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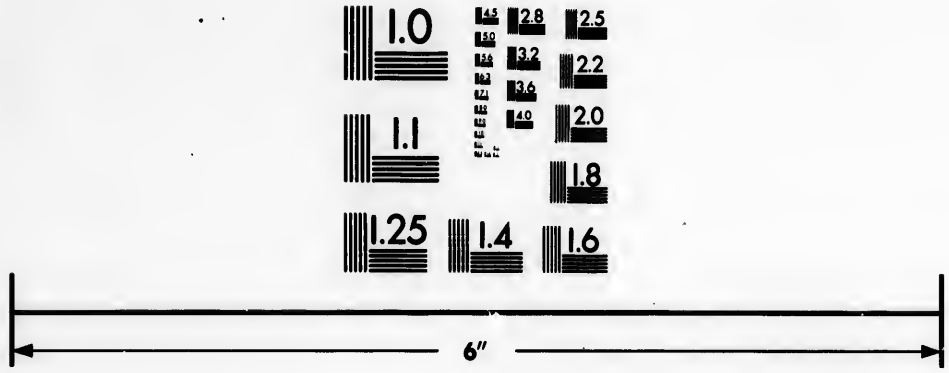

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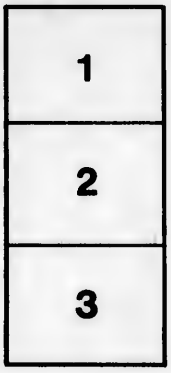

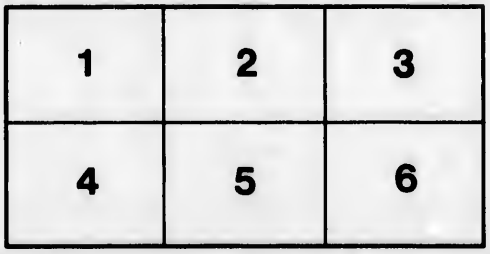

ESSAYS

ON

PRACTICAL HUSBANDRY,

ADDRESSED TO THE

CANADIAN FARMERS;

SHEWING

THE METHOD TO CULTIVATE AND IMPROVE THE SOIL: THE ADVANTAGE OF ROTATION CROPS, AND THEIR USE TO REAR AND FATTEN STOCK: THE MANAGEMENT OF THE DAIRY, AND THE EXPENCE TO STOCK AND CULTIVATE A FARM.

WITH SOME HINTS TO EUROPEANS OF THE ADVANTAGE CANADA OFFERS TO SETTLERS.

BY CHARLES FREDERICK GRECE,
ISLAND OF MONTREAL,
LOWER-CANADA.

Montreal:

PRINTED BY WILLIAM GRAY.

1817.

PREFACE.

THE European Writings on Agriculture being so numerous, and many of them performed by men of great abilities, it is enough to deter one, whose capacity as well as path in life, is so inferior to those Authors. But after a perusal of their productions, although very minute on that Art, they are adapted to Climates very different to Lower Canada, where the season for labour in the field is so short, and the pursuits of the Husbandman so limited, that it is impossible to assimilate the one with the other.

The British Government, always acting with paternal regard towards her Colonies, has, in order to encourage the Canadian Farmers, given a preference to the Wheat from hence, by allowing the use of it, when her own is Seventy Shillings the Quarter, and excluding the use of Wheat from other Countries, until her own is as high as Eighty Shillings.

Viewing the neglected state of the Agriculture of the Province, the great room there is for improvement,

ment, to make it worthy the favour offered to its prosperity, and not only furnish large supplies to Europe, but also to the West India possessions, when a proper method may be applied to cultivate the Soil, I have presumed, that a Practical Work on Rural Economy, may guide the Canadian Farmers in that desirable object. The errors they commit arise from the first settlers of the colony, following the Norman practice of the last century: that is, dividing their farms into two equal parts; ploughing one half annually and feeding their animals on the wild growth of the former year's cropped land. The cause in part of the diminutive size of their Stock, the want of information to change that system, leaves them open to their better informed neighbours, who take the opportunity to furnish the Markets with various kinds of stock fattened with vegetables, which enable them to sell low: the Canadians always fattening their animals with grain or pulse. A contravention against those importations, which must take place amongst the farmers, is highly necessary; they ought to look very seriously at their present situation, and avoid delay; for unless they alter their present method very soon, they will incur certain ruin. It cannot be expected, that the Seigniors will promote a better practice; it is by no means their interest. A rich Farmer will not leave his farm; but a poor one must. The more frequent transfers the better for the Seignior, as he receives eight per

cent

cent on all sales on the Seigniory; a contrary conduct takes place with British proprietors; they let the farms on their estates on improvable leases for given terms of time. In order to ascertain what rent a Farmer can pay per acre, he cultivates a farm under his own directions, and tries various experiments to discover the cheapest and best manner of management, by which means many valuable discoveries are made; from those essays the tenants have a rule to go by. The British government bestows an annual sum on improvements in Agriculture within the realm. The Society of Arts do the same, and extend them to all the British possessions. It is very probable that premiums distributed in the parishes to promote improvement, for the finest field of wheat under particular management; for root crops to feed and fatten stock, and also for the rearing and fattening of every kind of animals; might create emulation in the country people. I know of no better means to render the Province independent, than to prohibit improper importations. Should an embargo take place, it will then prove the consequence of depending on others for our first necessaries, and we shall lament neglecting our own interest, when it will be too late. "The wealth or indigence of a country, "takes its decisive turn, in proportion as the Earth "is well or ill cultivated; vegetable nature receives "assistance from the wise Legislator; the esta-

"blishment

*" blishment of all Colonies is founded originally " upon Agriculture ; and by rules of Agriculture, " the inhabitants cultivate the ground, and prove " useful to the parent hive, from whence they mi- " grated. The produce of the husbandman is the " only merchandize which all the world are obliged " to deal in *"—There is great reason to believe, that with exertion and a proper management of the Soil, this Province may, in a few years, become a very efficient part of the British Empire.*

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* Rev'd. Wm. Harte, A. M.

THE

THE CAUSE
OF THE STERILITY OF THE SOIL.

THE general opinion amongst the Farmers that their lands are worn out, has created an apathy, and no one has courage enough to step out of his old path ; but acts like those, who, bewildered in the forest, give themselves up for lost.—Let them examine the cause of the sterility of their land ; it is no other than having been too avaricious—too frequently cropping with grain. They have not considered that the earth requires rest and nourishment, otherwise it soon becomes exhausted. The soil being thus reduced, demands a different management, to bring it back to its primitive strength. Land that has due nourishment and repose, cannot be worn out, as is supposed ; but will produce to the end of time. Their are sufficient examples of the fact in the vicinity of Montreal, where many farms have been sold by the Canadians to Europeans. Those lands were considered incapable of supporting their former proprietors : indeed they afforded them but a poor existence. Let them return to their former résidence, although few years have passed away since they left the spot, they will

will find beautiful Meadows, fine crops of grain, and abundance of vegetables; healthy, robust animals improved from the diminutive stock they left. These delightful scenes, the reward of care and industry, will prove, that the means are at hand whenever they may be brought into action. The plan I propose to bring the soil into a fertile state, is to give a better tillage, to destroy weeds; to give rest and manure. There are few situations, but what may in a few years produce profitable crops of one kind or other. A farm on the scale of one hundred arpents is proposed; that size being most frequent in the seigniories; as the nature of the soil differs on every seigniory, so it does on every farm. I shall, therefore, treat separately on them, and the manure fit for each, as also the crops best adapted for each soil—the method of culture—and the use they may be applied to when gathered:

No. 1.	2	3	4	5	6	7	8	9
Sheep and Pig Pasture.	1st Wheat 2 Green Crop 3 Barley 4 Hay 5 Pasture 6 Hay 7 Pasture 8 Hay, & break up in the Autumn.	1st Oats 2 Pease 3 Wheat 4 Green Crop 5 Barley 6 Hay 7 Pasture 8 Hay.	1st Pease 2 Wheat 3 Green Crop 4 Barley 5 Hay 6 Pasture 7 Hay 8 Pasture.	1st Wheat 2 Green Crop 3 Barley 4 Hay 5 Pasture 6 Hay 7 Pasture 8 Hay.	1st Pease 2 Wheat 3 Green Crop 4 Barley 5 Hay 6 Pasture 7 Hay 8 Pasture.	1st Wheat 2 Green Crop 3 Barley 4 Hay 5 Pasture 6 Hay 7 Pasture	1st Oats 2 Pease 3 Wheat 4 Green 5 Barley 6 Hay 7 Pasture 8 Hay.	Part Root
House, Barns and Offices.								
Garden and Lucern.								
Corn, Potatoes, &c								

ROAD.—The first year, there will be 34 arpents cropped; the second and third, 54; the fourth, 64; the fifth, 74; the sixth 80.

The Farm is distributed into nine divisions; a road is left on one side, that any field may be entered without interfering with the others: a more extensive one can be managed on the same scale. No. 1 has two arpents enclosed for the house, barn, stables and offices; four arpents for a home pasture; one arpent for a garden and lucern plantation well enclosed; three arpents for Corn and Potatoes; being ten arpents in the whole:—the remaining enclosures up to number eight are of the like size, forming eighty arpents under cultivation. The three arpents under Corn and Potatoes, are to be ploughed up as soon as the crop is taken off, that the land may be sown with Barley in the Spring, and laid down with grass seed for a home pasture, when the barley is taken off the ground; the other four arpents may be broken up as directed for number two, and follow that rotation.

No. 2 to be ploughed twice, between the middle of July and the end of October; to be sown with Wheat in the Spring. The wheat taken off, the following crops are proposed for the ensuing year, which are deemed Hoe Crops, because they are drilled, sowed, or planted in rows, by which means the horse hoe, the 2 horse plough, or light single horse plough and hand hoe are employed to cultivate and clean the Land of weeds.—Potatoes, Indian Corn, Horse Beans, Turnips, Cabbage, Carrots, Parsnips,

nips and Kidney Beans, can be made use of in part or in the whole, and adapted to the soil, and wants of the Farmer. All land intended for hoe crops should be ploughed in the Autumn, that the frost of winter may act upon the soil; thus the second year this number 2 will be under a hoe crop, care having been taken to clean the land of weeds when the crop is taken off. The field will be ploughed up to be sown with Barley the ensuing spring, and laid down with Clover and Timothy. The fourth year it is mowed, fifth year pastured, sixth year it is mowed; and having been three years under grass, it will be like new land, and fit to take another rotation of four or six crops.

No. 3 to be broke up in the spring after No. 2, which is stated above. The first crop Oats, the second Pease, third Wheat, fourth a Hoe Crop, fifth Barley, and laid down to meadow, with Red Clover and Timothy; sixth Hay, seventh Pasture.

No. 4 to be broken up in the spring as No. 3, and to be sown with Pease, second Wheat, third a Hoe Crop, fourth Barley and laid down in meadow, with Red Clover and Timothy; fifth Mow, sixth Pasture, seventh Hay, eighth Pasture, and break for a rotation.

No. 5 begins the autumn of the third year, and will follow rotation as described for No. 2.

No. 6 begins the spring of the fourth year, and will be cropped as directed for rotation No. 4.

No. 7 begins the autumn of the fifth year, and follows as described for rotation No. 2.

No. 8 begins the spring of the sixth year and follows as described for rotation No. 3.

No. 9 twenty arpents of Woods.

It will be perceived by the proposed change, that very little alteration of crops are offered; it is merely to avoid exhausting the soil by a too frequent return of the same kind of grain. Hoe crops that intervene those of grain, clean the ground and enable it to give more nourishment to succeeding crops. Those improvements can only advance gradually, because the lands are full of weeds, and require from three to four years, to bring them into a proper state for grass seed. Those, who lay down before the earth and weeds are subdued, will have their work to begin anew. The advantage arising to the farmer will be great, because every part of the Farm will be in a productive state. Instead of his cattle feeding on the wild growth of forty arpents, which produced but a mere existence, twenty arpents of good meadow will furnish them with more than they can eat. The other twenty will produce

a crop of Hay, to keep them in winter; and the after math, when the hay is mowed for autumn food, forty arpents under tillage will furnish the family, fatten stock, and give a surplus for Market. The Straw, Haulm and Fodder derived from the cropped land, will encrease the stock of winter food and furnish bedding for the animals, to be converted into manure —To improve the soil, nothing is wanted but industry and enterprize, to effect so desirable a change.

STRONG SOILS.

CLAYS in general, of whatever kind, are difficult to cultivate, particularly in summer; the sun and wind in a few hours make them so hard, that they cannot be worked to advantage. However, when proper correctives are applied, they are more lasting soils, than many others. The following Manures have been used to advantage: The coarse Blue Sand from the beach of the River St. Lawrence; the quantity, one hundred and forty loads to the arpent, the load contains eighteen minots.—Lime has an excellent effect on clay, at the rate of sixty

sixty minots to the arpent. The method to apply the lime, is to put it in heaps about the size of a minot on the land, where it is to improve: then have people ready to cover it over with earth, so that the rain cannot touch it, care must be taken from time to time, that the earth be on the heaps; for fear the wet should get to it. After it has been a fortnight in that state, it may be spread as equally as possible, and be ploughed in with a shallow-furrow. There is a blue slate that crumbles to pieces, often seen on the sides of rivers, that is of service as a dressing. Small gravel, tanners' bark, and stable dung, all these are beneficial manures and correctives. A trial was made on a piece of clay soil, that had been under a hoe crop; it was ploughed and manured with three kinds of manure for a crop of Barley, to lay down with Clover and Timothy. One part of the field had Lime, another tanners' bark, and a third stable dung. The lime produced the finest Barley, the stable dung was next, the worst was where the bark was put. The succeeding year the grass was so heavy, that it was very difficult to cut; and for five years after, it produced very heavy crops.

Wherever manures are applied, no soil is more grateful, than that of this Province; it returns its master many fold.

LOAM.

LOAM.

OF this denomination, there are several colours; the stable dung, at the rate of sixty loads to the arpent, is sufficient; but these soils require refreshment every fourth year; the light kind of loam might be improved with Marle, which is the most lasting of any. There is plenty near Three Rivers, as also on the River du Loupe and Yamaska: it is of a blue colour at these places, but there is likewise marl of a grey and some of a reddish colour. Those who may not be acquainted with that earth may be able to know it, by putting a piece into a wine glass; if it is marle, it will dissolve in water. The quantity to the arpent must not exceed seventy loads; if it is spread too thick, it makes the crops grow too rank.—It will last for eighteen or twenty years.

SANDY SOIL.

SAND is improved by putting on clay, which should be done in the autumn to be exposed to the air

air and frost. Marle is also a manure for Sand; it would require one hundred loads to the arpent. The mud from ponds would be very good for sand. Those on the borders of lakes, have an excellent manure at hand; the mud on the sides of them could be collected in the summer, when the water is low; it is useful for sand and loam, and would make a part of a compost for any use.

METHOD TO ENCREASE MANURE.

THERE are many opportunities of collecting materials to form a compost; the sides of ridges and hills offer virgin mould of a contrary nature to parts of the farms. The earth on the sides of main ditches, the mud from ponds, rivers and lakes, rushes, tanners' bark, horse and cow dung, that from pigsties, might be placed in layers, on some convenient spot, made for that purpose. A hollow where the bottom is clay, is best; should no such place offer, one might be made and boarded, to prevent the urine from running off. Where lime can be obtained, that mixed with the other parts, would be of great use.

Sand

Sand or light loam may be put into the Sheep-House, about two feet thick, then straw or any litter for the sheep to lie on. As the frost prevents the removal of the sand or earth, in order to put on fresh earth, fresh litter must be added, as often as it becomes soiled. By this method, I obtained forty loads of dung, from twenty-five sheep in one winter: this manure is the best of any for wheat.

The horses, cattle and pigs, should all have litter to lie on in the stable; the fodder they leave when they are fed out, might be gathered up for bedding. This method will much increase the stock of manure: the straw and other litter will soak up the urine, the most valuable part thereof.

The dung of all kinds of Poultry is approved of, as a top dressing for Wheat and Barley, strewed thin on the ground when the grain has come up.

WOOD ASHES.

ASHES are a manure for yellow loam, strewed at the rate of twenty minots to the arpent, when

 the

the grain is about three inches high. I have tried them on strong clay soil, without perceiving any good effect.

BONES.

BONES are a lasting manure; they are useful for strong clays and all loams; they must be chopped small; fifty minots will be sufficient for one arpent; they are strewed as equal as possible.

SOOT.

THIS is an excellent top dressing for Wheat, Barley, or low grass land; twenty minots to the arpent Much might be collected in the towns from Chimnies and Stove Pipes; it is worth one shilling the minot. It being very light, the expence of carriage would be but trifling to distant parts.

PLASTER

PLASTER OF PARIS.

