger of its being washed down into the soil, in too strong proportions when placed upon the top of the ground, particularly when the tree is newly planted. The object of covering the ground over the roots of the tree is to preserve a uniform degree of moisture, and temperature, so that the earth shall not be baked by the sun, nor the trees suffer in time of drouth.

Standard apple trees are usually planted about thirty feet apart each way. An esteemed correspondent residing at Woburn, strongly recommends that in this climate they should be planted much closer together, not more than 18 feet apart, for the reason that they protect each other. We have never seen such an orchard, nor are we sure that it will prove on the whole desirable.

Standard Pears, and Cherries of the Heart and Bigarreau varieties may be planted twenty feet apart each way; Standard Plums, Peaches, and Duke Morello Cherries at eighteen feet.

Dwarf Pear, Cherry and Plum Trees are planted ten feet apart each way, and Dwarf Apple Trees (on the Paradise Stock) eight feet. It is best to plant Dwarf trees so that the stock shall be entirely in the ground, but *not any deeper*. By the stock is meant that part of the tree below the place where the bud or graft was inserted; this part it is desirable to bury in the soil so that the place of union between the graft and the stock shall be just at the surface of the ground. Many trees are set out every year only to die before

the end of the season or to straggle only during a few years of unsatisfactory existence. It is important to success that trees should be planted in a suitable place and in a proper manner, but prominent among the causes of this loss is one thing that unfortunately cannot be wholly remedied by the most judicious selection of soil or the most careful planting. We refer to the *mistaken anxiety to get large trees*. At least ninety per cent. of the orders received by our nurserymen contain the injunction, "be sure and send nice large trees, I want them for *immediate bearing*." Now a large tree cannot possibly be taken up with as much root, in proportion to the top as a small one; if, then, the proper equilibrium between the root and the branches is to be restored a large part of the top must be cut away, much more than in the case of a smaller tree. This the planter is seldom willing to do, and in consequence the tree dies; and even when he does cut in the top sufficiently, the tree is never likely to thrive as well as if it had been transplanted smaller. Ordinarily the younger, smaller tree, treated with the same care, will in ten years not only have outstripped the larger tree in size, but have borne more fruit. The best trees for transplanting are those that are young and thrifty. Standard apple and pear trees at three and four years old will be transplanted with better success than at any greater age. Plum and Cherry at two and three years, and Peach at one and two, and Dwarf trees at the age of two and three years.

On the Best varieties of Apples for Market.

To decide absolutely as to what kinds are best under all varieties of circumstances, is what no one can do. And it is with great diffidence that I would hazard an opinion, when we see some hundreds of apples described in our pomological works as, "good, very good, and best," and perhaps any one of them would please a not too fastidious taste. Yet there are some varieties that are better than others, although what may be "best" in some localities, may be only second or third rate in others, owing to the great difference in soil and climate, more especially the latter; as in almost every section of the country the cultivator has an opportunity to choose his soil, at least to some extent.

If we plant with a view to the English market, there is no doubt the green Newton Pippin is the most profitable apple, as it is a good bearer and brings a higher price than any other, while the cost of transportation is no more than upon a kind that brings a lesser price. But the objections to it are, that it will not do well on every soil, nor bring a fine sample with indifferent cultivation. It requires a very deep rich clay loam resting upon lime stone, or else the land must be heavily dressed with lime, I need not say that it benefits largely by protection from the prevailing winds as, indeed, every kind of fruit does in a greater or less degree. As the tree is rather a slow grower, and late in coming into bearing, I would recommend the planting of the Baldwin, Northern Spy or any good fast growing tree, and when the trees are eight or nine years old, graft them with the Newton Pippin. But before doing so try if it will succeed in your locality by grafting some bearing tree with the Newton Pippin, and give it a chance, by good cultivation and plenty of time, and if you can grow good fair apples, free from black spots, you will be quite safe in going largely into them. The Lady apple commands a very high price as a fancy dessert apple, both in London and New York. The tree is rather small when full grown, but bears a heavy crop, the objection to it is its very small size. The Baldwin is an apple that takes well in the market. It presents a fine appearance from its high colour, uniformity of size, and freedom from blotches. The tree is one of the best growers we have and bears a large fine crop, but it is deficient in flavour. The Rhode Island Greening should not be passed by; it is one of the most profitable apples we have, but they should only be planted to a limited extent; as they are emphatically a cooking apple, and not fit for table use, and no dealer likes to buy a large quantity of them, without getting a lot of some other kind, yet from the immense crops they bear the apples can be sold at a good

