

has no control, and the only way by which he can defend himself against them is by the adoption of a rotation of crops. But on this topic we cannot at present enlarge.

The next point connected with this subject is the plan of rotation best adapted for this country. Instead of dilating on this point ourselves, we prefer to lay before our readers the experience of a Scottish Farmer in Lower Canada, and to express our thorough belief that were anything like the plan recommended pursued in this country, a complete revolution would be effected in the course of a few years on the whole of our external condition:—

PLAN OF THE ROTATION.

Divide the arable portion of the farm, whatever may be its size, into six parts, as equal as possible, with a direct communication from the barn yard to each field, and from one field to the other, so that the cattle may pass from one to the other when required. This division into six fields, may require on most farms new fencing, and it will be proper beforehand, to see how this can be done with the least possible expense. I shall now suppose the farm prepared to receive the application of this system, and that is the one which I have found the best for even the poorest settler.

1st. Root crops, such as potatoes, carrots, beets, parsnips, &c., [turnips and also flax,] and in cases where the land is not sufficiently open for a crop of this kind, the field must be left in fallow.

2d. Crop of Wheat or Barley.

3d. Crop of Hay.

4th. Pasture.

5th. Pasture.

6th. Crop of Oats or Peas.

In the beginning the application of this system, that field of the series which is in best condition for a Root crop, should be called Field

The best for Wheat or Barley,

That which is actually in Hay,

The Pasture Fields

That which is best for oats or Peas,

A  
B  
C  
D & E  
F

Each field for the first year ought to be appropriated to the crops above mentioned, and after the fashion now in use among the farmers of Lower Canada, except in the case of field A. By this plan, they will at all events still get as much from their five fields as they get at present.

The culture of field A and of crop No 1 come up together for the first year, and ought to be the object of special attention, as this is, in fact, the key to the whole system; for the good culture of this field has for its object, and ought to have for its effect, not only a good crop the first, but also to improve the land for the five other years of this Rotation of Crops.

In the following year the cultivation of the different crops will be according to the following order:—

Crop No. 2 in the field	A
Do " 3	" B
Do " 4	" C
Do " 5	" D
Do " 6	" E
Do " 1	" F

and so on, changing each year until the seventh, when crop No 1 will come back to field A, and the whole will then be in a good state of fertility, and free from weeds. The above system has been proved to be capable of watering old land, and extirpating all weeds.

In order to render the thing more simple and easy of comprehension, I shall suppose myself to be again obliged to take a worn out farm in the autumn of 1849. The first thing that I should do, would be to divide the land into six fields, by proper fences, to prevent the cattle going from one field to the other; and I would then take for field A, that which appeared best for green crops or root crops; I would collect all the manure I could find in or out of the barns, I would take up the flooring of the cow-house, stable and piggery,

and I would take out as much of the soil underneath as I could get, for this soil is the essence of manure, one load of it being as good as four or five loads of common dung. The portion thus removed ought to be replaced by an equal quantity of ordinary soil, or, if it be possible, of bog earth, which might be removed when necessary afterwards.

The dung and other manure thus collected, should be placed on the field A, in September, or the beginning of October, spread with care (as far as it will go,) and covered up in a shallow furrow. Manure aids the decomposition of straw and the weeds of the soil, and frees it from these plants, which thus help to keep the soluble portion of the manure, until its juices become necessary for the crops of the succeeding years. The greater variety there is in the crops of this field, the better it will be, provided the soil is suitable for them. Thus, this field ought, as nearly as possible, to look like a kitchen garden.

CROP 1ST.—ROOT OR GREEN CROP.

Under the actual circumstances of the country, I would particularly call the attention of the farmers, to the cultivation of the Carrot as being one well adapted to our soil and climate.

The land which has been manured in the fall, as above described, ought to be ploughed at least twice in the spring, the one furrow across the other, and both as deep as possible. It is then to be harrowed until it is properly mellow. You then make with the plough two furrows, distant two feet, or two feet three inches from each other, taking care to raise the soil as much as possible between them. You pass the roller over this ploughed portion, and then with the corner of a hoe, make a small furrow or drill along the top of the rows; drop the seed into this furrow, and pass the roller over it again: this last operation will cover the seed sufficiently.

If you can get a seed sower, that will simplify matters considerably. A roller is essential in the culture of root crops which spring from small seeds, but it can be readily got by all farmers. A log of twenty inches diameter, and five feet long, with a pole fixed at each end, will do the business admirably.

Carrot seeds (and you may say the same of the other seeds,) ought to be soaked in rain, or soft water, until they are about to sprout, and then rolled in quick lime until the grains are dry enough not to stick to each other. When there is no lime, wood ashes will do as well. A pound of seed, if it be good (and you ought always to try it before sowing,) will be sufficient for one acre of land. By the above plan, the young plant will come up before the weeds, so that it will be easy to distinguish the rows of carrots before the weeds appear: this renders the cleaning comparatively easy, since it may be done (except the thinning) by means of a cultivator. This cultivator is an instrument which every settler ought to have, and which, like those already mentioned, is extremely simple in its construction. It is made of three bars of wood joined in front, and separated behind according to the width of the furrows which you wish to clean. This instrument, called the Horse-hoe or Drill-harrow, or Cultivator, is drawn by one horse, and has handles to it like a plough, only lighter. A man or a boy may guide it, so as not to touch the rows of Carrots or other crops, but only to raise the soil to a greater or less depth, at pleasure. As soon as the weeds appear, you draw this harrow between the rows, so as to bring the soil as close as possible to the young carrots, but without touching or covering them. This process will keep the plants sufficiently clean until the time for thinning them and leaving them four or five inches apart from one another; soon afterwards you may plough between the rows thus harrowed and raised. These operations do good to the plant, by permitting air and moisture to have access, and by facilitating evaporation. My plan for gathering the carrots in autumn, is to pass the plough along the right side of the plants as close as possible, without injuring them; this frees