THIS valuable manure, almost unknown and very easy to be obtained, merits the attention of every farmer; there is scarcely a farm in the Province, but it might be applied to with advantage. The practice of nine years on the following soils and crops, may suffice to prove its quality. On a piece of poor yellow loam, I tried three grain crops without success; with the last, which followed a hoe crop, I laid it down with Barley: the return was little more than the seed. The grass seed took very well. In the month of May the following year, I strewed powder of plaster, at the rate of one minot and one peck to the arpent; in July the piece of land being mowed, the quantity of grass was so great, that it was not possible to find room to dry it, on the land where it grew. The produce was five large loads of hay, to the arpent, it continued good for five years. A trial was made with plaster on a piece of white clay laid down with clover and timothy—the grass was very thin. After the plaster was strewed, it improved so much, as to be distinguished from any other part of the field; the sixth year after, the field was broke up in the spring and sowed with pease, the spot where the

plaster had been put, produced twice as much as any other part of the field. The haulm was of a deep green colour, nor were they effected with the drought like the others on the part of the field, where no plaster had been put. A trial was made on a strong loam; the crop Indian corn, manured in the hills with old stable dung, lime and plaster: the stable dung surpassed the other two. The Indian corn was finest where it was applied. In the spring of the following year, the field was ploughed and sowed with pease, where the plaster and lime had been the year before, the pease were as strong again as any other part of the field. I tried plaster on cabbages and turnips, but did not perceive any good effect. From the frequent trials on various soils of this manure, it is evident that it is applicable to both strong and light soils, for top dressings of succulent plants.

The method to reduce it; take an axe and break the stone to the size of a nut; then take a flat stone two feet diameter, and break it into powder with a wooden mallet—it must be reduced very fine; those that have an iron pestle and mortar, can pound it expeditiously that way. Should plaster meet its deserved attention, it might give employment to people in the Houses of Correction to reduce it to powder, for the use of the farmers, when no other objects of industry present themselves.

In

In order to give an idea of the measure of a ton of plaster in stone, it will measure three feet square on the base, and two feet two inches high English measure. This is cited, in order to assist persons that may wish to buy from the vessels going up the river, where weights cannot be had to weigh. That which is taken from the mine is best and is of a silver grey colour; that from off the surface is red and is of less value. A ton will produce fourteen minots of powder when broke; a man can break eighty pounds in one day, in a mortar of six inches diameter in its natural state. Having a great deal to prepare for the spring of 1817, I had it broke about the size of a goose egg, and then put it into the oven of a double stove; it remained about half an hour, after which a man could reduce two hundred and ten pounds in twelve hours with a sledge hammer, pounding it on a flat stone. As this is an experiment, time must determine whether the heat diminishes its quality: it does not loose weight by the process.

GREEN CROPS TO PLOUGH IN FOR MANURE.

LAND sown with red clover, when the clover is mowed,

mowed, and has grown again to the height of eight or nine inches, is ploughed in and is a great enricher of land ; the crops that follow after are, first barley, second pease, third wheat, and laid down in grass. Buck wheat has the effect of enriching light soils, one minot of seed to the arpent; plough light, then sow the seed. When it is in bloom, it must be rolled with a roller to lay it down, after which it may be ploughed in, to take a rotation of two grain and one green crop, when it may be laid down.

Pease are used sometimes for the same purpose. Tares would be preferable to the two before mentioned crops to plough in ; they produce a far greater bulk ; but at present there are none to purchase. Oats are very good for the same purpose ; they require to be sown thick ; and when about ten inches high, plough them in —Having pointed out manures that will restore different kinds of soils and enable them to bear crops ; it is also requisite to recommend to the Farmer, to clear his land of stones, at least of all that are larger than a man's fist, as also stumps of trees, to fill up small holes and drain off the water from the cavities ; an improvement in many places, that would cost but a trifle and render the land much easier to cultivate.

TWO

TWO HORSE PLOUGH.

BEFORE I point out the advantage of the two horse plough, I should do injustice to a deceased gentlemen, MR. DAVIDSON, were I to omit the acknowledgment of the signal service, that he rendered to the vicinity of the Rivière du Loup, where he introduced that implement, called the Devonshire Plough. It is to be regretted, that it has not made more progress, through the province. The ease with which that implement performs the labour, the facility of ploughing equally every part of a field (even holes can be turned up, where the French wheel plough cannot touch,) the many baulks and large corners left untouched by that combrous machine. The number of cattle, horses and men, to attend its slow progress, one might think would show the Canadian farmers the propriety of adopting the two horse plough, where one man with two horses perform the labour in less time and far better; the saving of manual labour, as well as the expence of keeping useless cattle, might be sufficient inducement. However, there are many Canadians in the vicinity of Montreal, that have adopted the two horse plough in preference to the wheel plough; it is therefore to be hoped, that in a few years, the

light

light ploughs will be in general use. Those who wish to adopt them, should get ploughmen from the parts where they are in practice. I have shewn men the use of them, and in a few years, they have soon become proficients; but it is necessary the plough should be well made and well handled; and what is remarkable, when a man has worked with the light plough, he gives it the decided preference, declaring its superior advantage. Some iron ploughs, which are very complete, have been imported; but they should not be put into the hands of new beginners. A plough that has the beam and handles made of wood, had better be the first; they are easiest repaired in case of accident. The share and coulter should be steeled; they cut better, and in meeting stones, receive little injury. Very good ploughs may be had at Rivière du Loup, for about four pounds. The seasons for the different pursuits of agriculture in Canada, being so various, every machine that can advance labour, should be employed.

THE FOOT PLOUGH.

THIS implement is a smaller plough for one horse, to clear the earth out of the furrows, after

a field is sowed and harrowed; to run furrows, to plant Indian corn, French and horse beans, potatoes and cabbage; also to clear the rows of weeds, and earth up the plants.

THE DUTCH OR HOG PLOUGH.

THE hog plough, so called, perhaps from the share resembling, in a side view, the face of that animal; is very useful in shallow soils, interspersed with large stones, or in new land among stumps of trees. The shortness of the beam and handles renders it easy to remove; the solidity of the share enables it to meet obstruction without receiving injury. This implement is in general use amongst the Americans, and was introduced by them into this province. It is also employed to run furrows and earth up hoe crops; but from the great width and hollowness of the share, it is unfit to plough deep and effectual.

THE HORSE HOE.

THE horse hoe is formed with a beam and handles. It has an upright share, the foot of which is of a triangular form, and two mould boards which are extended at pleasure by means of a scraw. This implement is used to work between the rows of plants and roots sown in drills, to cut the weeds and earth up the plants. It will perform in two hours with the assistance of one horse as much as one man can do in three days.

THE SCARIFIER.

THE scarifier is of a triangular form, furnished with handles and five tines, two inches thick, flat at the foot, formed triangular and steeled; they are five inches at the base, and set so as to cut thirty inches. It destroys the weeds between the drills, pulverizes the earth, and gives nourishment to the crops, by enabling them to expand their roots.

THE

THE DRILL RAKE.

THIS cheap and useful implement is formed with a beam five feet long and four inches thick: it has a pair of shafts for a horse to draw; on the top of the beam two sticks are placed upright, and on the sticks a piece of wood to press the tines into the earth; these are of an angular form, curvated and two inches thick. Holes are made in the beam at the distance the crops are intended to be put in the field; it answers for turnips, beans, pease, corn, carrots, parsnips and onions in drills. When the seed is sowed, it is covered with the head of a rake, or a piece of wood four inches broad with a handle placed in the centre like that of a rake. The seeds are very soon covered with it.

HARROWS.

THE form of those implements differ in most countries; that used by the Canadians is triangular,

mostly set with wooden tines, differing from the French Harrow which is a long square. The English patent locked Horrows have been introduced here, but from the want of careful persons accustomed to that refined implement it is often injured. In order to avoid that difficulty, I have had some made of three inch timber, four feet long, three feet wide in front, and four behind. It has four cross bars, each of them have twenty iron tines, which are steeled at the points about three inches high. The tines are best made flat on the side and narrow in front, if a little curvated the better ; when the harrows work single they are drawn by one corner. A small staple is put to steady the clivice. sometimes two are attached together, and drawn straightways with two horses, by which means they answer for single or double use.

THE SWEDISH HARROW.

THIS harrow is constructed with three inch timber forming a square of five feet set with iron tines half an inch thick, and curvated. It is used after the heavy harrows to cover small seed when sown

sown broad cast. The tines are set at the distance of three inches. I have it used after sowing hemp, flax, and turnips.

THE ROLLER.

ALTHOUGH few Europeans have Rollers which may be had for a small sum, they are very necessary on every farm, to roll the grass, grain, and pulse crops; as also to break the rough soil, and render it more easy to cultivate.

PLOUGHING.

FARMERS cannot too seriously consider the great principle on which the due culture of the earth is founded, viz. thoroughly to devide and loosen the soil; this principle is so generally received, that there is not an English Farmer, who does not

not know, that one ploughing more than ordinary, is near as serviceable as a light dunging. Experience shows him that his crops are more abundant by extraordinary ploughing. Of all the ways of improving his land, no one is more effectual, or less expensive than this. If its full value were known, it would be practised more, and every farmer would give all his land one ploughing extraordinary; the Canadian farmers plough little and sow a great deal: that practice will keep them poor, such imperfect culture, is the cause of the very small return, which they reap, very often it is only five seeds. In the best years rarely more than eight. So small a return does not pay the expense of the labour, nor can they expect any other until the land is better prepared. The wide furrows taken by the wheel plough leave the earth in a massive state. A great part of the field is not ploughed at all; the sod is merely laid over the turf. If the farmers observe the middle of their ridges, they will always see, that the weeds are stronger there, than on the sides. Their roots remaining undisturbed, they rise early and choak the grain. In order to plough thoroughly and destroy the weeds, when the first furrow is run, let the plough turn it back. By following that method, every part will be cut, and there will be an end to the covering system. If a fallow is intended, after the field has been ploughed three weeks or a month, let it be harrowed well;

well; a few days after let it be ploughed cross-ways in very broad lands. It may lay till within a few days of the last ploughing; before which, it must be well harrowed. The lands must be run out straight and equal, and laid up high to sow in the spring. If it is to be manured, that will be done directly after the last harrowing, to be turned in. Manure should never be laid on in the summer; unless it be turned under furrow, as it is carted on the field.—Great quantities of manure are wasted annually, by being exposed on the land during the burning heat of that season. October is the best time to spread manure.—The month of July is the time the farmers have least to do; they then cart their manure and spread it on the land. It remains in that state until October; the sun exhales all its virtue in a day or two, from which circumstance it has little or no effect to enrich the soil. The Canadians not knowing the fact, have considered manure of little benefit; this can only be the cause why they are so inattentive to the first principles of refreshing the earth. Let them reflect, that when they apply manure to potatoes, Indian corn or cabbage, they cover it immediately with earth, and always reap a benefit. The same precaution is necessary, while the sun has power to draw the salts from the dung; it is therefore advisable, not to draw manure on the land until the Autumn, when every advantage may be reaped from it.

THE

THE CHOICE OF SEED.

IT should be the farmers particular care to choose for seed the finest and cleanest grain of every kind, free of weeds. The little attention to this very essential object in husbandry, is but too frequent a disappointment to the Farmer. No merchant or miller will buy foul or burnt grain, when they can get that which is clean. The change of seed is no less necessary every third year, the greater the distance the better. Those who live in the north, should procure seed from the south; it is more likely to come to maturity earlier, than that from a backward situation. Those who continue sowing the grain on their own land too frequently, cause it to degenerate, and as there are always more or less seed of weeds sown with it, the land will continue foul. It is a general case, that change of seed produceth more abundant crops.

PRE-

PREPARATION OF SEED TO SOW.

THE grain intended to be sown, should be screened ; after which it should be put in a tub, and washed ; the light grains and seeds of weeds must be taken off as they rise. When it is well washed, it may be spread thin on a barn floor, and have some slack lime sifted over it. Then it is shovelled on the floor, and when the grain is incrusted, it can be sowed. There are many steeps recommended in order to purify and fertilize grain ; perhaps the following may be as good as any. Put as much salt in a tub as will make an egg swim : that done, add as much more, then the grain is put in and stirred about. Let it lie thirty hours ; then take it out, spread it on a barn floor, sift slack lime over it, as stated above. Those who live where salt is scarce or dear, can make a strong lye with wood ashes, which will answer very well for a steep.

THE TIME OF SOWING.

THIS essential point in husbandry drew the attention of one of the greatest Philosophers that ever lived,* his remarks are so instructive, that it will be proper to insert them. It is evident that great advantage may be reaped, by a strict application to them: "It is now the fourth year," says the ingenious M. HAROLD BARCK, "Since our illustrious President, exhorted his countrymen to "observe with all care and diligence, at what time "every tree expands its buds, and unfolds its "leaves. Imagining, and not without good reason, that our country would, sometime or other, "reap some new, and perhaps unexpected benefit, "from observations of this kind, made in different "places." As one of the apparent advantages, he "advises the prudent husbandman to watch with "the greatest care, the proper time for sowing, "because this, with the Divine assistance, produces plenty of provisions, and lays the foundation "of the public welfare of the state, and the private "happiness of the people. The ignorant farmer, "tenacious of the ways and customs of his ancestors, fixes his sowing season, generally to a month, "and sometimes even to a particular day, without "con-

* Von Linnaeus of Upsal, sweden.

" considering whether the earth be prepared to re-
" ceive the seed : from whence it frequently hap-
" pens, that the fields do not return, what might
" be expected, and that what the sower sowed
" with sweat the reaper reaps with sorrow. The
" wise economist should therefore fix certain signs
" whereby to judge of the proper time for sowing.
" We look up to the stars, and, without reason,
" suppose that the changes on earth, will answer
" to the heavenly bodies ; entirely neglecting the
" things which grow around us, we see trees open
" their buds and expand their leaves, from whence
" we conclude, that spring approaches, and expe-
" rience supports as in this conclusion ; but nobody
" has hitherto been able to shew, what trees Provi-
" dence intended should be our Calendar, so that
" we might know on what day the countryman
" ought to sow his grain. No one can deny but
" that the same power, which brings forth the
" leaves of trees, will also make the grain vegetate ;
" nor can any one justly assert, that a premature
" sowing will always, and every where, accelerate
" a ripe harvest. Perhaps, therefore, we cannot
" promise ourselves a happy success, by any means
" so likely, as by taking our rule for sowing, from
" the leafing of trees. We must for this end, ob-
" serve in what order every tree puts forth its leaves
" according to its species, the heat of the atmos-
" phere and the quality of the soil. Afterwards,

" by comparing together the observations of sever-
" al years, it will not be difficult to define, from the
" foliation of trees, if not certainly, at least probably, the time when annual plants ought to be
" sown. It will be necessary likewise to remark
" what sowings made in different parts of the
" spring, produce the best crops, that by comparing these with the leafing of trees, it may appear
" which is the most proper time for sowing." The principal points, which Mr. Barck thinks necessary, in these observations are,—first, that they be continued for three years, and that the time and place of observation be particularly specified ;—secondly, that they be made on the same subjects : and, thirdly, that the soil and exposition be carefully noticed and described, in order to their being duly compared with the field which is to be sown. The necessity of being exact in this last article, will appear to every one, who does but consider, what all know ; that the *north wind, shade,* and a *moist soil* hinder the leafing of trees, as much as a dry situation on the slope of a hill inclining to the south, promotes it. Another circumstance, which would greatly facilitate the application of these observations, is, to take the trees in their progressive order of leafing ; for nature is always regular, and the guide would then be sure.

These observations are applicable to this Province,

vince, where the sowing of every kind of grain, is confined to the spring; however, the forest is not directly the guide. Those who are acquainted with the woods, know that trees bud and expand their leaves earlier there, than in the open fields. Trees exposed to a free circulation of the air, are more backward in leafing, than those in the woods; it is from open situations, that the time for sowing must be drawn. In order to lead to such discovery, trees might be planted in exposed situations; there is an evident want of taste, in not planting those beautiful ornaments, so frequent to be met with in Europe; the inattention to shade the farm house, so necessary in summer, as well as to break the storms of winter,—the painful sight of the panting flocks and herds exposed to the burning sun of summer. The few trees required, to form, a shade for ages, are sufficient inducements to erect such useful monitors. Those who may wish to embellish their estates, with forest trees, should have the holes dug in the Autumn, and as soon as the frost is out of the ground in the Spring, take up the trees they mean to transplant: they should not exceed two inches diameter. Care must be taken not to bruise the roots, and get up with them as much mould as possible; two poles should be put slant-ways, to meet the tree, about four feet from the ground; and a band of hay tied round the whole, that the wind might not prevent the tree, from

from growing. They should be watered twice a week until they take root. The nature of the soil will guide the choice of the trees: the following are applicable to trials made on the east side of the island of Montreal, near the city. The witch elm will point out the time to sow spring wheat, Rye, Horse Beans, and the Large Pease, when the buds have risen to the size of a large pea. The Soft Maple, the Butter Nut, and Haw-Thorn, when the buds open, will point out the time to sow barley, buckwheat, oats, and early pease. The White Oak and the White Ash will shew the time at the opening of their buds, to plant Indian corn, potatoes and French beans. There are some farmers, who sow their wheat on the snow, depending on the frost and thaws in the month of April, to cover the seed. Sometimes they have succeeded on light loams; but on strong clays there is little hope of a crop. Others commit their grain to the earth, while it is wet and harrow it in: the Horses sink to their knees and bury the grain too deep, ever to be able to rise. Although early sowing of wheat, beans, and large pease, is advisable, yet the farmer had better wait a few days, until the earth be dry enough to bear a horse, without sinking more than two or three inches. When he would have every reason to expect success from whatever he may sow; if the earth is harrowed wet, it becomes hard with the sun, and spoils the crops.