profit, even at a lower rate than some other kinds would bring. The Roxbury or Boston Russet and the American Golden Russet, are both very good long keeping apples. The latter is smaller in size but higher in flavour and altogether a much finer fruit. The Roxbury Russet is a good late cooking apple, and the American Golden Russet is a fine late table apple, both are perfectly hardy and desirable varieties. The Ribston Pippin commands a high price in the English market. The tree is a good grower and the fruit here is much finer than can be grown in its native England. It bears a good crop every year, comparatively uniform in size and colour, and is a profitable apple, if sent to market not later than November, as it is past season early in January.

There is an apple which I believe has not yet been described, in any pomological work, but which in my humble opinion should as a dessert apple, rank among the very best. The original tree was grown by Mr. Swayzee, in the latter part of the last century, on his farm between Niagara and Queenston, and it is locally known as the Swayzee Pome Grise. It is rather below the medium size, quite crisp, and of a very high pear flavour and a long keeper. The tree bears an average crop every year, and is no doubt quite hardy. From its great superiority to all other russets, in point of flavour, I have no doubt that if it were disseminated by some of our enterprising nurserymen, it would prove a great favourite. The original tree is or was standing a short time ago.

I might extend the list, but it is by no means desirable that many varieties should be planted, and having a list of good growing, good bearing, good eating, and good keeping apples, it is all that is required, unless it is to extend the season by including some of the earlier kinds. This has not been done, because except for domestic purposes it is better that they should be grown in the more Southern parts of our Province as they are only valuable if thrown early into the market.

R. N. B.

Niagara, March 17.

Hedge Plants.

To the Editor of THE CANADA FARMER:

SIR,—Fencing is an expensive item in the cuttings on a farm, especially when the materials have to be purchased at a distance. In some localities it is becoming absolutely necessary to plant hedges; and on this subject we want more information. The remarks in No. 2 of THE FARMER on the Buckthorn and Barberry, are encouraging. I have upwards of sixty rods of the Buckthorn, two and three years old, and can add my testimony as to its ease of transplanting, hardness in frost, drought, &c.; its lack of sweetness to mice, cattle and sheep; but it requires a much more formidable-looking barrier than it now promises, to prevent cattle that have been "raised in the woods" from crowding through with their eyelids closed. If any of your readers—not having plants to sell—have succeeded in training a hedge of this plant, to be "bull-proof," (never mind the hogs—they ought not to run at large,) then I should like to know how it is done, and what its age.

The Barberry is slower in growing, and the plants more difficult to raise; but, to my mind, it is the plant above all others suitable for Canada, for hedging purposes. It can be trained to be not only bull-proof and hog-tight, but a bird or a snake could not go through. Its foliage is beautiful at all seasons, and when in blossom it is exceedingly lovely. Woodstock, April 2, 1861.

R. W. S.

Asparagus Beans.

To the Editor of THE CANADA FARMER:

SIR,—Last season I procured from Mr. Simmers, seedsman, Toronto, a packet of these beans. Let all lovers of green beans try them. In my opinion they are superior to all others.

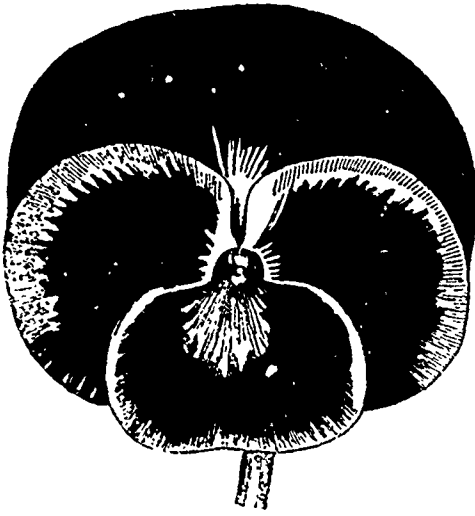
HOW TO COOK THEM.

