

### The Clover Crop.

In an article in a previous issue of this journal, we gave some extracts from Dr Voelcker's lecture on the results of his chemical investigations for 1868, to which we cannot too earnestly refer our readers; the article may look long, and tiresome, but it is of the greatest interest and importance.

In a late article we mentioned a system which is now beginning to be extensively practised in the West, namely, that of allowing the entire clover crop of the first year after wheat (the clover being sown with the wheat) to go down on the ground without feeding or mowing, there to remain during the fall and winter, to be allowed to spring the following season, until in full flower, and then to be ploughed under with the entire results of the previous year's crop, as a preparation for wheat. This at first sight appears to be an extremely wasteful course, but Dr. Voelcker's researches show the importance of it, and also the benefit which must accrue to the land. As to the economy of it, by the loss of the land for one year, (that is the loss of the rent, and the cost of the clover seed,) we not only get the full benefit of the enormous mass of the best possible wheat manure, which exists in the clover roots, but we also get the entire mineral and nitrogenous matter, which would otherwise be removed from the two cuts of hay, or the one cut of hay and the second of clover seed. We get this without labour, which is the bane of Canadian farming, and without cost, except the rent for the year; and it cannot be denied that an equal amount of manure, which you thus put into, and on the soil, by the destruction thereon of the clover crop, could not be applied in so cheap a way by any other means. It may be said, that we also lose the profit which we should have made by feeding the clover; but if we are to believe Dr. Voelcker's theory and observation, the loss to the subsequent wheat crop, by feeding the clover on the ground, will fully overbalance the profit we should make from the animals to be fed on it. Let us suppose a farm of 300 acres cultivated on this system. We reduce it from ordinary cultivation into three portions of 100 acres each. The first year we have a crop of wheat sown down with clover, the second year we have the fields shut up, and the entire clover crop wasted on the soil; the third year, we plough in the results of the second year's growth, and the spring's growth of the clover, and prepare for wheat. One ploughing, and one dressing with the cultivator, and a good heavy rolling, leaves the land in the best possible order for a crop of wheat, which is then sown; the fourth year we have wheat again; so that for two years' rent, one ploughing, one cultivating, and the ordinary cost of sowing and seed, we get a crop of wheat, which, if Canada is ever going to be rid of the midge, ought at all events to ensure us forty bushels per acre. What plan of operations could be cheaper, or show a larger profit?

VECTIS.

### Renovating a Worn-out Farm.

A correspondent at High Falls, Renfrew Co., writes to us asking information on this subject. He describes his farm as being of a loamy clay soil, originally good, but worn out by overcropping and bad farming, and says he is going to take it in hand and farm it himself next season, and would like to know how it is to be improved quickly and cheaply. He asks, would it do to sow buckwheat, plough it under when in bloom, and again sow buckwheat, turning this second crop under in time to sow fall wheat. He says he is a new beginner, and if he is, we would say, he would begin quite wrong if he put winter wheat on such poor land as he describes, so soon, and then on top of nothing but such a mass of half decayed vegetable matter as turned under buckwheat. We fancy that the soil is not so poor as it seems; that, as usual with shiftless farmers, the surface has been but little more than scratched over, and the top stratum only has been deprived of a portion of its plant food. We should begin the work of amelioration by ploughing deeply, say to a depth of at least two inches below the present hardpan, in the fall if possible, if not, early in spring. If lime is to be had cheap and near by, we would then top-dress the surface with lime and harrow it in, at the rate of twenty-five to fifty bushels per acre. Get some of the land into good enough tilth early in spring, to be seeded down to clover, and the rest of it sow with peas, or lay by to be summer fallowed and still more deeply worked. Sow the portion to be seeded down, with at least half a bushel of clover seed per acre, sown about the 30th April, and immediately after, and without covering the seed in any way, sow on the soil a mixture of equal parts of gypsum (plaster of Paris) and unleached ashes, allowing from two to three bushels of the mixture to the acre. If the ashes are not to be had on the farm, buy them from the neighbours, who will but give them away for soft soap. This will be the best portable manure that can be supplied cheaply to start the clover with, no other crop occupying the soil, and with a good catch and fair season, we anticipate that by September the ground will be covered with a heavy growth of clover, which may be allowed to lie and rot down on the soil the following winter. The season after, the land may either be used as a clover pasture, or be ploughed and sown with peas, followed by fall wheat, that again seeded to permanent grass, to remain such for several years, to allow the land to rest and recuperate. If it is desired to put the land in fall wheat so soon as next fall, we should sow rye early this fall, turn it under in spring when about just high enough to be covered in by the plough, sow peas on that, harvest them, and by fall one cross-ploughing would intermix the decayed rye stalks with the soil and prepare it for fall wheat, which could then be top-dressed with finely com-

posted manure, either in the fall or early spring, before frosts come out of the ground, and the land can then be seeded down to permanent grass.

### Winter Barley.

We must, in Canada, have another winter or fall crop. The failure of our fine winter wheat, which may now be considered as settled since the midge has left no portion of Canada unvisited, calls imperatively for some substitute. Our midge-proof wheats are a great boon, and we are and ought to be very grateful for them, but we want something else. Any fall wheat, to be successful, must be sown very early, certainly not later than the first week in September, and it ought to be all sown by the first of the month if rust is to be avoided. For the purpose of, obtaining a crop which may be supplemented to wheat, we shall have to look to winter barley, and we believe that there are kinds of that grain which, if properly tried, would succeed. We have now before us a catalogue of seeds issued by Raynbird, Caldicott, Bawtree, Dowling & Co., limited, of Basingstoke, England, who advertise no less than four kinds of this grain, some of which would, no doubt, succeed with us in Canada. The sorts are as follows:—

No. 1; a variety of Chevalier Barley, two-rowed, suitable for planting in England in November and December.

No. 2; Winter Barley, four rowed.

No. 3; Winter Barley, six rowed, known as Bere in Scotland, and much grown in England as green spring food for ewes and lambs. In the neighbourhood of fall cities and towns it is grown for this purpose, sown with winter vetches and tares, and produces enormous crops of green food, and is there sold by the square yard, and cuts out almost solid. It is there grown on the market gardens when they get too rich with constant manuring to grow certain crops. Its mothers everything else.

No. 4; the Hertfordshire Hero Barley, a six-rowed variety of Winter Barley, with long and very stiff straw, and coarse grain, it is very productive.

In addition to these winter kinds of barley, we have also advertised, besides common rye, "Giant Rye," earlier and of a larger habit of growth than the common sort.

Another winter crop is the winter or Tawny Oat, grain dun-coloured, weight about 42 pounds per bushel; stands without injury through the winter, ripens early, and is largely sown for early spring feed for all animals. They might become a dangerous weed.

Now, some or all of these would surely succeed with us if properly tried; and we heartily commend a trial of some or all of them to our enterprising agriculturists.