SPRING

SPRING WHEAT.

THERE are three kinds known among the Canadians: the white or bald, the red and the bearded. The white has a very thin skin and yields a great deal of flour; the red is next in quality, the bearded yields less flour, than either of the former. It was introduced about the year 1810, when the Hessian Fly first began its ravages on the two former, under a belief that they would not touch it, on account of the straw being less hollow; however the farmers were disappointed in their expectation, for they destroyed it likewise. Experience also shewed, that the cattle would not eat the straw, on that account: There is less cultivated at present. However, this will succeed on the poorest soil, and ripens much earlier than the two former; wheat succeeds best on clay or strong loam; but very good crops are got off light loam, when in good condition. The quantity of seed for an arpent, is one minot and an half; the return is according to the preparation of the soil. From twelve to twenty-five minots per arpent.

SPELT.

SPELT, called Egyptian Wheat, by the Canadians, is very productive; it will grow on poor light soil. The flour is very coarse; it makes bad bread, but good beer—and could be used, to feed horses, pigs and poultry. It is cultivated the same as Wheat, but requires rather more seed for the arpent, the grain being larger.

BUCK WHEAT.

THIS grain will grow on light loam, gravelly or sandy soil, but rarely succeeds on clay or strong loam. The quantity of seed for an arpent is two gallons and one quart; the meal makes good cakes. When it is scalded, it will fatten hogs, but should not be given whole unless it is boiled. It is good for horses and poultry. The produce is from fifteen to twenty minots to the arpent.

RYE.

THERE are two kinds of Rye, the autumn and the spring. There is no demand for this kind of grain; it is scarcely to be met with on the markets. As it succeeds on poor light loam, and sandy soils, it deserves attention from those who have that kind of soil, wheat not growing in such places. One third of rye meal, to two thirds of wheaten flour, will make very good bread. It fattens cattle, and the meal when scalded is good to fatten hogs and feed poultry. One minot and a half is sufficient seed for an arpent of land; the return is sixteen minots in general. This grain is nearly equal to that of barley, for laying down to meadow: the grass seed, if good, seldom fails when sowed with it.

BARLEY.

THERE are three sorts of Barley, the two rowed, the four, and the six; the latter is most pro-

 ductive.

ductive. The land must be in good heart, to receive the seed. It will succeed on strong or light loam and clay. As this is the best grain to lay down to clover, or mixed grass, the use of it is indispensible with the farmer. One minot and a half is sufficient seed for an arpent; the return from fifteen to thirty-two minots. Besides the use of this grain for brewing, it is next to wheat for bread; one third barley meal to two thirds of wheaten flour, makes excellent household bread. The meal when scalded fattens pigs, and gives the meat a very fine flavour. The same preparation made into a paste is superior to any other food, for young poultry. The practice of giving scalded bread has often proved fatal, from the salt used in the preparation of that article. Poultry of every kind are fattened sooner with scalded meal than any other kind of food, and the meat has a better flavour.

OATS.

THERE are some very good oats lately imported, which will improve the seeds; for those in the country are very bad. They are the white kind, and suc-

succeed on all light loams, as also on clay; but where they are most productive is on swamps newly cleared, and drained. The quantity of seed is two minots to the arpent. In the latter soil, they will produce forty minots to the arpent; but on the former not more than from twelve to eighteen.

MAIZE OR INDIAN CORN.

THE corn best adapted to this province is the twelve rowed, small yellow kind. It ripens much earlier than the large. All light soils are fit for corn. The quantity of seed to the arpent is one gallon: the return when properly tilled, is thirty minots. Should the land be rich enough to bear a crop, it is preferable to plant it in drills, at the distance of four feet a part; and the grains of corn, one foot a part in the drills or rows, it requires less labour than the present practice of the Americans, which is as follows:—After the land has been ploughed and harrowed, a furrow is drawn lengthways, at the distance of four feet from each other, after which there are others drawn crossways at the same distance, forming squares or diamonds

 through

through the field, at each point there is about a shovel full of rotten dung put in the hole, then four or five grains of corn, and in each third row, a few pumpkin seeds; then it is covered with a light plough about two inches thick. When the corn is six or eight inches high, it must be earthed up a little, and the hills cleared of superfluous plants: three or four are sufficient to stand in a hill for a crop. The ground must be cleared of all weeds; otherwise the corn cannot thrive. It must be gone over again, when it is fifteen inches high, and cleared of all weeds. When it is two feet high, it has its last earthing, and when the corn has bloomed, and the top got a pale straw colour, they should be cut off, at the joint above the cob or ear: they are tied in small bundles and shocked to dry, and when dry are housed. There are few crops more advantageous than corn; although in the year 1815 and 1816 it failed by those unfavourable seasons, people should not be discouraged from future trials. It is of great use to eat, when green, either boiled or roasted; when ripe the meal mixed with half wheaten flour, makes very good bread. In all new settlements it is made into cakes, and is almost the only bread made use of. It fattens cattle, hogs and poultry, and is also given to horses; when it has been prepared with lye, it is very good in soup. The stalks are ate by cattle and the cows give more milk when fed on them, than on hay.

After

After the corn has been gathered, the husks or leaves must be taken off the grain, otherwise it will mould; when that is done it must be put on a floor, and turned once a week, until it is dry. In the new settlements they make cribbs: those places are formed with logs laid square, about five or six feet high, and ten feet long, and four feet wide, covered at the top like a house; the air passing through, dries the ears without farther trouble.

Plaster of Paris is a good manure for corn; a table spoonful of powder strewed on each hill before the first hoeing is performed, has a great effect on light soils.

HORSE BEANS.

THERE is but one kind of these at present in the Province, which are such as those chiefly given to horses in England. They grow best in clay or strong loams, which ought to be in good order; the land must be prepared in the Autumn, to be ready to plant in the spring, as soon as the earth is in a state to receive the seed. They will succeed

ceed best, planted in drills, at the distance of thirty inches, between each row: the beans should be put four inches apart in the rows; they can be cultivated either with the horse hoe, or the light plough. As they require to be kept clean of weeds the above implement will be found the best. They are sometimes dibbelled; and some people sow them broad cast and plough them in; but as the advantage to be derived from this crop, is the cleaning and preparing the land for a crop of grain, the drill husbandry is preferable to any other; one minot is sufficient seed for an arpent when drilled, and two if sowed broad cast. The return is from twenty five to thirty five minots per arpent. They are harvested with the sickle, and require to be well dried, before they are housed. If the opportunity should offer to stack them out, it will be best, they are the best food for horses that can be, mixed with oats. They fatten sheep and pigs—the stalks are much liked by cattle in this country.

DWARF FRENCH BEANS.

THOSE beans are cultivated by most of the Ca-

Canadians. In order to have good crops, the rows should be thirty inches apart and the beans planted four inches from each other; they grow on almost every soil, but light is the best for them. They require to be kept clean from weeds, and must not be earthed up more than two or three inches. The quantity of seed for an arpent of land is three pecks; the produce is from twelve to fifteen minots. They are very good for table use, and are the best thing for fattening sheep, giving more tallow than any other food; they are also in demand for exportation: the white ones would have a preferance for that purpose.

PEASE.

THERE are but three kinds cultivated in the field: the green, the large white, and a small white pea, called the early pea by the country people. They all grow better on strong than on light soils; those that grow on strong soils boil well; but those that grow on light loams, gravel, or a part sand, do not boil well, but remain hard. The samll pea has a preference, as they ripen early; the large pea ripens

late,

late, and is frequently exposed to be mildewed, for which reason, it is advisable to get the green and large white pease in the ground, as early as the earth is in a state to receive them. The small pea, improperly called early pea, is sown always late, very frequently in the month of June, and is ready to harvest in August. One minot and a half of the small pease is sufficient seed for an arpent; but the large kind require one peck more. There are few crops more precarious than that of pease: the return seldom exceeds twenty minots, and frequently is but from six to eight per arpent. Pease are in such general demand in this country for soup, that they are wanted daily in most families; it is therefore necessary to explain the cause of the frequent miscarriage in their culture. The present custom is to sow them broad cast on a lay, or on land that was cropped with oats the year before under furrow: the wheel plough turns up a sod eighteen inches wide, and very frequently ten inches thick; the seed is therefore buried too deep to be able to rise. This is often done in the latter part of May, or in the beginning of June; the dry season commences at the latter date, the earth being in such a massive state, it then becomes so hard that they must fail. To avoid that misfortune, let the field be ploughed with the two horse plough, with a furrow not exceeding six or seven inches wide: the thickness will not exceed the width; let the furrows be laid

edgeways one against the other, the lands ought not to exceed 8 feet in width, let the pease be sowed lengthways of the furrows ; they will roll in between each layer of earth, and find immediate nourishment. As the quantity of work to be done in the spring drives the labour of the plough into the month of June, it will be found expedient to sow and harrow the land of the preceding days ploughing. If it is delayed to the second day, the harrows have very little effect, and the sowing must be delayed until rain falls, when it may be too late for a crop to come to maturity.

VETCHES.

THEY are very scarce in this province, as such it is to be hoped, that they may be imported, there is no doubt of them growing, because there is a wild sort, which is but too frequent in wet seasons, on low strong soils : they overpower the crops of wheat, and spoil it for sale ; it being the same size as that grain, there is no machine that can separate the one from the other, by which means the wheat is very unfit for bread.

LENTILS.

LENTILS are cultivated the same as pease, but require light soil; one minot is sufficient for an arpent; they are much esteemed to make soup.

OF CULTIVATED GRASSES.

IT has already been stated, that the land is in an almost continued aration; although nature appears to have allotted various parts for a different purpose. Many islands in the river St. Lawrence are nearly overflowed every spring; which prevents the sowing of wheat, until there is little hope of its coming to maturity. In the vicinity of lake St. Peter, the lands are in the same state as many of the islands. This should point out to the farmers, that grass ought to be their object; the dairy, raising and fattening stock; the easiest and most profitable part of farming. The following grasses are the most applicable to the various soils:—The red clover and fox tail; the latter

ter called timothy and herds grass, from the person who introduced its culture. These are the only grasses that are sowed for crops; they agree on all soils that are not subject to remain long inundated, The white honey suckle clover is a native of the country, and comes in on all lands that are cleared, and suffered to lay fallow. Hop clover does the same as the white, the sheep fescue is a native and comes in on cleared land: those are upland grasses. The low meadows grasses which are natives and easy to introduce, are the great meadows, known by the name of franc-foin. The silver hair grass, foinfol, the cyprus or blue joint, which is to be found in meadows formed by the beavers, before the Country was settled. By daming of brooks which backed the waters, and destroying the trees, they formed vast meadows, which contain various kinds of course grass, adapted to flooded lands. The Dutch gold top is very common in most places that are overflowed. A selection may be taken from the above, that will suit any soil or situation. The quantity of fox-tail or timothy seed for an arpent is one peck, and two pounds of red clover. If a field is to be sowed with red clover in order to take a crop and plough in the second growth for a manure, ten pounds of seed will be required. When clover stands for seed, as soon as the bloom appears it ought to be mowed, because it is not the first flowers that produce seed, it is the second

growth.—When clover is intended for hay, the swaths should not be shook out like other grass; but be turned over to the contrary side it layed after mowing: the least shaking the better, lest it loose its leaves, which is the best part of it. One arpent of land will produce from two hundred to two hundred and fifty bundles, weighing fifteen pounds each.

COTTONIER

ALTHOUGH a wild growth, which is little noticed, it hath much to recommend itself to our consideration. When it is five inches high, it is gathered, and is an excellent substitute for Asparagus; when it blooms, the leaves being erect and large enough to contain a table spoon full of dew which is collected at sun-rise, after being boiled, as the sap of the maple tree, it makes a very white manna: when it goes to seed, the pods are as large as the pods of the Windsor Beans: they contain a fine silky down, set at the sides with a flat brown seed. These pods are collected by poor people, to make beds; the stalks being cut and dried, make fodder for cattle and sheep, who are very fond of it.

This

This plant succeeds on the poorest gravel, or loam. The roots run horizontally and have the taste of stick liquorice. It is therefore advisable to encourage its growth on high rocky or any poor soil, for winter food. A supposition has been made, that this plant will produce silk; but its broad leaves, being set alternately up the stalk, at the distance of three or four inches, and penetrating to the centre of the stem, the staple or rind cannot be obtained more than three or four inches long. This plant does not make its appearance until the land is cleared, it propagates itself by means of its winged seed.

LUCERN.

THIS artificial grass, a native of Media, has been introduced into this country. It succeeds both upon strong and light soils; but the light is preferable for its culture. The best method of management, is to sow it in drills, thirty inches apart. When the plants are up, they must be thinned, so as to stand a foot distant from each other in the rows. It may be sowed broad-cast; but, as it

re-

requires to be kept clean from weeds, the drill will be found preferable. The seed may be sown in beds in the spring, and transplanted into rows. When that is done, the tap roots are shortened, and the top of the plants cut off about the middle. The quick growth of this grass in the spring is sufficient to recommend it to the Farmers, for feeding their pigs, lambs and calves. It will be nine inches high, when the other kinds make their appearance. In favorable years, it may be cut four or five times. A quart of seed is sufficient for an arpent, when drilled; two quarts when sowed broad cast. The hay made of lucern is managed as directed for clover; (no animals should be allowed to graze on it, as they are apt to eat off the head of the plant,) as such, one arpent of lucern, is equal to four arpents of those grasses, now under culture.

SAIN FOIN.

SAIN FOIN will grow on very poor soil, where the other kinds will not succeed. It has the advantage of standing longer than other grass, so as to give time to cut it. It may be cut in bloom or when in

in seed; it is sowed broad cast. The quantity one gallon to the arpent. This, like the lucern, is advisable not to pasture, the roots rising above the surface, are liable to be injured by cattle. Sain Foin is longer coming up than other grass, and people sometimes suspecting the seed being good, plough it up too soon.—Those who wish to try its culture, had better examine the land minutely, before they break up. When made into hay, it is managed as clover.

CULTURE OF VEGETABLES.

BEFORE I enter on the culture of Vegetables, as food for stock, it is impossible that I can refrain from impressing on the minds of the Canadian Farmers, the necessity of their paying every attention, to the propagation of those plants and roots. It is by the application of them, for rearing and fattening domestic animals, that they have been undersold by the Americans in that branch of rural economy. The time is arrived when these people must use their utmost efforts, to get sale for their stock and produce. The interest they have in this province

vince is very great. It is only by a constant industry and regular perseverance, to cause the earth to produce in abundance, that there efforts can be opposed. The natural advantage possessed in this country are great. Let it be shewed that those importations can be dispensed with, as was the case some years ago. I repeat what I have said some years past, that wheat alone will keep the country poor. Every branch of husbandry, consistent with the demands of the British Empire, must be attended to. When that object may be effected, there is little doubt of regulations being put in force, to protect the Agricultural interest of the province.

TURNIPS.

OF these roots there are several kinds; but the blue and white field turnips are most advantageous to the farmer. They grow best on black ground; they also do well on light loams or on strong soils, when rendered fine and manured to receive the seed. They may be sowed broad cast or in drills; the drill husbandry will be found the best: the land is much easier kept clean from weeds. The seed

seed may be sowed in the latter part of June, or the begining of July. If sowed broad cast, half a pound of seed will be sufficient for an arpent; if in drills at three feet apart, four ounces of seed will be enough for an arpent. When they have four leaves, they must be thined, so as to allow the plants to stand nine inches apart. About three weeks after the first hoeing, they are gone over again and the plants are thined, so that they be eighteen inches from each other, all weeds are cut up, and the land is made as clean as possible. Should the weeds come up anew, they must be again removed; after which the turnips will require no farther attention, until they are ready to gather, which will be at the end of October.* They must be carefully pulled up,—avoid bruising them as much as possible; otherwise, they will not keep. When pulled up, the tops are cut off one inch above the bulb. They are then put into a cellar, but the heaps should not exceed fifty minots, because when larger, they are apt to heat and rot. The tops are thrown in heaps, about the size of two minots, in a field that is shut; and when the cattle cannot get any more food abroad, those leaves are given them, to eat. The turnips may

 be

* In order to ascertain whether Turnips improved after the 15th of October, and at what ratio, I measured two, and found one increase three inches and a half in circumference in eight days, the other two and a half. I imagined that the latter was nearer maturity, as they were both in the same kind of soil, and not more than one hundred feet apart.

be buried on a hill side, on any convenient rising ground. They fatten oxen and cows. Young cattle grow fast; and cows give much milk, when fed with turnips; but sheep do not seem fond of them. This is very extraordinary, as there is nothing which sheep like better than turnips, in all parts of Europe.—A preparation for turnip seed, which has often prevented the plants, from being destroyed by the fly; put the seed in Chamber lye: let it lie eight hours; pour off the water, and mix the seed with flour of sulphur, so as to separate the grains; and sow it directly. If broad cast on light soil, a bush harrow will do to cover the seed. If on strong soil, a fine tined harrow will be preferable.—The method to raise turnip seed:—Dig trenches in the autumn deep enough for the turnips. So soon as the snow is off them, plant the turnips in the trenches; the frost will not hurt them, and they will sprout before the fly will have power to hurt them. There must be sticks put in the ground to tie the stalks to; lest the wind should break them. With the above precaution, the seed will be ripe in time to sow for a crop, the same season that they are planted. There are few crops more precarious on old cleared land, than turnips; but when they succeed, there are few more valuable. They are much esteemed for the table, as also for animals. The produce is from two hundred to two hundred and fifty minots to the arpent.