Cut the pods, which are long, into lengths; cook and serve as you would asparagus.

FOR WINTER USE.

Pick them when fit to use as green beans; put into a firkin or keg alternate layers of common salt and beans; keep in a dry cellar. During the past winter I have had them preserved and cooked as above, fresh and green as if from the garden.

P. E.



The Pansy.

This favourite flower can be more easily and perfectly grown in the cooler and moister climate of Canada, than in the more southern parts of the Continent, and for this reason probably, it is more

popular with us than in the United States. The English Pansy requires a moist, cool climate, like that of England, where it is grown in the perfection shown in the above engraving.

The Belgian Pansy has not yet attained that perfection of form, but it exhibits a much greater variety of colouring, being blotched, striped and mottled, so as to be very showy. This variety is said to be more hardy, and less sensitive to extremes of heat and cold, than the English. Mr. Beadle and other florists, have taken the pains to import some of the seed from the most celebrated cultivators of this variety, and we hope this deserving flower will receive more general and careful cultivation. We present our readers an engraving of some fine specimens, which in size and appearance, are unexaggerated representations of flowers actually grown in Canada. We saw some pansies exhibited by George Elliot, Esq., an enthusiastic horticultural amateur, at the Guelph show last fall, which it would be difficult to excel. Those who have only seen ordinary specimens of this flower have but little idea of the size and perfection to which it may be brought by skillful cultivation. A fortnight since, we measured a bloom in the open garden of Mr. Fleming, in this city, which was two and a quarter inches in diameter. A little extra attention would

have made it the full size of the slugle pansy at the head of this article.

We clip the following directions, for the culture of the Pansy, from the *Rural New Yorker*:

Obtain seeds of the best kinds, as others are unworthy of culture. The seeds may be sown on the open ground as soon as possible in the spring, or in the hot-bed or cold frame, to be transplanted as soon as possible. The soil for the Pansy should be deep and rather cool. Rotted sods, mixed with cow manure, is an excellent preparation, and will grow this flower to perfection. If the bed can be shaded a little from the hottest noon-day sun the flowers will be better. Flowers will appear when the plants are quite small, and will continue to improve until the hot, dry weather of midsummer, when, unless kept well watered, they will become small. As soon as the cool nights of fall and the autumn rains commence, the plants will make a new growth, and continue to bloom well until covered with snow. In the spring they will be the first to show blossoms. The plants require no protection, but a few leaves scattered lightly over them is little trouble and considerable advantage.

The Verbena.

(READ BEFORE THE TORONTO GARDENERS' IMPROVEMENT SOCIETY BY JAS. FLEMING.)

Mrs. LONDON says in her companion to the flower garden, in 1827, the beautiful Verbena *Melendres*, was first introduced from Buenos Ayres and it directly became a favourite, though for some years it was carefully kept in the *green house*, and considered difficult to manage. Since that time, however, thousands of new varieties have been introduced, and, as they hybridize freely, the *Leading Florists* in Europe and also in the United States, produce many new varieties every year. They are all found to root very freely from layers and cuttings. As a bedding plant they cannot be excelled; and it would now be rare to see a flower garden without a good show of this very useful plant. The Verbena forms one of the principal groups of flowers, at each of our Exhibitions. I should like to see an alteration in the mode of showing them; this will not be effected, however by an Exhibition of 12 or 24 varieties in single trusses—the only means of showing the habit, is to exhibit perfect plants—and then arises the question, how is that to be done? I answer, in any way that displays the natural style and growth of the plant—this cannot be accomplished in pots, by erect training, hence the necessity for some trellis, which will best exhibit the trailing and natural habit of the plant—and at the same time display the largest amount of bloom. When in England in '62, I saw a trellis that seemed to meet the difficulties of the case, it was in the form of a parasol, and so arranged, that by overhanging the pot, the growth may run riot with perfect freedom; by careful training the pot is nearly hid from view, and the trellis covered with bloom, in its most natural form. The out-door cultivation of the plant, is in all its details well known to you, still I think great improvements may from year to year be made, and I am pleased to say, that several of the members of this club, put their hands to the work last year; and effected a great change in the appearance of their flower beds, by adopting the grouping and ribboning system.