RU-

RUTABAGA, OR SWEDISH TURNIPS.

RUTABAGA, was introduced on the River Ottawa by me, in 1804: the settlers have found them very advantageous. There is not an animal, from the horse to the pig, but what is fond of them. They require a deep light soil, on account of their tap root. As such deep ploughing is required; in other respects they are managed as turnips; except that they should be sowed in May, to come to maturity. A Canadian gentleman has assured me, that those turnips had been put in a barn, and remained in that state during the winter; in the following spring, they were perfectly good and fit for the table. A person who had some seed of me, and was the first that sowed them in the upper settlements, on the Ottowa, informed me, that his crops of Ruta Baga were incredible on new cleared land: his Indian corn having failed one year, his pigs were wintered on that root, and looked as well as when fed with grain. I recommended this species of turnip, in the year 1807. The result of an experiment was published in the Quebec Gazette, proving their faculty, of wintering in the open field; there is great difference between land screened by the forest, and the former. A field was

prepared in 1806, and sowed in July with the blue and white turnips, and Rutabaga ; each in seperate lands. In October when they were ready to be gathered, one land of each kind was left, to try the effect of wintering out. Some cattle broke into the field and gnawed some of the Rutabagas. In the spring, when the land was uncovered, and unfrozen, the blue and the white turnips were all rotten ; but the Rutabaga was as good as in the autumn ; even those that had been gnawed in the fall were perfectly good. Those Rutabagas that were put in the cellar had become spungy. This points out to the farmers a very essential assistance for stock in the spring, when green food is scarce ; particularly for those having young. I have practised a method to ensure a crop, by having the land run out in squares of two feet : at each point of diamond, five or six grains of seed are put, and covered about an inch deep, thus giving food for the fly. When they are out of danger, the finest plants are left to stand for a crop. In general it has succeeded : the plants will bear being earthed up a little.

CAB-

CABBAGE FOR THE FOOD OF CATTLE.

THE Drum Head Cabbages are most esteemed for feeding cattle. Their culture in the Garden is known to the Canadians ; they can be raised in the field with little trouble, even on strong soil, if ploughed deep, and rendered fine. When the land is ready for planting, furrows may be run with a light plough, to form the field in diamonds from two feet and a half to three feet apart ; a shovel full of old dung must be put in the hole, that is to receive the plant, people should follow and plant the cabbages as the dung is deposited. After which, the light plough or horse hoe will keep the land clean with very little assistance of the hand hoe, to clear the weeds that are very near to the plants. The best method to apply cabbages would be, to feed them in the latter part of the autumn, when the pastures get bare and give them to stall feed cattle intended for Christmas. Those intended for winter and spring use, require great care ; as they cannot bear heat, more than too much cold, they might be buried on a hill side, or on a rising ground, where no water can come to them ; the holes may be made five feet deep. A layer of straw being put to keep the ground from them,

them, the earth is thrown over. In this manner they are preserved in new settlements; and trials made in the open country have been successful. An arpent of land will contain 3600 cabbages at three feet distance. The average weight in an unfavourable year to their growth; namely 1816, was ten pounds each, which made the produce eighteen tons.

POTATOES.

THERE are several kinds, the Large White, the Kidney, the Rusticoat and Ladies Finger; the Blue and the Red. The large white are the most productive, and fittest for the Farmer.

Potatoes require a light loam, bordering on sand; although strong soils under good management will produce heavy crops, when the land has been well ploughed, and harrowed fine. The furrows are run with a light plough; the distance between each furrow is from thirty inches to three feet: the sets must be taken from the finest Potatoes, picked out for the purpose. Small cuttings,

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as well as small potatoes planted whole, produce small fruit. Large sets produce the finest crops. When the sets are put into the furrows, the germ must be put next the earth. Each set should be one foot apart from the other; to allow room for the potatoes to form, if planted too close, they generally are very small. The sets being deposited, long stable dung is strewed over them, and the earth is turned on them with the plough. When the stems are about eight inches high, the earth is ploughed from them, and in a few days after, they are earthed up again. Before they go into bloom, the earth is brought up for the last time, and all weeds cleared from among the potatoes. They ripen about the end of September, which is known by the stalks becoming dry, and turning brown. They are then ploughed up with a two horse plough, the coultre is removed prior to that labour. The work is began, by going down the centre of the rows, the first turn to the right the second to the left, which will turn up all the potatoes, after they are picked up, the land is harrowed across to uncover any that may be buried. There will not be one fiftieth part cut by this operation ; but getting them up with a hand hoe, maims two thirds of the crop, besides much time is lost. They require a warmer cellar than any other root : the least frost will spoil them. The country people are in the habit of leaving their potatoes on the ground all night

night in the month of October, when they get them up. This never should be done; the frost being so frequent at that time of the year, they sustain great loss by it. The potatoes for planting should be changed every third year. The greater part of the labour for this crop being performed by the plough, there are few others that will turn to so great an advantage. Potatoes will preserve until the crops of the preceding year are fit to eat. After their utility for the table, they are very good food for horses, when cut small and mixed with bran or oats. Cattle fat with them, they encrease milk in cows; but do not appear suitable for sheep; they scower too much, For fattening pigs in the autumn, they are the cheapest and most efficacious food that can be given, when boiled for that purpose. The cuttings from twelve minots of potatoes will plant one arpent of land, which will produce two hundrerd and twenty minots of Potatoes on an average of seven years.*

Extract from Holt's Survey of Lancashire.

"After the Potatoes are gathered and suffi-
"ciently dried, they are put together in heaps,
"th

* Note.—An Arpent of land is four fifths of a statute Acre; five arpents forms four statute acres. The Scotch acre is equal to one and a half arpents.

" the shape of the roof of a building, covered
" closely with straw which should be drawn straight
" and to meet from each side in a point at the top,
" about six inches in thickness ; and then covered
" with mould closely compacted together, by fre-
" quent applications of the spade ; after which,
" Mr. Ecclestone makes holes in the mould, at the
" sides and tops of those repositories, as deep as
" the straw, and about three yards distant to per-
" mit the air, which, he says, visibly arises from
" the fermentation, to escape ; after the fermenta-
" tion has ceased, the holes are closed, to prevent
" the effects of frost or rain."

It is owing to the neglect of this last precaution, that Potatoes often acquire a bitter taste after they are covered up, and they are often very unpalatatable. In this climate, the holes should be closed up every evening, and they should be covered at least, thirty inches thick with mould.

CARROTS.

CARROTS thrive in strong or light loams ; the land must be ploughed deep, and be well manured :

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the drill husbandry is best for this crop; the distance between the rows should be two feet. The seed being very light, it must be mixed with sand that is a little damp: the plants should stand from four to six inches apart in the rows; they must be kept clean from weeds, and will grow to a very great size. I have had carrots that measured thirteen inches round, and weighed upwards of two pounds. This root has much to recommend itself to the Farmers; after its use for the table, it is good for horses, and also to fatten cattle, to feed sheep and hogs. They are preserved during winter in a cellar, buried in sand; one layer of sand and one layer of carrots alternately. They will keep in that situation to the end of June, and can be appropriated to fatten cattle in the spring, from March, until the grass cattle come into market.

Three quarters of a pound of seed will sow an arpent of land, when drilled; but broad cast will require twice that quantity. One arpent will produce from one hundred and twenty to one hundred and thirty minots.

PARSNIPS.

THEY require the same culture as carrots, but do not offer the same advantage to the farmer.

They

They are considered unhealthy for horses, and cause Sows to loose their pigs, but are esteemed for fattening cattle ; cows increase their milk with them ; the butter made in winter from cows fed on parsnips, has a very fine flavour. They create more tallow in cattle fed with them, than when fattened on potatoes. I have had parsnips, that measured fifteen inches round, and weighed three pounds and six ounces each. The quantity of seed for an arpent is one pound ; the return is from one hundred and thirty minots, to one hundred and forty. When carrots, parsnips and turnips are taken off the ground, their tops must be left about one inch from the crown of the plant ; if cut too close, they are very liable to rot. Nor should they be housed when wet, or with earth sticking to them.

HEMP.

SOME years ago a trial was made, under the protection of the Government, to introduce Hemp as a staple commodity for this and the sister province. Unfortunately, political events obstructed that ef-

fort; the American embargo gave so great a scope to mercantile enterprize, particularly the Lumber Trade, that there was scarcely any bounds to the price given for labour. Soon after the war ensued, which may be said, gave a death blow to Agricultural pursuits. The present offers fairer prospects, by the general peace now taken place. Should a future attempt be made for its introduction, a recital of the practice and experience of many years may be useful to the undertakers.

CULTURE AND MANAGEMENT OF HEMP.

HEMP requires a rich, deep, and moist soil; a hazel loam is its favourite. It will also do well on black soil when drained. The ash swailes are preferable to the cedar swamps for its growth; a tolerable crop may be obtained on light yellow loam when moderately manured. Strong loam, that has been cropped with potatoes, lightly dunged, and ploughed directly, after they are taken off the ground, will bring a good crop of hemp the following

ing year. Old meadows that are broke up after the crop of hay is taken off, by receiving two or three ploughings, and being laid well up, may be sowed in the spring so soon as the snow is off the ground. The lands should be laid out in ridges six feet wide, and be harrowed fine ; after which, the seed is sowed and harrowed in with a very fine tinned harrow. Should there not be one of that description, a bush harrow must take its place ; the seed being small, a heavy harrow would bury them too deep. The seed of this country being small, one minot is sufficient for an arpent of land, but it will require double that quantity of English seed to furnish sufficient plants; the seed being nearly twice the size of that of this country. After the seed has been harrowed in, and the water courses cleared, no further attention is required, until the male plants are fit to pull, which is in September ; they are known from the dust falling from them, and their leaves turning yellow. They are pulled up by the root, and placed together according to their lengths ; sometimes there is only two distinctions ; if more, they are classed accordingly in order for dressing. The male stalks must not be allowed to stand until the female stalks are ready to be pulled, because they rot by standing, and spoil the colour of both. In order to collect the plants, two people take a land between them ; they go up the furrow on each side of a land, and ad-

advance one foot on the land, and pull up the stalks, avoiding as much as possible the breaking the female or seed-bearing plants. The stalks are tied up in bundles about the thickness of a man's thigh. When they are all pulled, they may be put to rot directly in a river, brook or pond. A place may be prepared with stakes, according to the quantity there may be to rot. The hemp must be all put in at the same time, that it may be all equally rotted. Boards are put on the top, and large stones on them to sink the stalks, so that every part may be under the surface of the water. When it has been twenty hours in steep, examine the stalks that are about one foot under the water. If the rind comes off from the root to the head of the stalk, it must be taken out immediately, and spread thin on a clean meadow to dry. If a sandy beach is at the rotting place, there cannot be a better. When they are dry, they are gathered up, tied in large bundles and housed; they are then ready to break when an opportunity may offer.—Hemp seldom takes more than from twenty-four to thirty hours to rot in the month of September. If it is left in the water only a few hours over the time it should be taken out, the rind or hart will leave the stalks, and no hemp will be obtained from them. The way to know when the seed is fit to gather, is by examining the heads of the female plants; when the seed may be perceived opening the

the green husk that encloses the seed, which takes place at the end of September, or by the 8th of October; the stalks are either pulled up or cut with a sickle. The cutting is preferable, as the stalks are less shook by that operation, besides the mould is thereby prevented from mixing with the seed; the roots of the female stalks are inconvenient in dressing of them. When gathered, they are tied as directed for the male plants; they are then piled in the field, in the form of a sugar loaf, thin enough for the air to pass through and dry the stalks. In three or four days they may be carted to the barn, to have the seed taken out. Great care must be taken that the seed is not lost by removing the stalks.

The method to take out the seed.—A bench is made whereon is placed a board two feet long; in the centre of which there are two rows of iron tines one inch broad, and about a quarter of an inch thick; they intersect each at one inch distance, and are nine inches long. The board is placed on a decline; from the person that cleans the seed, a foot board is placed from the top of the bench to the floor, for the cleaner to put his foot, so as to command the handful that he strikes on the tines. The cleaner must not be allowed to wear heavy shoes, lest he bruise the seed. Moccassins are best for that labour. As the seed is taken out, a boy ties up the bundles of stalks. They are put

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by until the following spring to rot, when the hurry of the work is over, which will be at the end of June. They are managed as directed for the male stalks. The season being so far advanced when the female hemp is gathered, that was it put to rot it could not be dried on account of the frost, so very frequent at that period, and the sun having so little power to effect the purpose. The seed is cleaned and put in a secure place from vermin, which are very fond of it.

BREAKING.

Hemp requires two sized breaks: the first a heavy one; and in order to assist the workman, a spring pole might be affixed to a beam in the barn, where a rope could be placed to the head of the break from the end of the pole; by which means the upper jaw of the break being risen up, the man would have only to strike it down on the stalks; one man can furnish sufficient for three boys or women, who would pass it through fine breaks, which are closer than the flax breaks of this country. If care is taken in this process, it will require very little swingling, which last labour is performed with a wooden knife, about two feet long in the blade. The handfuls are held over a board, placed on a slant, from the person that does the work, which is to strike off the sheaves that hang on the hemp.

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It is then laid on a table, each length by itself, and tied up in heads, which ought to weigh fourteen pounds each. It is then ready for the market.

REMARKS. Dew rotting of hemp gives it a bad color, and it is not fit for the purpose of navigation. Snow rotting has a worse effect, by its destroying both strength and color, which are its primitive qualities. The male is fittest to make cloth, and when well prepared, is of a silver color; the female is of a brown color, and fittest for cordage. That of a green color is gathered before it has arrived at maturity. Autumn sowing is hazardous; mild weather making the seed grow, and the frost killing the plants. Sowing on the snow exposes the seed to be eat by the field mice. Those two points I have proved. Sowing early in the spring will ensure a crop, if the seed is good, and the land in a state to bear one. When a linen crop is intended, the seed must be doubled, which will produce stalks about three feet long. The former quantity, (one minot) will produce stalks from six to eight feet long, which are for exportation. It has been advised to sow hemp thin in order to obtain more seed, and throw the stalks away; those who practise that method deceive themselves, because the seed only ripens by degrees, and sheds itself, at every wind that agitates the stalks; but when sowed full for a crop, it ri-

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pens equally all over the field, and produces better seed. An arpent will produce eight minots of seed, and three hundred pounds of merchantable hemp.

FLAX.

FLAX requires a rich black soil, or a hazel loam which is moist, but not wet. Yellow loam would bear a crop, if in good heart, but stiff soils never should be used for flax. The land must be well ploughed, and rendered very fine, before the seed is sowed; it is covered with a fine tined harrow. No one should attempt to sow flax, that has not got clean land for the purpose. The plants are so tender that much damage is done to the crop by the people that weed it. Two minots and a half of seed is sufficient for an arpent of land. When the stalks turn a pale yellow color, and the leaves die, it is fit to be pulled up; it is tied in small bundles, and put in piles in the form of a sugar loaf, to dry. When the balls which contain the seed will break with a gentle pressure, the

bundles

bundles may be removed to the barn, and threshed; after which they are tied up in bundles about the thickness of a man's thigh, and put to rot, as directed for hemp; requiring the same management in the steep. Dew rotting flax makes it weak, and prevents its bleaching; as also does the drying it over a fire, prior to its being broke, and will prevent its sale for a foreign market.

The farmers grow flax, but from an improper choice of the soil fit for its culture, and inattention to provide good and clean seed to sow, they reap little advantage for their trouble. The practice of putting their flax to rot on the ground before they thresh out the seed, injures the grain so much, that one half of it is spoiled by the dew and rain. Were they to thresh it out prior to the rotting, it would be fit to ship to Ireland, and by having good clean seed, it would always command a good price for exportation.

A machine to clean the seed can be made of tin, by punching it with holes to let out the false flax-seed, and small seeds of weeds; it is in the form of a roller; the cover puts on at the end; a crank is affixed at the other end, and put on two upright posts, sawed so as to let in the crank at one end, and a small gudgeon in the centre of the cover: it is turned round like a grind stone. The vast quantity of soil fit for flax in this province,

offers a great advantage to the farmers, to embark in a commodity, which is always in demand for the mother country. Great quantities of this article, which are annually imported into Great Britain from the Baltic, might be furnished in part from hence.

Flax-seed should not be sowed more than twice on the same farm. An arpent will yield two hundred weight of flax, and eight minots of seed.