The soil I have found to do best with the verbena, is an alluvial bog soil, mixed in the proportion of one part sharp sand, and one part well rotted manure, all well incorporated together and put through a half inch riddle before using.

The verbena is subject to several diseases: first, the green fly, which is easily destroyed, by syringing with Tobacco water, or fumigating with Tobacco smoke. The plant is also subject to the attacks of a small louse, which seems to adhere to the roots, during the summer months, I found a remedy for that by pouring a little guano water on the roots. Another disease, has within the last two or three years, made its appearance on the plant, and I am sorry to say I can find no remedy for it,—I should be pleased to hear the experience of any, on this point. The disease seems to me, to be some kind of a blight, first making its appearance on the tops of the young shoots, completely stopping the growth of the plant, the leaves begin to curl up, one after another, until the whole plant is destroyed.



Preparation for the Flower Garden.

READ BEFORE THE HAMILTON HORTICULTURAL CLUB BY MR. OLIVER LAING.

The busy season is fast approaching, endeavour to be ready for it. Clean and dress the grass lawns, shrubberies, &c., prepare composts, moulds, and other requisites for the seed and planting time.

When the weather sets in favourable, uncover and dress Crocus and Tulip beds, keep on propagating those things that are suitable for spring propagation, such as *Heliotropes*, *Gazanias*, *Alyssums*, *Verbenas*, &c., &c. The hardy varieties of *Geraniums* may still be propagated, and if properly treated, make good plants before the first of June. It is the practice of some gardeners to select in the fall a few good strong plants as stock, pot them with strong soil into large pots, cut them back and allow them rest for a short time, excite them about the first of January, and when ready keep on propagating from them: through the winter. Some parties in England use wood boxes, instead of pots, for bedding stock. The plan is a good one, both for growing and hardening off the plants. It is, in the opinion of many, far preferable for such as *Verbenas*, *Heliotropes* and the like; in boxes the roots get free course to run, and are not subject to be bound up as we often see them in small pots, so much so that the season is sometimes nearly half over before they begin to grow.

D. Thomson, who strongly recommends the box culture, says in an article published some time ago in the "Cottage Gardener" something as follows, referring to spring cuttings.—So soon as the cuttings make roots about an inch long, they should be immediately pricked off into boxes 4½ inches deep, of convenient sizes to have a few holes in the bottom, to be crocked over, then use 2 inches of old mushroom bed dung, nearly pure horse droppings, afterwards fill up with turfy loam and leaf mould of equal parts, with a small portion of sand. I know from past experience that young bedding plants root and grow very freely in such a compost, and can be lifted without injury.

In growing bedding plants, care ought to be taken not to draw them up too much, as we often find to be the case, by keeping them over close and in too much heat. As soon as the cuttings are struck they ought to be gradually hardened off. If tender and half hardy Annuals are not sown, lose no time in getting them put in. Many are in the habit of sowing in pots. The better way is to prepare a bed for the purpose, say two feet deep, of well sweetened manure, a few inches larger than the frame that is to be used: after the frame has been put on, and the bed seasoned, mould it over to the depth of five or six inches, with rich turfy loam and leaf mould, mixed with a small portion of sand. In a few days the bed will be ready for the seed, which ought to be sown in drills.

I would remark here, that it is very necessary, previous to planting out the beds, to have the matter well considered, and the arrangement fully matured. The different plants, their nature, habit of growth, colour of flowers, tints of foliage, &c., so as to bring out a proper contrast, not only in one bed or border, but over the whole Parterre. Such a study will be found very interesting. In this respect the *Geranium* tribe alone cannot fail in affording to the studious mind the highest source of gratification. Among the new varieties that are being produced yearly, we have colour and shade of every description.

I would again call attention to Hybridizing and the raising of Seedlings, a beginning has been made, persevere and success is sure to be the result.