URTICA OR THE NETTLE.

THE Nettle has been long known to produce a filament, and is used in various parts of Europe to make Cloth. The inhabitants of this Province applied it to make cloth, fifty years ago; it is likely that the first French settlers brought the knowledge of its utility. Fishing nets and small ropes have been made from that material. The Maison Rustique recommends the Nettle for making cloth. The faculty of the nettle has been brought by recent experiments into more notice. It is said to be more durable in water than hemp; which is very

very probable, it being an aquatic plant, it is then in its element. The property of the nettle deserves the particular care of Farmers ; when more certain information may be gathered relative to its durability, it may become an object for exportation. Nettles are found on the borders of Brooks and Beaver Meadows in places called Swailes, which lay between high lands, in ash and soft maple swamps, and on most low flooded land, on the sides of rivers and lakes, but chiefly in damp shady places. The length of the stalks depends on the quality of the soil. The leaf resembles that of the Beach. At the head of the stem, three branches put forth, and bear a pale straw colour bloom, in the beginning of September. The seed is small and flat, forming a half-circle, and is of a dark brown colour, it hangs from the stem by a fine point, and is easily shed. It is fit to cut when the leaves turn yellow, and must not be pulled, being a perennial. It is managed as directed for Hemp, to render it fit for use ; but has the advantage of giving twenty-five per cent more hemp or staple.

This plant has not as yet been cultivated. It is not certain that it will succeed in the open country. The trials I have made to introduce it in up-land, have not been favourable. Swamps where it grew, being cleared and drained, the growth has disappeared ; but as cattle grazed on those lands, and I have

have discovered they are fond of it, that may be the cause of its destruction. It is to be hoped that trials might be made, to introduce its culture; a certain degree of moisture must be retained, that it may approach its natural state. The land ought to be fenced from cattle, otherwise, the grower will be disappointed.—It is broke with a Flax-Brake, and when passed through fine heckels, will make as fine cloth as flax, but not so durable.

It offers for the Fisheries, a superior advantage, to any other filament, for Nets and Lines.

THE FARMER'S STOCK.

HAVING gone through the culture of the most material Crops, I will proceed to another branch, which requires no less care and attention from the industrious Husbandman, which are his Horses and Cattle, part of which is necessary for his service in the execution of his work; and part for breeding for sale. This country offers little advantage to those, who embark in the breed of fine saddle or elegant coach Horses, there are few peo-

people who want horses of that description. The farmer will find more profit by good substantial draught horses, which are in constant demand. Those descending from the Norman breed, are most desirable to propagate ; they are very hardy, and capable of bearing great fatigue. It is to be regretted, that the Legislature has not made restrictions, for the preservation of that valuable breed. The first point, which depreciates them, is the importation of worthless American Mares, which are changed for the finest Canadian horses : the second arises from the Canadians not castrating their male animals, at an early period ; but allowing them to run at liberty in the fields, by which means they couple when they are too young. Their produce degenerates, and their strength diminishes. Frequently those young stallions cross the farms, and soil the mares intended to be covered by the finest horse, thus disappointing the hopes of a better race. To redress the above grievance, a tax might be imposed on all stallions above one year old : the impost would have the effect, that no inferior horse will remain uncut above that age. Those having mares to breed from, would pay the keeper of a good stallion a liberal price, to have them covered. By such proceeding the breed of horses would improve rapidly.

CATTLE.

CATTLE.

THE Canadian breed of cattle is susceptible of great improvement. They are the best for the climate, with care and sufficient food. Their size may be encreased nearly one-half: the defect of size arises from two points, the first from not being sufficiently fed; the second from the farmer's neglecting to castrate their male calves, allowing them to remain in that state until they are five or six years old; the heifers pasturing with them, they couple at eight or nine months old, by which means their growth is stopt. The farmers sustain a loss by leaving their male calves uncut; that operation ought to take place when they are three weeks old. They grow larger when cut young, and fatten better, when intended for sale. There are many people who only turn the Testicles; in that case they have very little inward far, nor is the meat ever so good, as when they are castrated young.

A preference has been given to cows from the United States; because they give more milk; but the Canadian cows are more hardy, and their milk con-

continues far longer and is more rich; and they are much easier kept. The breed may be improved by selecting the finest animals of each sex for the purpose. Those who have few cows, had better hire a bull than keep one.—Cows go nine months and a fortnight with calf.

The best time to raise calves is from the middle of February to the middle of May, and not later. They should be taken from the cow when six days old. Warm skimmed milk must be given to them twice a day for a week or two, after which they will drink it cold: that drink, or one made with barley-meal, must be continued until they are two months old; when they may have water. Small racks should be put in their stable, and fine hay given them. Turnips, carrots, parsnips, or potatoes may be cut small, and put in a trough, with a little salt sprinkled on them to encourage the calves to eat. If the farmer has a Lucern plantation, he will have early green food three weeks sooner than that of any other growth. To raise calves with success, there must be near the house a pasture, well stocked with white and red clover, franc foin, and purple fescue grass. If water is not convenient to the pasture, a trough may be made with a peg at the bottom, to let out the dirty water that their drink may be clean and good: it is necessary to have a stable or shed, that they may lay dry and under

cover the first year. They ought not to be put out of the stable until the end of May, unless the season is very warm and fine. Heifers should not be allowed to couple before they are two years and a half, or three years old; they will make much finer cows, being arrived at a greater maturity. When the cows have been with the male, a memorandum ought to be kept, that when they are expected to calve, they may be put each in a stable, loose by themselves;—a good bed must be given that they lay dry. Many calves are lost annually for want of a proper place for the purpose. After calving, the cow must have a quart of oats or barley parched in a frying pan, and a handful of salt, or wood ashes, which is given as warm as she will eat them. She must have a warm mash of bran or barley-meal: if the weather is cold the water must be warmed for a few days for her to drink. All the cattle ought to have a handful of salt twice a week, from the first of March to the first of December. Many cattle are strangled by being tied up; it is sufficient to induce the farmers to fit up their cattle stable with stanchcons, having a sliding bar to let the head of the animal enter. It is then returned back, and fastened with a peg. Calves should be let loose the first winter in a stable by themselves; they ought to have racks to eat from, not mangers, because they are liable to get cast in them, and many are lost by that means.

METHOD

METHOD TO FATTEN CATTLE ON ROOTS IN THE SPRING.

NO kind of animals improve in this country from the setting in of the severe cold, (which is about Christmas,) until the middle of March. The best way to manage is, to keep in regular stable feed till then. The roots are washed, if necessary: this will depend on the manner they were housed: some seasons they are got in cleaner than others. They are put in a trough, and chopped small, so that none be left so large as to choke the animals which are to eat them: this can be done with a spade, or a blade made in the form of a hoe, for a handle to be placed on the top, in a socket. The quantity of food to be given will depend on the size of the animal.

I have fatted two Canadian oxen of the largest size, with one hundred and twenty minots of potatoes, and two hundred bundles of hay, between the eighteenth of March, and sixth of June, making seventy-nine days.—When put up, they were in working condition; when sold, were estimated to weigh twelve hundred weight.

Those who put up cattle must feed them regularly, give them a good dry bed, have them curried, and kept very clean. This practice when compared with feeding all grain, will reduce the expence three fourths, and the markets may be well supplied with good beef in the spring, until those from grass be ready to kill.

SHEEP.

THE farmers labour under difficulty for the want of grass for every kind of stock, and particularly for sheep, there being no extent of range for them in this country, such as is to be met with in most parts of Europe. They are confined to small fields, without food, in a manner; for the wild growth cannot be termed such. This will prevent the keeping of any number of them, until more conveniences be made for the purpose. A good breed can be obtained from the States.

The age of sheep is known by the mouth: when one year old, they have two broad teeth; when two, four,

four, and when three, six; when four years old, they have eight; after which their mouth begins to break. The ewes go twenty weeks with young: the time to let them couple, should be regulated according to the means of subsistence; because if they have not green or vegetable food, they can give but little nourishment to their young: this points out the necessity of root crops for their subsistence. When they are near their time of yeaning, they ought to be put in a pen by themselves, and should be milked after dropping their lambs before it sucks, to clear the udder of the vitiated milk: a warm mash made with barley-meal or bran must be given to the ewe. When they lamb in the winter months, the lambs should not be allowed to follow their dams in the snow: many are lost in March and April, by being let out too soon: they skip and heat themselves; then lay on the snow, which gives them cold, and causes their death.

Neither should sheep and lambs be put to feed about a barn in winter, with cattle and horses; they frequently get bruised or killed by those stronger animals. A place must be made apart for them. Two breeds might be obtained in a year, by putting the rams to the ewes, in the middle of December, and again in May. The rams ought to be kept seperate from the ewes, and only put with them when intended to couple. The young males not intended

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to be kept for rams, should be castrated whilst sucking. Potatoes alone scower sheep; they must be mixed with barley-meal or bran.—The sheep are kept too warm in winter, which makes them lose their wool: and in summer, they are too much exposed to the heat of the sun without any shade, which reduces them very much in flesh.

PIGS.

THESE useful animals are easy propagated. They require less care than any other stock, living on the refuse of the farm. Those with short legs, and long deep bodies, are easiest to fatten; and therefore the best kind to raise. The Chinese are not a desirable breed; they have too much head and belly, and too short a body; nor is their meat so good as the other kinds in the country. Sows go three months and three weeks with pig: two litters may be obtained in time to rear, by letting them take the boar about Christmas, and again in May. When the sows are near pigging, they ought to be put in a stye by themselves; they must have but little bedding, lest they bury their pigs in it, and lay

lay on them and kill them. When they are five or six days old, they may have a good bed, being then able to get out of the way. When pigging, give them as much food as they will eat, to prevent them devouring their young ones, which some sows are apt to do. Male pigs to rear, should be cut when three weeks old: one boar is more than sufficient for a farm. In summer, pigs will fatten on skimmed milk, or whey; in the autumn, potatoes boiled and mixed with milk, or ground barley, or buck-wheat meal; barley or buck-wheat, may be boiled and mixed; one minot of meal to four of potatoes. When the frost sets in, in December, discontinue soft food, and feed with pease, Indian corn, or horse beans, for two weeks, when they will be fit to kill. Young pigs are fond of lucern, which may be given to them in their pens. Pigs require a warm place in winter, and plenty of litter to lie upon.—They ought to have a shade in summer from the sun, being too much exposed in the open fields; sheds might be made for them to go to from the heat and rain. They ought always to have water in their pasture, which should be well stocked with red clover. In the spring and autumn, a few doses of salt and flour of brimstone is given them to clear their humours.

Memorandum

Memorandum of fattening two Pigs, in 1811.

	£.	s.	d.
Value two pounds each, when put to fatten	4	10	0
Put in pen the 20th July; fed on skimmed milk to the 30th September; October 1st, began to feed on boiled potatoes:—quantity ate,—thirty minots, at 1s. 8d. per mt.	2	10	0
Three minots and a half of Corn, at 4s. 2d. per mt.	0	14	7
Three minots of Peas, at 5s. per mt.	0	15	0
	£7	19	7
They were killed on the 20th December, aged twenty months each, and weighed 560 lbs. at 7½d. per lb.	17	10	0
Profit	£9	10	5

The Canadians would have given forty minots of peas, worth ten pounds, making a difference of six pounds and five pence in the value of the food, which proves the advantage of using vegetables. There is no better pork than that fed on potatoes; this will show the faculty to undersell the Americans in that article, which is very great the present day. The skimmed milk being the refuse of the farm is not charged; for were there no pigs, it must be thrown away. It will be perceived, that pork could be afforded much lower by the stated profit; but these were the prices of the day.

The practice of giving to fatten animals as much food in the morning as is supposed to be sufficient

cient for the day, is very improper: those who continue that method, will pay dear for their negligence. Animals do not thrive, or fatten, when over fed at once; feeding a little at a time, and often, encourages the appetite: they enjoy their meals when fresh; after eating they lie down to sleep.

Inasmuch as cleanliness is considered a virtue in the human being, it is equally applicable to the brute creation. The farmer that keeps his animals in a dirty and filthy condition, cannot prosper; he will ever be beset with diseases or death in his stock, which appears a just chastisement by the Supreme Being, for the neglect of his creatures committed to our care.

THE imperfect manner amongst the Canadians of calculating the return of the produce from a farm, by the number of bundles or sheaves of the different kinds of grain taken off the land, which are frequently composed of one half weeds, renders it impossible from such statements, to ascertain what are the natural or probable returns from a given quantity of land. It would be foolish to draw a

criterion from the immediate vicinity of a city, where labour and manure is always at command; but from places where amelioration must come from that made on the farm, or, by ploughing down green crops, or artificial means, by change of crops and fallow. The difficulty at all times, to command labour, joined to the short season for action, puts it frequently out of the power of the best farmers to accomplish their intentions.—The following estimate, taken from the latter situation, is offered for the purpose.

13th September, 1806.

	£.	s.	d.
Ploughed one arpent of land, cropped that spring, with peas	0	7	6
Harrowed, before sowing	0	1	0
One minot of autumn Wheat, at 5s. per mt.	0	5	0
Ploughed in the seed, Wheat	0	3	9
10th August, 1807.			
Wheat was mowed	0	3	10
Gathering and binding	0	5	0
Carting to barn	0	1	0
Threshing	0	18	8
Carting to market	0	2	0
Rent	0	10	0
	£2	17	9
Produce,—sixteen minots, at 7s. 6d. per mt.	6	0	0
Straw	1	0	0
	£7	0	0
Profit	£4	2	3

September

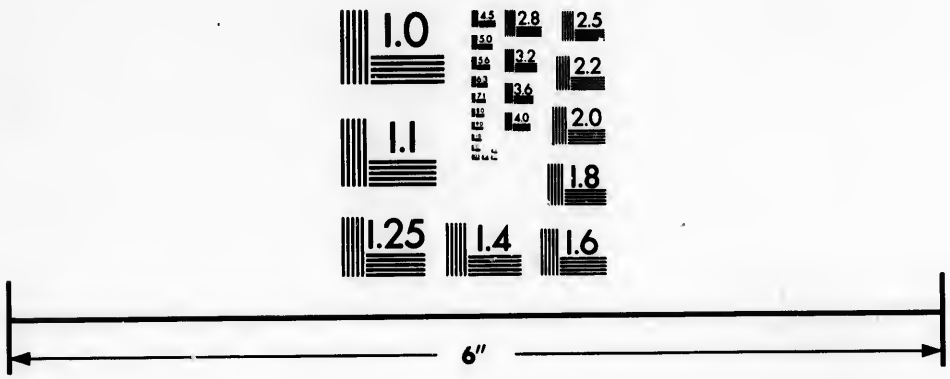
September 15*th*, 1807.—An arpent of land that was cropped with pease, that spring, the crop taken off, it was manured, ploughed, and sowed, with one minot of autumn wheat, that kind of grain having more time to tiller than spring wheat, and it is found sufficient seed for that quantity of land. The expences were as above. The return was twenty-four minots.

The protestants pay no tithe ; but the catholics pay the twenty-sixth minot on grain and pulse only ; every thing else raised or produced by the farmers is clear. A minot contains thirty four quarts Winchester measure.

The Expence of Cultivating one Arpent of Land for Wheat in May, 1815, *broke up for Pease, that crop removed. In October ploughed the land once, laid it well up, and cleared water courses.*

Ploughing	£0	15	0
26th April, 1816.			
Sowing one minot & half of spring Wheat, at 10s	0	15	0
Harrowing in the Seed.	0	2	0
26th August.			
Reaping, Binding, and Housing	0	16	0
Threshing	0	14	0
Rent	0	15	0
Carting to Market 4 miles	0	3	0
	£4	0	0

IMAGE EVALUATION
TEST TARGET (MT-3)



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2.8
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2.2
3.6
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Produce eighteen minots at 10s. 10d.....	£9	15	0
Straw.....	1	6	8
	11	1	8
Profit.....	£7	1	8

ENEMIES TO CORN.

A Sketch on this subject will show those acquainted with the varieties of enemies, which are so destructive in Europe, how much this country is favoured in that respect. Of birds there is but one kind, called the Goglue, which comes hither about the end of May. They eat the Barley, Wheat and Oats, when it is near ripe ; their numbers are very few. The Crows and Black-birds attack Indian Corn, and are very destructive to it, and the Pea crops.

The Wire Worm. They are numerous, and very destructive to wheat and Indian corn in dry seasons, by eating the seed in the ground; and call on lovers of agriculture to try experiments by steeps. It is very possible that a preparation for seed, which

which will give a flavour that those insects may dislike, might prove a remedy for the evil they commit. They prey also on potatoes, eating the sets, and causing the leaves to curl, and the plants to die; they disfigure the crops so much some years, that the potatoes are unsaleable. The onion crops are also subject to their depredation.