And may there not be found among our native plants some suitable for bedding purposes? Who will be the first to bring such into notice?

Queries About Hedges, &c.

To the Editor of THE CANADA FARMER:

SIR.—An answer to the following questions will be gladly received through the columns of THE CANADA FARMER.

1st. I wish to plant an evergreen hedge or screen along the west side of a public road near my dwelling. The object is to keep the snow from blocking up the road, which it does in winter after every storm; also, for ornament. The soil is a cold, wet clay. What kind of evergreens would you advise me to plant, whether from the nursery or the forest, and at what distance apart, and how ought I to prepare the ground? If an under-drain were laid immedi-

ately below the line of the hedge, would it be likely to get choked up by the roots in course of time? or would an open ditch be best, with the clay thrown up in a ridge, and the trees planted on top?

2nd. Do you know of any good combined tile and brick machine which will grind the clay and turn out the tile or brick at one operation, and which can be driven by horse power? If so, what will be its capacity, and what about the price?

3rd. Have any of your correspondents ever tested the efficiency of a tile drain along the line of a post fence, in wet clay soil, to keep the posts from heaving with the frost? Most of the fences in this section, when new, present a neat and thrifty appearance, but the frost soon makes sad work, throwing some of the posts farther out than others, and sideways in every direction.

4th. Do you know where I can get the following three books.—"Kippert's Land Drainage," "Munn's Practical Land Drainer," and the "Chronicles of a Clay Farm," and what will be the price of each? Lately I enquired at half a dozen or more book stores in Montreal, but could not get any of them. Don't you think it would be a good idea if you were to keep an assortment of Agricultural Books at the office of THE FARMER, like most of the editors of American agricultural papers? G. Y.

Ormstown, Chateaugay Co., C. E.

NOTE BY ED. C. F.—1st. Trees will bear transplanting better from the nursery, if they have been properly cultivated, than when taken from the forest. In planting a hedge with trees from the forest, it will be necessary to take quite small trees and use a great deal of care in removing them: and after all, very many of them will probably die. The Norway Spruce will make a fine screen, planted at two feet apart. The White Cedar and the Hemlock also make good hedges, and are usually planted a foot apart. There is some danger that an under-drain would be choked by the roots of the hedge, but perhaps some of the readers of THE CANADA FARMER, who have had some experience with such a drain, will favor us.

2nd. If any of our readers know of such a machine they will confer a favor upon our correspondent by stating where it can be found.

3rd. Will some one give the desired information? Mr. Bolton has had considerable experience in tile draining.

4th. "Munn's Practical Land Drainer" is published by C. M. Saxton & Co., New York; and they may have the other works. Parties having Agricultural and Horticultural books for sale will find it to their interest to advertise them in THE CANADA FARMER.

Creepers.

To the Editor of THE CANADA FARMER:

SIR.—Is it too much to ask you the names of some of the best and most hardy creeping plants for rocks, &c.; something showy and of quick growth preferred; soil, such alluvial matter as has accumulated in the hollows of granite rocks. W. H.

Brockville, March 10, 1864.

NOTE BY ED. C. F.—The Creeper most likely to thrive in such a location is the American Ivy, (*Ampelopsis hederacea*.) In autumn the leaves change to a rich crimson, and will shed a warm glow over these earth-born castles. It is a very rapid grower, and throws out roots at the joints, by which it attaches itself firmly to anything it finds for support.

The Staff Tree (*Celastrus scandens*) is a twining plant, winding itself around a tree or other like support. Its chief ornament is its clusters of orange capsuled seeds, which remain through the winter.

The Running Myrtle (*Vinca Minor*) will, no doubt, be found useful and by the help of a little training, be made to cover steep slopes. It has dark, green, shining foliage, and very pretty light blue flowers.

The Honey Suckles are training plants, and need some support other than the rocks. The Fragrant Monthly is very sweet, and keeps in bloom all summer.

The Trumpet Flower (*Bignonia radicans*) sends out roots at the joints, whereby it fastens itself to whatever it touches. It has large scarlet flowers in August. It may be that it is not sufficiently hardy for your climate, though we are by no means certain that it is not.

Protection of the Strawberry.

STRAWBERRY beds require looking after to see that they have not too much snow lying in drifts or banks. Last spring our finest strawberries were very much injured by the snow and ice lying too late in the season, excluding the air and light from them, causing them to be too tender to stand the slightest frost. This can be avoided by removing the snow or breaking the ice, which will cause it soon to give way. Constant freezing and thawing is very injurious to the plants, having a tendency to draw them up. A slight covering will prevent this; clean straw is the best to avoid the seed of weeds. Some varieties stand the winter better than others. *Triomphe de Gand* proved quite hardy until last spring, when it came out nearly dead, caused by the great quantity of ice lying too late in the season. Last spring *Adonis* proved very hardy, *Austin* some injured, *Baltimore* *Scarlet* and *Bartlett* hardy. *Diadem* killed out, *Downer's Prolific* stood well, *Early Scarlet* hardy, *Honey* very hardy, *Hooker* some injured, *Jenny Lind* killed badly, *Longworth's Prolific* very hardy, *La Constant* and *McAvoy's Superior* hardy, *Ophelia* stood well, *Scarlet Magnate* injured some, *Syrus* hardy, *Tren-rana* killed more or less, *Triomphe de Gand* killed badly, *Victoria* killed totally, *Vicomtesse* stood well, *Wizard* killed out, *Wilson* very much injured, so much so that it failed to mature a crop of fruit. If the coming season proves favourable, I may be able to give a better account of the above varieties as to hardiness, and a report of their fruit-bearing qualities. Cobourg. B. LOSEE.

Apple Trees in Stiff Clay Soil, &c.

To the Editor of THE CANADA FARMER:

SIR.—I beg to enquire what kind of apple trees are best suited to a rather stiff clay soil, with very little black mould on the surface—not three inches in places?

I see that in your first (Feb. 7) number, "W. S.," of Woburn, recommends "pruning back" of the tap-roots of apple trees, when planting them. Does this mean cutting most of it off and trusting to the side-roots for the nourishment of the tree? And if so, is it not a mistake? GULIELMUS.

Edgeworth, March, 1864.

NOTE BY ED. C. F.—"Gulielmus" is referred to an article on "Where to Plant," in No. 7. Apple trees do not refuse to grow on clay soil, if it be sufficiently dry and in good tilth.

We are unable to perceive any advantage to be gained by leaving a long tap-root on the apple tree. If it has been well grown at the nursery it will not have any such tap-root.

Miscellaneous.

MODERN education too often covers the fingers with rings, and at the same time cuts the sinews at the wrists.

AN ACTIVE OLD FARMER.—Mr. Charles Goodwin, of Ridgehill Farm, Eastgrinstead, England, now in the 79th year of his age, offers to plough any man in Sussex, of the same age, one acre of land, in eight hours, with a turnrise plough, for five pounds—the ploughing to take place within one mile of Eastgrinstead.

A LEGISLATOR'S OPINION OF FARMERS.—He says: "The best part of a population are the cultivators of the soil. Independent farmers are everywhere the basis of society, and the true friends of liberty," and yet a member of the Maine Legislature said the other day that if it had not been for the advantages of a Seminary education he should have been only a farmer.

THE FARMER'S FATHER.—Once there was a peasant, in Switzerland, at work in his garden very early in the spring. A lady passing said, "I fear the plants which have come forward rapidly will yet be destroyed by frost." Mark the wisdom of the peasant:—"God has been our Father a great while," was the reply. The season for farming is opening. Already we see in some of the papers, that the winter has killed this, that, and the other crop. But, "God has been our Father a great while," and will be till the end of the year and the world. Seed time and harvest never fail, and honest industry gets its due reward. Trust God and work hard, so shall thy barns be full, and thy soul at ease.

Advertisements.

ASTER SEEDS.

FINE collections of ASTER, BALSAM and STOCK SEEDS, put up in separate colours, and guaranteed superior. Twenty packets of Flower Seeds, free by mail, for one dollar. Address—
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May 16, 1864.