In the spring of 1816, a small brown caterpillar made its appearance in the fields planted with Indian corn. A friend shewed me some taken from the hills, where he observed the plants to fade and die. Those insects were in the manure, which was put to the corn.—On the 10th of July, having an experiment to make on some sets of potatoes, which had sprouted from the centre after the first sets had been cut out, dung was brought from the pig's sty: when it was put on the ground, I observed a number of these brown caterpillars, which may serve as a caution to examine the manure before it is applied for hills. That practice being very common for various things, I planted some sets in a hill, where the dung was full of those insects, and another that was free from any: the crop was no ways injured by them. The potatoes came to maturity, and made an abundant return: they were taken up in the middle of October, and were perfectly ripe

In

In the spring of 1809, the province was visited by the Hessian Fly; the grain crops were much injured by them for five years in succession. This, with the frost in the spring, was the cause of discontinuing the culture of autumn wheat. When my wheat was first attacked, I suspected it had met with some insect in the granary, where it had lain a year. I had some put in strong brine, where it remained twenty hours; lime was sifted over it: when taken out of the steep, it was shovelled until it was incrustrated; after which it was sowed. It came up very well, and in a day or two many of the plants withered and died. I took up some disordered plants, and found a small white maggot that eat the bottom of the plants near the root. I observed a great number of very small flies on the ground; some of them appeared to eat the leaves of the wheat, some went into the plants, remained a few minutes, and came out. It therefore appeared that they went into the plants to deposit their eggs, some of which came to maturity in a few days, or the fly transforms into a white maggot; because there is a part of the plants which grow and form ears. When the barley or wheat is within a fortnight of being fit to cut, those eggs that were deposited early at the joints, having come to maturity, the insects are nourished by the plants, which they gnaw, making a hole in the stem, and fly away. This second operation is not so visible

sible in calm weather, but the least wind will cause three-fourths of the plants to fall to the ground. On opening and examining the stems thus fallen at the joints, the eggs or aureliæ may be seen set round the joints, which are of the colour of lint seed, and about the same size: the Canadians call them *la Puce,* on account of their colour. Some are often found that have not arrived at maturity. When pressed between the nails, they crack like a flea. The grain obtained from crops in this situation is shrivelled, and very light. Whole parishes have had their grain crops swept away by those insects.

VERMIN.

THE field mice are numerous, more from the inattention of the ploughmen than perhaps any other cause. They are often too idle to step out of the furrow to destroy them. They injure the standing crops, and are very destructive to apple trees, by gnawing the bark when the snow is deep on the ground. They have disappointed the hope of

of introducing hedges made with hawthorn, the bark of which is a chief subsistence for them in the winter. Were the farmers to take notice at the end of March, and at the beginning of April, when the snow is going off the ground, they assemble in numbers under the small bridges, that carry the water into the main ditches, and in the cart ruts, perhaps for the purpose of copulation; at that time, two persons with a piece of wood made broad at one end, to give width to strike them, might destroy many, by raising up the pieces of timber where they are; had they a small terrier dog, more execution might be done. The rats and mice do great injury in the barns: were the cats less nursed, and less fed, it is very possible their number would not be so great.

DISTEMPERS OF CORN.

TO enter into the various distempers that grain is subject to, would exceed the limits that I have prescribed to myself, and could entertain but a few curious observers. I shall only speak of those that immediately concern the farmer.

Of

Of Burnt Grain. Mr. Mills observes, "that almost all writers upon husbandry, have confounded this distemper of corn, with that which is properly called *smut*; though it is, in fact, very different, and much more dangerous. Smut, properly so called, occasions a total loss of the infected ears; but as the black powder which it produces is very fine, and the grains of that powder do not adhere together, wind and rain carry them away, so that the husbandman houses little more than the straw, which does not infect the sound grains, and scarcely damages their flour. The Burnt or Carious Grains are, on the contrary, often housed with the sound grain, which they infect with a contagious distemper, at the same time that they render its flour brown, and give it a bad smell. The characters of this distemper, which the Romans called *ustilago*, and the French name *charbon*. 1. The plants which are to produce burnt ears are strong and vigorous. 2. The ears attacked with this distemper are not, at first, distinguished from those which are sound, but after their blossoming is past, they become of a deep bluish green, and then turn whitish, at which time they are easily known. 3. The skin, or bran, which forms the immediate covering of the grain itself is not destroyed here as it is by the distemper properly called *smut*. This covering still retains consistency enough to preserve the grains in nearly its natural shape, and to make it look whitish. 4.

The burnt grains are shorter, rounder, and lighter than the sound grains, and likewise sometimes larger, and sometimes smaller. The furrow which run lengthwise of the grains of wheat is sometimes totally effaced; the pistils at the end of the grains are dried and withered. The grains retain a small degree of firmness. If opened, as may be easily done with one's nail, they are found to be full of a substance which feels unctuous, is of a brown colour, bordering upon black, and of a nauseous smell. Some of the burnt grains are crushed by the flail in threshing: their black powder is spread upon the other grains which are sound: this greasy powder sticks chiefly to the hairs at the end of the grain opposite to the germ, and there forms a black spot: those grains are called spotted. This spot at the end remains, and these will be sufficient to discolour the flour, by rendering it brown, and give it a disagreeable taste."—Wheat that is infected with this distemper, must be washed in several fresh waters, before it is sent to the mill, to be ground for bread. It never should be used for seed to sow, unless necessity should be the cause. In that case, it must be washed very clean. Were a piece of tin punched full of small holes put at the hole where the water is let out, at the bottom of the tub on the inside, it would save much trouble in changing the water. When the wheat is put into the tub, the grains that

that swim at the top must be skimmed off. The wheat must be stirred with a paddle, in order to be washed clean; after which, it may be infused in a lye made with sea salt, strong enough to bear an egg; it may remain eighteen or twenty hours in the steep. When taken out, spread it on a barn floor, and sift lime over it; after which, it is shovelled together. When the grain is incrustated, or covered with the lime, it may be sowed.

A LYE may be made as for washing of linen, in a tub. Put four pounds of water to every pound of hard wood ashes. One hundred pounds of ashes, and fifty gallons of water, will yield thirty-five gallons of lye; to which should be added fifteen pounds of quick lime. This will be sufficient to prepare twenty bushels of wheat. When the lye is to be used, it should be heated to such a degree, that a man can but just bear to hold his hand in it: the corn should then be plunged into this liquor in baskets, and be well stirred with a paddle. The baskets should afterwards be lifted up, and suspended by poles over the tub, that the lye may drain off into it: and lastly, the seed thus prepared,

should be spread upon a floor, until dry enough for sowing. If it is prepared before hand, it must be stirred, and turned from time to time with a shovel, to prevent its heating. With this precaution, the seed thus prepared, may be kept a month.

The most informed Canadian farmers are of opinion, that the distemper called *Burnt Grain*, and by them *Blé Noir*, is contracted in wet years. The most intelligent Europeans are of opinion, that it proceeds from grains that are mouldy. There is reason to believe, that the mould may be a cause of the disease. When the season of 1815 is refered to, it is found to have been extremely wet, so much, so that there was a general failure in the vegetable world. The seed wheat for 1816, was taken from that year's growth, and was sowed without having any previous preparation; although the crop was very good in the district of Montreal, there was a great deal of it infected with this distemper; had the season been wet, it is possible the damage would have been greater.—This may serve to shew the necessity of collecting good and perfect seed after a very wet season. There were many that met with very serious losses, for not taking that precaution.

OF

OF MILDEW;

Called by the Canadians Rouille, Rust.

THIS disorder is most where the lands are low and wet; it sometimes takes place where the land is too rich. The growth becomes too luxuriant; the hazy weather, and heavy dews in the month of July, followed by very hot sun, have the effect of mildewing the crops of wheat. When wheat is sowed too thick, it prevents the free circulation of the air, and retains too great a moisture, which causes the rust. This misfortune takes place more frequent with Europeans, than Canadians, who always sow thin. The rust has the effect of ruining the finest fields of wheat, stopping the sap vessels; by which means the grain becomes shrivelled, and has the appearance of that which has been frozen, yielding little else than bran. These grains, although diminished, will vegetate, and produce good wheat.—Barley is subject to this disorder, in the same degree as wheat. The large pease are often much injured at the above period.

OF THE SPUR;

Called by the French Ergot; a distemper which Rye is subject to.

ALTHOUGH rye is but little cultivated by the Canadians, there are many parts in the province where the soil is more fit for it than any other grain; therefore time may point out the propriety of introducing its culture; and as I have observed rye which I have raised, to have been infected with the spur, I think it necessary to shew the utility of picking out the ears, that may at any time be infected with that disorder. 1. The grains which have the spur are thicker and longer than the sound ..es, and generally project beyond their husks. 2. Their outsides are brown or black, and their surface rough. 3. When a spurred grain is broken, one perceives in the middle or centre of it a pretty white flower, covered with another flower, which is redish or brown. 4. Though this vitiated flower has some consistency, it may, nevertheless, be crumbled between ones fingers. 5. These grains, when put into water, swim at first, and sink afterwards to the bottom. If chewed, they leave a bitter taste on the tongue.

"The

"The effects of this distempered, or *cornuted rye*," say the Philosophical Transactions, "are to dry up the milk in women, to cause sometimes malignant fevers, accompanied with drowsiness and raving; to breed the gangrene in the arms, but mostly in the legs, which ordinarily are corrupted first. This corruption is preceded by a certain stupefaction in the legs, upon which follows a little pain, and some swelling without inflamation, and the skin becomes cold and livid. The gangrene begins at the centre of the part, and appears not at the skin till a long while after; so that people are often obliged to open the skin, and find only the gangrene lurking under it. The only remedy for this gangrene is to cut off the part affected: for if it be not cut off, it becomes dry and shrivelled, as if the skin was glued over the bones, and 'tis of a dreadful blackness without rottenness. Whilst the legs are drying up, the gangrene ascends to the shoulders, and one knows not which way it communicates itself.—Poor people are almost the only persons subject to these evils." *Lowthorp's Abridgement*, vol. ii. p. 626.

However, it is not every year, that the spur in rye produces these dreadful accidents.

THE

THE MANAGEMENT OF THE DAIRY.

THE care of the dairy belonging to the farmer's wife, any remarks thereon may be deemed superfluous; but when it is considered that there may be some who might profit by the observations of attentive dairy women, I am induced to offer the following remarks.—The dairy should be on the north side of the house; the more shade the better: the entry ought to be from the kitchen if possible. The immense heat of the summer requires that it should be in part under ground, four or five feet at least, in order to keep it cool. A small window, the frame covered with canvas, will give sufficient light: there should be a few iron bars on the inside of the window, to prevent visits from intruders. There must be four tiers of good broad shelves, about two feet above each other, the first to be set three feet above the ground floor. A building sixteen feet square on the inside, will be sufficient for fourteen or sixteen cow's milk. The dairy must be furnished with a strong table, and plenty of milk dishes, that will contain from one to one and a half gallon each; pewter are preferable,—there is less risk of breaking, and the frost has no effect on them. There are large brown glazed dishes,

dishes, which are next in quality; they last little more than a year or two; the frost chips off the glaze, and then they corrupt the milk in a few hours after it is put into them. The tureens are too small, and badly made; besides, there is a loss of cream and time in skimming such small vessels. A tin skimmer, the size of a small plate, is best to use in lieu of a spoon, which is in general practised. The milk dishes, and every utensil of the dairy, must be well washed and scalded after having been used; unless this precaution is attended to, the milk corrupts when put into half-clean vessels, and only part of the cream rises. It is necessary the mistress should see that the servants milk the cows clean; that they are not milked too fast; because the cows give their milk gradually:—the servants are little interested, therefore take the least trouble they possibly can; by which means the cows do not give half so much milk, and are often dried. Many good cows are spoiled by bad milkers. When the milk is strained, one pint of cold water is put to each gallon of milk, which makes the cream rise quick: this method is pursued from the 20th of May to the 20th of September; from that date to the ensuing May, hot water is applied instead of cold. When the cold weather sets in, it will be found expedient to have a large cupboard put into the kitchen, to receive the milk; the dairy will then be too cold for the cream to rise. The

cream that is taken off the milk in winter, should be put where it will freeze; there being but little at that season, it is found to preserve better: when a sufficient quantity is collected to churn, it is put into a tin pail or earthen vessel, and set on the stove; it is stirred now and then to prevent it burning. When it has thawed, and has the warmth of new milk, it may be put into the churn, and will turn to butter in ten minutes.—There are a variety of churns, therefore people can choose to their minds: from experience, the perpendicular one has a preference of ten per cent. over the water wheel box churn. It will perform the work in equal time; but with more fatigue. When the butter has come, cold water is put into the churn, and the work is continued a few minutes, in order to wash and harden the butter; after that, it is taken out and washed clean. The salt that is applied, must be ground fine; the quantity will be to the taste; too much makes it disagreeable, and too little will not preserve it: practice must be the guide.

Those who wish to enter into the cheese business, must have occular practice, and a certain service, to be perfect in that branch; the seasons having great effect in corrupting that article.

Expence of a Two-horse Plough.

	£.	s.	d.
Servants' Wages per ann.	24	0	0
Board per do. do.	25	0	0
930 bundles of Hay, at 4l. 0s. 0d. per hund. ...	37	4	0
116 half Minots of Oats, at 3s. 4d. per mt.	19	8	4
This food is given between the 20th of October and the 10th of June.			
Grass between the 11th of June and the 19th of October, at 2s. 6d. per week for each horse	4	0	0
Smith's and Wright's work	7	0	0
Repairs of Saddlery	2	0	0
Interest ought to be charged.			
Two Horses, at 20l. each	40	0	0
An imported Wooden Plough, with wipple trees	6	6	7
Harrows	2	10	0
Saddlery	6	0	0
Shovels, Forks, Curry Combs, Halters, &c. ...	2	0	0
	£175	8	11

Labour performed by the Man and Horses.

Forty-five Arpents once Ploughed

Thirty-five Arpents once Harrowed

Nine Arpents Scarified

Nine Arpents Horse hoed

Beside, carting Manure, rolling Land, and carting off the Crops to the Barn, drawing Wood for Fuel, and various Labour required on the Farm and Marketing.

Outlays when commencing on a Farm of 100 *Arpents.*

The Rent in the Vicinity of Montreal, may be rated at 15s. the Arpent; at a distance of 15 to 20 Miles from thence, 7s. 6d.

	£.	s.	d.
Two Plough Horses, at 20. each	40	0	0
An ordinary extra Horse	10	0	0
Twelve Cows, at 6l. each	72	0	0
Ten Sheep, at 1l. each	10	0	0
Two Sows, at 2l. 10s. each	5	0	0
Twenty-four Fowls, at 2s. each	2	8	0
A light Plough, a Roller, Horse Hoe, a Scarifier, Axes, and various small Implements	20	0	0
Two Dung Carts, two Hay Carts, two pair of Wheels to serve the four bodies, and two Trains for winter	29	0	0
A Two horse Plough	6	6	7
Harness for do.	6	0	0
Harrows	2	10	0
A Cart Harness for extra horse	3	10	0
Saddles and Breech for Plough Horses, when put to cart	5	0	0
Three Halters and Stable Furniture	2	0	0
Furniture for Dairy Dishes, Pails, Churn, &c.	10	0	0
Fifteen Minots of Seed Wheat, at 10s. per mt.	7	10	0
Ditto ditto of Peas, at 10s. per mt.	7	10	0
Ditto ditto of Barley, at 7s. 6d. per mt.	5	12	6
Grass Seed for ten arpents	3	7	6
Potatoes for five arpents, at 3s. per mt.	9	0	0
Seed, Corn, or Horse Beans & seeds of Vegetables	2	10	0
SERVANTS' AND LABOURERS' WAGES.			
Ploughmen	24	0	0
Two ordinary Men, at 15l. each	30	0	0
Carried up	£313	4	7

A Servant

Brought up	£313	4	7
A Servant Woman, at 12l.	12	0	0
A Girl, at 6l.	6	0	0
Four Men, from the 15th of July to the 15th of September, at 3l. per month	24	0	0
Women & Children to plant & gather Root Crops	6	0	0
Provisions	124	0	0
	£485	4	7

The above calculations are made for entering on a Farm on the first of May, when the stock may be expected to feed abroad. Were the entry to take place in November, an allowance must be made for the subsistence of the stock. The cows would be rated at 30 lbs. of hay per day; the sheep at 5 lbs. of hay, with rough fodder; the pigs at 3 pints of grain or pulse, with the wash from the house. The food for the servants is included for one year; but the expence of the furniture for the house and vehicles, the maintenance of the master and his family are not included, that depending on the stile they may choose to conform to.

THE natural endowments granted by Providence to this country, offer many comforts to the industrious economist:—the maple trees present themselves

selves to the assistance of man, yielding sap to make abundance of sugar. The apple for eating and beverage; the elder, the raspberry, and the various kinds of currants, for the like purpose. The pleasure arising from a proper application of those fruits, can only be felt by those who draw these blessings from their industry. They have the heart-felt satisfaction to offer to a friend wine or liquor made of the fruit they get from the forest, or their garden. These considerations have induced me to give the directions for making wine and perkin, with a hope that they may be brought into practice.

TO MAKE ELDER WINE.

TO nine gallons of water, put three pecks of Black Elder Berries; boil them for half an hour; then strain the liquor into a tub: dissolve two pounds of maple sugar to each gallon of liquor: when it is cold, put half a cup-full of yeast on a toast made of bread; if yeast cannot be procured, put into the liquor a cup full of milk. When it is working, skim off the froth as it rises; after it has done working, put it into a cask, where it will rise to the bung-hole. That it may work over when it is done hissing,

hissing, put one quart of spirits, four ounces of ginger, and four of allspice; then it may be bunged up.—This wine is bottled off in March; it is generally warmed to drink in the winter, and is very fine to drink cold in the summer.

To make Raspberry Wine.

One gallon of Raspberry Juice to one gallon of rum or gin. It is sweetened to the taste of those who make it. Should it not fine, put a little milk to it, and it will fine down.

Currant Wine, white or red.—To make nine gallons.

Squeeze three pecks of Currants and one gallon of Raspberries; wash them, and squeeze the fruit; put the liquor into a barrel that contains nine gallons: fill it near the bung-hole with cold water; disolve two pounds of maple sugar to each gallon of liquor. When it has done working, put two quarts of brandy or spirits; it will be better for the brandy. Put a quarter of a pound of sweet, and a quarter of a pound of bitter almonds. Let them be blanched* and bruised: then put them into the cask,

* Blanched means that the skin must be taken off; to do which, they are put to steep twelve hours in cold water: then they have scalding water put on them, they remain two hours in it, when the skin peels off easy.

cask, and bung it up.—It will be fit to drink in January, when it may be bottled off for use.

Wild Grape Wine.

The grapes when perfectly ripe, are gathered and squeezed; two gallons of juice to one of reduced spirits. Refined sugar, allspice and ginger, are boiled, and the wine is sweetened to the palate. Let it be bottled off, and in three months it will be fit to drink.

To make Perkin.

Cut one bushel and a half of apples into a tub; put nine gallons of water to them; let them stand four or five days; strain the liquor off, and boil it a quarter of an hour. When cold, it is barrelled; add a quarter of a pound of ginger, and it will keep very well.

All Fruits that are most exposed to the sun and the free circulation of the air, are the best to make wine.

MY first intention to treat on Agriculture was, with a view to excite the Canadian farmers to change their system, so as to render their products applicable to the necessities of the province, and beneficial to navigation. Viewing the impolicy of allowing vast sums of money to go out of the country, to purchase cattle, sheep, hogs, butter and cheese—the rearing and manufacturing of which, might be performed by the farmers of the province: the ill effect it has to draw out the money necessary to carry on an active culture of the soil, proceeding from a want of information on rural economy. But on reflection, it occurred to me, that the immense tracts of forest yet to settle, will be peopled from England, or the northern part of Europe; from whence alone the interest of the British Government can meet support. These circumstances considered, it appeared, that some hints on the subject might be of use to those who may settle on new land.

The Canadas offer greater advantage to settlers, than most parts of America. In the United States,

every situation, worthy of occupation, has long since been taken up :* the new comers, as they are called, must go back where their produce, when raised, becomes of little benefit to them, having no market for many hundreds of miles. In Lower Canada, the most distant farms are not one hundred miles from the principal cities, and many villages intervene, where sales can be made, whereby the Americans of Vermont, the back parts of New York State and Pensylvannia, and along the Lakes, look to the Canadas for a market. It is certainly better to be in a country governed by English laws, and honest old English custom, than where it is considered a crime to be an Englishman, and where deception is the order of the day.

The first consideration is the choice of soil; no place, however pleasant to view, should engage a man to settle where the land is infertile: nor an unhealthy situation, where the soil is good. The quality of the soil may be judged by the growth of trees; where they are large, it is a sign of good land; where there is plenty of beach, maple, and butter nut, that land is good—it is either yellow or hazel loom. Where elm, white ash, butter nut,

* The emigration of Americans to the Canadas, demonstrates the advantage of these colonies over that of the United States for settlers: their removal is not from principle, but to improve their fortune, which makes them leave the land of liberty and equality, which Mr. Winterbothom has painted in far too high colours.

white and red oak grow, the soil is generally strong. Where pine, hemlock, birch and spruce grow, the soil is sandy, the worst that there is. Cedar swamps, though often composed of good soil, are not desirable to take, unless easy to drain. Ash and soft maple swamps are mostly on a clay or marl; if easy to drain, they are good for meadows. White birch and poplar denote very poor light loom, or white clay. The spot being chosen, which ought to be near a constant supply of good water, trees are cut to build a log house; if a saw mill is not near, to get boards to cover it, the bark of ash becomes a substitute for them. It is best not ot lay out money at first to build a fine house, because when the land is cleared, it often happens, more advantageous spots are discovered to build on. A good large cellar must be made under the house, for the vegetables. Log stables and a barn ought to be erected, and care taken to make them shade the cattle from the north and north-west winds;—they are the coldest in this country.

Clearing. This is done by the acre: in the Lower Provinces it is about three pounds, in the Upper, six. They cut down the trees, chop off the branches, and lay them in heaps: the trunks of the trees are cut in pieces about ten feet long. The fire is put in a dry time; after it has passed, the logs are drawn to a place, and burnt; the ashes are

gathered, and put under cover, to sell to the makers of pot ash. The land is then sowed; if with wheat or rye, one minot of seed is sufficient for an acre, because the stumps occupy a great part of the land, for some years: the seed is harrowed in with a triangular harrow. When land is sowed with grain, it is advisable to lay it down with grass seed; half a peck of fox tail, or timothy, mixed with two pounds of red clover seed: this can be sowed when there is an appearance of rain, which will wash it in. It need not be harrowed. Laying down to grass has the effect to keep down any fresh growth of trees, by mowing the land, and hay is always in demand in new settlements. When land is intended for potatoes, it is prepared as above: the sets are laid on the ground, four sets in each place at the distance of three feet; earth is drawn over them with a hoe; they are made in heaps, about the size of a bushel measure: nothing further is done to them until they are taken up. If Indian corn is planted, four or five grains are laid on the ground; a person follows the planter, and covers the seed with a hoe; a few pumpkin seeds are put in the hills when planting: it is managed afterwards as directed in the former part of this work, with the exception, that it is done by the hand.

As the land is cleared, it is fenced with the wood taken from the clearing, or elsewhere, that is suitable

able for the purpose. A piece should be fenced, for a pig and calf pasture, near to the house. It is better not to be too hasty in buying sheep, they are not easy kept at first; settlers must be cautious of buying stock before they have food for them: advances must be gradual, and success will crown their endeavours.

The object of people at a distance from market, should be to raise and fatten cattle,—to make butter and cheese; therefore pasture is a first consideration. A few acres of lucern might be sowed broad cast, to cut and feed in other enclosures, not where it grows. It may be argued, there is the run of the woods; granted, for grown cattle, but calves, sheep and pigs cannot be trusted abroad. By having such a resource, the stock of young animals can be greatly increased. The cows that feed in the woods give very poor milk: hence arises the bad flavour of the greater part of the American butter and cheese. The leading cow will require a good toned bell, buckled to her neck, because cows are often too idle to return home; by which means they are easier found: salt should be given them every week, to entice them to the house. But with this care, they sometimes absent themselves, and if not looked after, they soon become dry, which is a serious loss. Fat cattle go to market themselves. Pork, and the proceeds of the dairy, are easy to

carry;

carry; therefore new settlers have only their bread stuff to raise, and what grain may be wanted for their stock.

A question will arise to an European settler;—what are the necessaries to take hither? In the first place, good bills of exchange, in preference to goods: outfits for a family, soft Yorkshire clothes, striped cotton shirts, boots and half boots, worsted stockings, beds and bedding, kitchen utensils, a twenty gallon copper, a skillet, pewter plates and dishes: *Tools:*—a hand and a six foot cross-cut saw, a hammer, an adze, a howel or hollow adze, different sized augurs, socket chissels, spike and small gimblets, an iron crow about 30 pounds, made with two short prongs at one end, and a cross bar at the other, to get up stumps and stones. All other articles are bought in the colony to suit the wants of new settlers, which are felling axes, log and plough chains, American hand hoes, Dutch plough and ox sleigh, stoves, iron kettles for sugaring, pails, &c. The smith's work is charged one shilling per pound; Birmingham and Staffordshire wares, glass, &c. are to be had here. *Seeds that may be brought for the use of the farm:* lucern, saint foin, rutabaga, blue and white turnip, carrot, drum-head cabbage, early York, mangle wurtzel, radish and lettuce; gooseberry, and the different currant seeds. Such a collection will be of service to those that have them.

The

The price of land varies according to situation, from five shillings to forty; but the government has offered a grant of one hundred acres, for actual settlement, as such, a purchase can be avoided; there are many valuable situations on the seigniories, where a small house, and some clearing have been made, that might be bought for fifty to a hundred pounds, subject to an annual rent of a half-penny per arpent, and two minots of wheat, for each hundred arpents. There are seigniorial rights, similar to those of lordships, in some parts of England: 1st. eight per cent. on the sale of land and houses; 2nd. tenants must go the seignior's mill, and pay the fourteenth for mill fee; 3d. cartage of building materials for the seignior's mansion, and for the church. Those latter services do not happen often. These obligations are fixed and certain.—Those seigniories having been granted prior to the conquest of the country, are all in the most favoured situations, many of which are not filled, and offer residenee, at a distance of from thirty to fifty miles from Montreal, which is the first city in Lower Canada; and, from its central situation, will be the emporium of British America. The farmers of Lower Canada pay no impost, either personal or territorial, at present.

MAPLE SUGAR.

WHERE maple trees are on a farm a selection might be made of from four to eight hundred, to make sugar; what may not be wanted for the family, will find a ready sale. The spot chosen, the centre is pitched on for the boiling place. This operation begins about the 20th of March, as the snow begins to melt. When there is no snow or frost in the ground, the sap will not make sugar. A large white wood tree, commonly called brass wood, is felled for a back log, to make the fire against; two small trees are cut to get forked pieces to put a bar across; branches are cut for hooks to hang the boilers upon; a large white wood trough is made for a reservoir, to put close to the boilers; small troughs are made of white ash or butter nut, to put at the foot of the trees. *Tapping*:—the best method is to bore a hole slant ways, with an augur; and when done sugaring, to cork it up with a piece of wood, to prevent the tree exhausting itself; but the generality of people make an incision slantways with an axe; after which, a hole is struck with a gouge at the lower part of the wound: a thin piece of cedar is put into the hole made with the two-inch gouge, to conduct the sap to the small trough, which is made to contain a pail full. Each

evening

evening the sap is collected and put into the reservoir. Some people have a puncheon put on a light sleigh to carry the sap; others take it to there servoir in pails. The number of boilers will depend on the quantity of liquor; iron ones are in general use, perhaps from cheapness. The following morning, twelve pails full of sap is put on the fire, in a kettle, which is kept on the boil. Eight pails are put on in another kettle over a gradual fire. As the first evaporates, it is filled from the second; when it is laved out, the first one is continued boiling: in about six hours it will be reduced; that is known by its rising to the top of the kettle; a small piece of fat pork is thrown in. It will soon rise again when another piece is added. When it rises the third time, that is repeated, and the syrup is taken off the fire, and strained into a pail. This stands until the next day, when it is put on a slow fire in a small pot, and will take three quarters of an hour to fine down. It is then put into moulds the size of bricks, or earthen vessels, to cool. There are people who use milk instead of pork, to prevent it boiling over.

The quality, quantity, and colour of sugar, depends on the situation; up land trees give the richest sap and the best colour, yielding one pound of sugar to each pail of sap; low lands give a dark colour, and only yield twelve pounds to twenty pails

full of sap. Frosty nights, succeeded by clear sunshining days, are the best weather for making sugar.

IT will sometimes happen that people lose themselves in the *Woods*. This is found by returning several times to the same spot. Cloudy weather operates to deceive, but the sun will always direct by observing its rising and setting from the dwelling place, which Europeans ought strictly to attend to on their first beginning in the forest. Swamps are the most difficult, from the thickness of the green timber: in such a case, let the person avoid flurrying himself, because fear is the first thing that agitates the mind, and leads to frenzy. If fatigued, sit down, and examine the trees; the north side of large trees is covered with moss; the branches are longest on the south and south-east sides: these will form a compass. Should you fall on a river or brook, its course will lead to some settlement. The brooks, many of which are little rivers in the spring at the melting of the snow, become dry in summer; but their course may be discovered by observing the way that the wild growth

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of herbs, grass, and roots of trees lay: their heads will point to the out-let of such water; the stones will be cleaner on the side next the source, than that next the out-let. These observations are easier understood than heights, falls, &c. &c. Sometimes cattle are met with miles from home; by starting them, they run from a stranger, and generally go home: that will lead the lost person to a settlement. There being little to fear from wild beasts, food is a primary object. As berries are not always to be had any more than nuts, herbs become a consideration. The colts foot, called by the Americans snake root, has a leaf formed like the foot of a colt; it is of a deep green colour; the roots run horizontally, and are of the thickness of a tobacco pipe; they taste like lemon peel. By gathering of that root, to eat, a person might exist for some time. This plant produces many lateral roots, it is in greater abundance than most other herbs; it delights in moist situations, and is easy to discover. It is taken as a tea, to remove violent colds, when a little sweetened.

APPENDIX.

THE Wheat Crop of 1816 being much infected with burnt Grains, I tried an experiment in 1817 with some which was disordered, to ascertain the effect of the following preparation.

An hundred grains were washed in three different waters; after which they were put into a steep, made of sea salt, and remained thirty hours; when taken out it was mixed with unslacked lime, and laid twelve hours in that state before it was sowed in drill; there were no unsound grains when it was cut, the produce was 1 lb. 13 oz.

An hundred grains of perfect sound wheat were sowed two feet apart in a parallel line; at the same distance from it the same quantity of disordered wheat unprepared. The unprepared had a great many burnt ears; some of the ears of the sound wheat were infected that stood next to the unprepared row; the seed of the sound wheat weighed two

two penny wts. and twelve grs.—the produce was three pounds. The disordered wheat produced two pounds and three ounces.

The result of this experiment proves that there is a remedy for wheat in the above state to render it fit to sow, as also the consequence of using it for seed without a previous preparation: however, the sound wheat yielded nearly one third more weight than the other, and points out the advantage of good grain for seed.

It will appear singular that the unprepared crop produced more weight than the prepared; but it may be accounted for, that the burnt grains retain a greater degree of moisture, therefore they give more weight. It proves likewise, that an adjacent crop will be injured by wheat in the above state.

A recent Quebec paper states that Autumn Wheat has succeeded in that neighbourhood; perhaps it may, the snow laying so long on the ground. The cause of its failure in the open parts of the district of Montreal is, from the want of snow, to cover it from the frost: of late years, it has been in part uncovered during the winter; the frost in the spring is also very fatal to it. There being but very little Autumn Wheat in the lower

lower province, that defect may be relieved by using Spring Wheat in its place, which will answer the same purpose: the sowing should take place in the latter part of August, or early in September, to give the plants time to get strength. The potatoe crops come off the ground too late to sow Wheat on that ground with much prospect of success.

THE great public benefit arising from a knowledge of the state of the crops is too evident to need comment; and in order to imitate the practice of the British Counties, the conductors of the Montreal Herald suggested the idea to me of giving monthly reports of the state of the crops in the district of Montreal. I readily entered into their views, and furnished them from June, 1816, *to October,* 1817: *perhaps they may be not deemed of any use at present, but as they pourtray the period for labour in the field, as well as the various crops that are cultivated in this Province, they may be a source of information to people in Europe, who may be inclined to emigrate hence. For this reason I have had them reprinted; to the above gentlemen, I must acknowledge myself indebted for publishing various*

various papers on Agriculture; and I have reason to believe, that to their patriotism in promulgating such information, great public benefit will eventually be derived to this Province. The present period is very propitious to the advancement of Agriculture, as there are Societies established this year, (1817) headed by persons of the first respectability, to promote a better management of rural economy.

AGRICULTURAL REPORT
FOR THE DISTRICT OF MONTREAL.

JUNE, 1816.

THE continued cold weather and frosts to the middle of this month, arrested the progress of vegetation, and injured the rising crops in a great degree. The Grass on high as well as on low lands is very thin and short. The Wheat has a better appearance than might be expected from the sudden change in the latter part of the month to excessive heat and continued drought. The barley is promising, but very short: as is also the Wheat; neither have branched out from the foot as usual. The Oats are short and thin, but keep a good colour. The Pease are well colored, but are very short. The attempts heretofore to introduce Horse Beans, have often been frustrated, from too late sowing, and too light soils; those sown this spring on strong soil, prepared last fall, promise success, and have the best appearance of any crop on the ground. The greater part of Indian Corn, or Maize, that was sown early, rotted in the ground; those lately sown are hardly fit for the first hoeing. The wire worm has been destructive; as also a species of caterpillar not noticed before to have attacked this kind of corn.

corn. The hops have suffered much by the frosts in this month. The potatoes have not generally made their appearance above the surface of the earth.

JULY, 1816.