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TWENTY THOUSAND ACRES OF LAND, both wild and improved, and at all prices, for sale in various townships through out Upper Canada, cheap and on easy terms.

For acts and particulars, apply to the proprietor,

T. D. LEDYARD, Barrister, &c.,

South west cor. of King and Yonge-sts., Toronto.

Toronto, March 15, 1864.

5-11

BUY THE BEST.

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THRESHING MACHINE

THE RAILWAY-HORSE POWER, which has repeatedly taken the FIRST PREMIUM AT N. Y. STATE FAIR, AND HAS NEVER FAILED TO DO SO OVER ALL ITS COMPETITORS, wherever exhibited by us in competition with others, running with low elevation and slow travel of team.

COMBINED THRESHERS AND CLEANERS, THRESHERS, SEPARATORS, FANNING MILLS, WOOD SAWS, &c., All of the best in market. The THRESHER AND CLEANER received the First Premium at the Ohio State Fair, 1863, runs easy, separates the grain clean from the straw, cleans quite equal to the best of Fanning Mills, leaving the grain fit for mill or market.

For price and description, send for circulars, and satisfy yourself before purchasing. Address—

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Cobleskill, Schoharie County, N. Y.

May 16, 1864.

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CARD OF THANKS.

MARKHAM, 30th April, 1864.

TO THE EDITOR OF THE CANADA FARMER.—I have taken the liberty, through your valuable paper, to thank the Directors of the AGRICULTURAL MUTUAL ASSURANCE ASSOCIATION OF CANADA for the prompt and satisfactory payment of my claim, for the destruction of my extensive barns, stables and contents, amounting to eighteen hundred and fifty dollars. I am glad to say I had no trouble in getting my money, and I shall feel it my duty to recommend it to all farmers in Canada, in preference to any other Company.

GEORGE MILLER.

I beg to inform the farmers of York and Ontario Counties that I still continue to hold an office at Markham Village for the above Company. This Company has always avoided Shops, Stores, Taverns, and risks of that sort. It has become the largest institution of the kind that ever existed in Canada. It has nearly 24,000 Policies in force, and it is, moreover, by far the cheapest.—It never cost members more than 25 cents each year on the hundred dollars. During the last four years, no Company in this country can say as much.