Although very little rain has fallen this month, vegetation, when compared with the last month's unfavourable prospect, has much surpassed our most sanguine expectations. This alteration has been occasioned by the very heavy dews experienced since our last Report. The Wheat, although thin, with a few exceptions, bears an appearance equal to the most favorable years. Barley is fine; the early sown is now changing colour, and will be soon fit to cut. Rye, which is much neglected by the Canadian farmer, and only sown on a few sandy spots, looks well. The early sown Oats are good; of those sown late, great part of the seed has not yet vegetated. *Buckwheat.*—This species of grain being the last that was sown, and that in the latter part of June, little of the seed has yet vegetated, and consequently a crop cannot be expected. The Indian Corn looks well in some parts; however at this advanced season it is doubtful whether much will ripen this year. The pease have a very favorable appearance, and a good crop may be expected. The blossoms of the Horse Beans were injured by the frost on the 6th inst. The Hops also suffered much at the same time. The Hay making, which is begun, scarcely gives an assurance of more than two thirds of a crop, when compared with the growth of last season, which was in general allowed to be very good. From the season being so far advanced, there is but little prospect of hay being cut a second time. *Turnips* — This root, next to potatoes, both as food for man and cattle, has been cultivated to a greater extent in this, than perhaps any former

mer year; they have been in a great degree a prey to the fly, but early rains may probably yet save them. The potatoes planted on light soil have a good appearance, those set on strong loam are not so forward, but in general the prospect of a good crop presents itself.

When a review is taken of the present state of Crops in general, and the probability that a deficiency will arise in the article of Fodder during the ensuing winter, it may not be improper to point out to the industrious farmer, substitutes for the usual food given to horses, horned cattle, and sheep during that season; and which might be collected from the wild growth on almost every farm; viz. Mugwort, called by the Canadian peasantry, Herb St. Jean, Thistles, Wild Tares, and Hop Clover, to be given to horses. For horned cattle and sheep, the Cotonier, or Milk Weed, Panet or Wild Parsnips, Wild Endive, or Chiccorée, the young growth of Raspberries, the Fern and the Wood or Bouquet Jaune; the whole of the above mentioned would prove a valuable addition to the Winter stock of Hay, Straw, &c.

AUGUST, 1816.

It is with pleasure we are able to say, that this month has been the most propitious of any preceding one since the opening of the season, for Agricultural pursuits. The rains which fell were so ordered by the Divine Ruler of the Universe, as to be sufficient to give a due nourishment to the Fruits of the Earth, and bring them to maturity, without at any time impeding the securing of those that were ready to harvest.

The Clover and Fox-tail, or Timothy Hay-making, which began

began the latter part of last month and concluded in the earl part of this, was housed in good order. The Franc Foin, Dutch gold top and foul meadow Grass, on low lands, are a little more than half a crop, but the coarse low Island Hay, is more abundant than usual.—The Barley was cut and housed in the middle of the month, the ear is long and the grain very plump and heavy.—The Wheat harvest began about the 21st in the southern and eastern parts of the district; a great portion will be housed this month; the ear appears more like autumn than spring Wheat. The quality is excellent, and far beyond expectation, those in the northern and western parts of the district will not be ready to cut until the end of the month.—The Rye is a good crop and has been housed. Some Oats have been cut and housed, but the greater part were out, and very green at our latest dates. The rain has brought forward the Buck-wheat, which is in full bloom; the late frosts checked it, so that the crop will be very light.—The Indian Corn has improved in height, but very little in ear or cob. The Early Pease on high light soils, have been housed; those on stoney low soil were very green at the close of the month, but well podded. The large Pease have not half their bloom set, they are much exposed to mildew. The Horse Beans will be ready to cut by the end of the month, and will make a good return. The Hops will be a light crop; the picking of the Bells will commence about the middle of the next month. The Turnips on old land have been destroyed by the fly, those on new have suffered very much; they will not yield above half a crop. The Potatoes in every situation have improved in appearance; the small trials made to ascertain the fruitfulness of the plant is not so satisfactory as could be wished, but they have yet much time to improve. Summer Fallowing was attempted before the rain fell, and has been continued during the month. The fear of a want of Fodder has in some measure disappeared by the happy effect of the rain, creating fresh growth in these plants, which had not arrived at maturity; however, it may be held in view,

view, that they are not yet secured: therefore we must still recommend peculiar care to collect every kind of forage that can be got for winter use.

SEPTEMBER, 1816.

SINCE the first week, there has been a continued drought to the end of the month, the weather has generally been very hazy, attended with cold winds; on the 11th a severe frost was experienced. The 19th and 20th were extremely warm; the 26th, 27th and 28th, the frost was so severe, as to complete the destruction of the Potatoe haulm, which escaped that of the 11th. The effect of such unseasonable weather, has been particularly felt by all the standing crops, which were in a backward state, requiring warmth and rain, to bring them to maturity.

The Wheat in the north and west parts of the District, which remained at the date of our last report, has been housed and is very fine.—There still remains out through the District a quantity of Oats, a great portion of which cannot ripen and must be cut for fodder. The early Pease have been got in; the quantity is great, but the sample will not be generally good, there being nearly one third that were not perfectly ripe. The large white and green Pease, have not come to perfection; the frost, and continued chill in the air have prevented them ripening; many have cut them for fodder, those yet standing await the same result. The Indian Corn was destroyed by the frost of the 11th inst. it is doubtful whether seed can be obtained for another year. The Horse Beans have been housed in good order; they are very productive, and deserve attention by every cultivator that has soil fit for them. The picking of Hops was concluded at

at the close of the month; the planters had a dry time for that labour; the quantity and quality are both deficient, when compared with more favourable years. The Potatoes have had to contend with a dry season; superior tillage and manure have not insured success with this crop: the want of rain, joined to the early frosts, has caused a great deficiency in most situations of this valuable vegetable root; they cannot be rated at more than half a crop. The Meadows have made little progress since they were mowed; the country has seldom witnessed so great a want of green food for feeding of stock as has been experienced this summer. Lucern, has only been cut three times this year; in most others, it has been cut five times. Although a native of Media, it succeeds very well in this climate, from its quick growth and great produce. This grass cannot be too much recommended to the new settlers, for feeding their young stock and particularly their pigs. People in those situations are always in want of food for their young animals.

The progress of the plough has been arrested for the greater part of this month on strong soils; rain is much wanted to facilitate the advancement of that labour.

OCTOBER, 1816.

The little interest this month presents in rural pursuits, renders a Report almost unnecessary, were it not proper to exhibit the residue of the revolving year, wherein the farmer has had hope and fear in continual view, and for the present closing every expectation of farther reward for his toils during the season.

The Oats and Pease that remained out at the date of our last Re-

Report, have been generally got in; they can only serve for fodder. The weather was very favourable to the middle of the month to get up the Potatoe crop, which has generally been found light. Various trials have been made on the culture of Beets, Carrots and Parsnips in the open field, under the Horse Hoeing husbandry, for feeding and fattening cattle and hogs, the produce has been abundant; they have the peculiar advantage that no insects annoy them, which makes them sure crops, when the soil is fit for their culture. Few farmers enter into the merits of root crops, except Potatoes and Turnips. There is no crop so uncertain as the latter.——The culture of Cabbage in the open field under the plough succeeds extremely well. It is rare to see any in that situation. While the farmers neglect the many facilities to increase food, which can be obtained from the fertility of the soil, in order to raise and fatten stock, this country will remain open to competition, and the valuable branch of breeding and fattening stock will be performed for us by our neighbours; thus depriving the province of considerable sums annually, which might be obviated by attention and appropriate regulations.

The greater part of the land for sowing of Wheat, Barley and Pease in the ensuing spring has been ploughed. From the appearance of the weather, that labour may be continued to the middle of the next month.

NOVEMBER, 1816.

The ploughing ceased on the 18th, when the frost set in.

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APRIL, 1817.

The Season for rural pursuits opened on the 21st. Some partial operations took place on the preceding week which were premature. The sowing of Wheat, Barley and Pease, has been general in the South-East angle of this District, as also the drilling of Horse Beans. In the North-West Angle, the sowing of the Wheat began at the close of the month. The soil has seldom been in a better state to receive the seed; the strongest was rendered as fine as sand by the operations of frost during the winter. Although vegetation has made little progress to the view of an indifferent observer, yet those who look minutely to the budding of Trees, find them in a state to give confidence to the rising year. The plough has been actively employed on lay land, with the exception of two days occasioned by the fall of rain and snow, which stopped every operation. The meadows, although uncovered a great part of the winter, have not suffered so much as might be expected, and at the close of the month had begun to assume their wanton colour. The Hops have suffered by the frost in the winter on light soils. The making of Sugar is an appendage to husbandry in this part of the world. It may not be improper to state, that it has been very successful this spring from the frequent frosty nights succeeded by clear weather and bright sun.

At the close of the month, the wild flowers had begun to bloom in the woods.

MAY,

MAY, 1817.

The fine warm weather at the beginning of the month, gave a cheerful hope for the rising crops. The seed of every description was got into the ground without impediment. The alternate changes of heat and cold from the 9th to the 31st, with almost continued drought, kept vegetation in a languid state through the latter part of the month. The Wheat on summer fallows looks very healthy, but that on land less prepared has suffered much by drought and vermine. There have been several instances where it was necessary to sow the land a second time, the first being seed that had been heated, it did not vegetate. The early sowed Barley suffered by the frost; the late is rising and has a good colour. The Pease have a favourable appearance. The drilled and broad-cast Horse Beans look healthy, they may be considered a new production, and offer a great advantage to the country. As ingenious individuals are promoting their growth, it is necessary to observe that the Cabbage Caterpillar is preying on them this spring; they may be discovered by removing the earth from the Beans that are attacked. There have been more Potatoes planted this year than in most former ones. Beets, Carrots, and Mangle Wartzel under the drill husbandry are only beginning to rise. The Grass in the meadows is very short and thin. The Clovers of each denomination have suffered more by the frost than any other grass. Lucern was one foot high at the close of the month and might be cut. The pastures have seldom exhibited such deficiency as at the present. The great inconvenience inseparable from the practice now in use, might point out to the farmers the propriety of changing their method, and sow grass seed in order to provide for their stock. The Hop Vines have a good appearance for the season.

PLASTER OF PARIS.—This valuable manure is at length draw-

drawing the attention of the farmers of this district. Its virtue and cheapness offer greater advantages than any other for a top dressing.

By report, it has been said that the vast number of pigeons this year had destroyed much of the seeds; but it appears that what they ate was taken off the surface, by examining what was in their craws when they were killed; there was not the least appearance of the grain having germinated before they had taken it up.

JUNE, 1817.

The favorable change of the weather at the beginning of this month, with frequent rain through the whole of it, has removed the fear occasioned by the drought of the latter one; the progress of vegetation has been extraordinary and promises the most happy results.

The Wheat following green crop is very luxuriant, that on Autumn fallows has tillered much, and has a fine appearance; the early sowed Barley is in ear, the late is very strong and healthy. The Oats look well. The Pease bear a better appearance than in most former years. The Horse Beans are in bloom. The Potatoes are fit for the first dressing. Some inconvenience has been experienced in this crop, by planting seed which did not vegetate, but it is not too late to plant again. Some Potatoes were planted last year on the 16th July, which came to maturity and produced a very good return. The Caterpillar, called the Cabbage Grub, is preying on the Potatoe plants by cutting them

 off

off about one inch above the ground, after which they return into the earth: they may be discovered by removing the mould from about the stem, where they have cut off the head. The Hops are strong and healthy. The Beets and Mangle Wartzel have suffered much by the Turnip Fly. The Carrots have a fine appearance. The Meadows are more backward than any other growth: the Hay crop does not offer that abundance which might be wished: the Pastures are much improved, but are yet inadequate for full feed.

JULY, 1817.

There has been a great similitude in the weather of this month to that of the last, with the exception of the present being much warmer: the effect of frequent rain succeeded by heat, has produced an appearance in the crops that promises the most abundant harvest ever known in the annals of this district.

The Wheat is very strong and changing colour rapidly; it only requires dry weather for two weeks to complete its maturity; some very rank grain was laid by the heavy rain at the close of the month, which may cause it to rust. It is to be regretted the farmers pay so little attention to the choice of seed wheat; some disappointment will be met with in the north from an injudicious choice of seed, although strong injunctions were presented on that head in the spring to avoid sowing spotted wheat. Rye is nearly ripe, it will yield well. Barley is a heavy crop, it will be fit to cut by the 8th of the ensuing month. The Oats are in a forward state, but in some parts thin. The field Pease were fit to eat on the 20th; the crop will be abundant. The failure of Buck

Wheat

Wheat the last two years has deprived the farmer of the means to sow an extent of ground, but small patches are seen which look well—they will soon be able to enlarge to their usual quantities, which were very great formerly. The advantage of this crop for bread stuff and food for every kind of stock, has long been held in high estimation by the Canadian farmers. The Indian Corn has met with the fate of the above crop, and is in a like situation. The Horse Beans are very forward, and well podded. The Potatoes have a very fine appearance—their culture is well understood on the Island, and perhaps is equal to Europe in point of excellence. The Turnips have been destroyed generally by the fly on new burnt land, those on the old have met the same fate. The Cabbages in field culture have suffered also very much by the fly. Carrots, Beets, and Mangle Wartzel look well. Hay-making began on the 20th; the crop is very light in general, when compared with former years.—Lucern sown this year was fit to cut when it bloomed in the middle of the month—thus two crops can be obtained the year it is sowed. The Hops have the appearance of yielding an abundant crop. Summer Fallows are in an advanced state.

AUGUST, 1817.

Part of this district was visited this month with one of the greatest storms known in the memory of man. The frequent heavy rains from the 3d to the 23d, had given cause to fear for the grain crops; however, it is with infinite pleasure that the premises in our last report will be fulfilled in the present; by stating that from the forward state of the grain crops, they suffered very little; and the bad weather only retarded the cutting of them.

The

The Wheat Harvest began in the midland parts on the 20th; grain is very plump, and much was housed at the close of the month in good order. The Barley was mostly housed at the above period, but is not so weighty as that of the preceding year. The Rye has been got in. The Oats have improved by the rains, and will in appearance double the former expectations. The Pease have suffered more than any other crop by the frequent rain. The Horse Beans are changing colour; they suffered by the storm. The Indian Corn does not offer much, the wet and the storm have injured it. The Potatoes in high situations are a heavy crop; in low, very poor. Root crops have suffered generally by the rain. The Cabbages in field-culture are not promising. The Hops suffered more by the storm than any other crop by the poles being broken; the Bells are nearly fit to pick from those unhurt. The Hay-making was mostly finished this month on uplands, very little has been spoiled, but the colour is generally bad. Great part of the low meadow Hay will be lost or spoiled from the land being flooded so frequent.

SEPTEMBER, 1817.

The Weather was very favorable to the 21st, which enabled the farmers through the district to house the Wheat crop in good order. The early sown Oats were well housed, but great part of the late will be very bad from the moisture of the preceding month, which kept them growing; many of them will only be fit for fodder; much was standing at the close of the month. The early sown Pease were well housed: the late have suffered like the Oats; many were out at the close of the month. The Horse Beans have been cut; the crop is very good. The Lucern sowed

this

this spring was cut a second time at the beginning of the month. The frost on the 29th and 30th killed the Potatoe Vines, but as the crop had arrived nearly to maturity, little damage will be occasioned by it. The Hops were nearly picked at the close of the month; some plantations proved more abundant than usual, but the quality is not so good as in dry years.

The Ploughs have been actively employed on lay land; the weather has been very favorable since the 22d for that labour.

OCTOBER, 1817.

This month has been very unfavorable for rural pursuits; the frequent change of the weather causes much trouble and disappointment to the farmer in housing the late crops, but there was scarcely any thing out at the close of the month.

The Oats have been much discoloured, nor are they weighty. The late Pease have suffered in colour, many not having ripened. The Horse Beans were housed in good order; this pulse will be a substitute for Indian Corn, when sowed early; they ripen well, and are very good for Horses, Pigs, Sheep and Poultry.—The low Meadow and low Island Hay, is very light and bad, it being always cut late in the Autumn, it could not be housed well from the continued rain. The Potatoe crop has been generally got in; those on high ground have been very productive, and from the immense quantity that was planted this spring, there are perhaps more than in any former year. Carrots in field culture are a fair crop. Parsnips are scarce from bad seed. Mangle Wartzel has been successful on high land. The Cabbages are

very

indifferent, from the turnip fly having preyed on them when young. The Turnip crop is very light from the fly, they were generally cut off; those sowed in August stood, but it was too late to form any size.

From the changeable weather which prolonged the housing of the crops, it had the effect to prevent the farmers from ploughing, some ground being too wet; that labour is not near so forward as it was at this date last year; however, should the season be like the last, it may be continued to the middle of the next month.

ERRATA.

Page 24, line 4, *for* years *read* hours.
- - 19, *for* various *read* short.
46, - 6, *for* above *read* former.
56, - 3, *for* there *read* their.
70, - 25, *for* hart *read* hart.
88, - 1, *for* £4, 10, 0. *read* £4, 0, 0.
115, - 23, *for* Provinces *read* Province
120, - 9, *for* Brass *read* Bass.
121, - 3, *for* Servoir *read* reservoir.
122, - 2, *for* are *read* is.
127, - 16, *for* be not *read* not be.

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