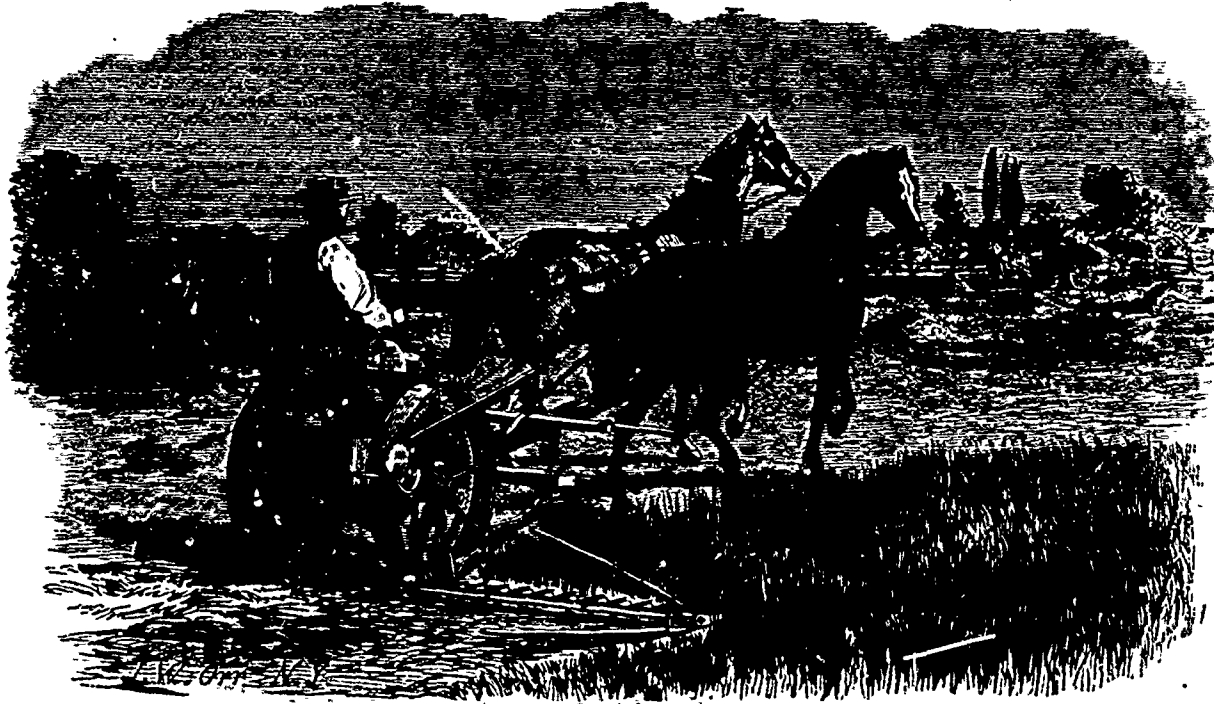
A. WILLIS,

Agent Agric'l M. F. Assurance Association of Canada.

May 16, 1864.

9-11

THE OHIO



AS A MOWER AT WORK.

BALL'S OHIO REAPER & MOWER,
MANUFACTURED BY JOSEPH HALL, OSHAWA, C. W.

THIS is the best and most popular combined Reaper and Mower—not less than 15 000 being now in process of manufacture in the United States for the coming harvest. While it is excelled by none as a Mower, it stands unequalled by any as a Reaper. The mowing and reaping attachments are entirely independent, no part of the one being used with the other. The change is effected in a few minutes without the slightest trouble. Its draught is quite as light as any, and it is entirely free from side draught. It is very simple in its management, and is wholly under the control of the driver. My OHIO includes all valuable improvements introduced in the United States, and some added by me this season which are not to be found in the Machines of any other manufacturer in the United States or Canada. They are gotten up in the finest style, with Cast-Steel Cutter-Bars, Wrought-Iron Guards laid with Steel &c. and are warranted to do all that is claimed for them in my descriptive Catalogue, just issued, a copy of which, containing full particulars, will be sent FREE to all applicants enclosing a postage stamp.

ALSO, MANUFACTURER OF HALL'S IMPROVED THRESHING MACHINES & HORSE POWERS, BRINCKERHOFF'S SELF-RAKING REAPER, The Cayuga Chief Reaper and Mower, the Ohio (Junior) Mower, Hubbard's Light Mower, all kinds of Mill and Job Castings and Machinery, &c., &c. For further information, address
Oshawa, May 16, 1864.

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JOSEPH HALL, Oshawa, C. W.



1864. NOTICE. 1864.

IMMIGRANT LABOR!

FARMERS, Manufacturers and others, requiring Mechanics, Laborers, Farm or Domestic Servants, are requested to apply to any of the undermentioned Government Immigration Agents, stating the description of labor required, rates of wages, &c., when every exertion will be used to supply their wants.

- Toronto.....A. B. Hawke, Chief Agent for C. W.
- Hamilton.....R. H. Rae
- Kingston.....James Macpherson.
- Ottawa.....W. J. Willis.
- Montreal.....J. H. Dely.
- Quebec.....A. C. Buchanan, Chief Agent.

Proprietors or Agents having Improved Farms or Lands for sale or lease, are invited to forward printed descriptions of the same, for the free inspection of immigrants, and, if in sufficient quantities, for general distribution.

A. C. BUCHANAN,
Chief Agent.

Gov. Immigration Office,
Quebec, April, 1864

8-31

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COE'S SUPER-PHOSPHATE OF LIME,

A STANDARD MANURE FOR ALL CROPS OF THE GARDEN AND FIELD.

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Price—\$50 per ton, or \$2 50 per 100 lbs.; put up in barrels of about 225 lbs. each.

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JAMES FLEMING & CO.,
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P. S.—The Trade supplied.
May 2, 1864.

8-21

THRESHING MACHINES.

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Apply immediately to

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8-41

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P. A. SCOTT, Yorkville P. O.
7-21

April 15, 1864.

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