

is still but very imperfectly understood.—Some sorts of soils seem to be peculiarly prone to the production of certain plants and weeds; to an extent that they are considered by many to be indigenous thereto.—Much also depends upon the nature of the seasons; for frost or open winters, and wet or dry summers have a great effect in increasing or diminishing several kinds of weeds during the ensuing year. Moreover, the most careful and best managing farmer often has the mortification to discover that along with the manure he finds it necessary to procure from a distance, he introduces a variety of weeds into his future crops, that otherwise would have been perfectly clean. The manures here alluded to are mostly the produce of stables, or the sweepings of the streets; for there are some sorts that are found to be great destroyers of certain weeds which some soils are commonly infested with. Thus, for instance, lime, when laid upon waste common or moor lands, will frequently be found not only to destroy many of the weeds or useless plants, but in a few years their places will be found occupied by a nutritious and excellent herbage.

When the seasons prove favourable, the skilful farmer is commonly able to subdue most sorts of weeds by a succession of ploughings and harrowings; for where there are annuals, and grow only from seed, by exposing as much of the soil as possible, from time to time to the action of the atmosphere, the seeds thus brought near to the surface will be caused to vegetate; when by allowing the young plants to grow for a short time, and then ploughing them under, all the seed that vegetated is thus completely destroyed: and this process being repeated from time to time, the whole of the seed deposited in the soil is brought into contact with the atmospheric air, and in the above manure destroyed. But there are others, particularly among the perennial class of weeds, that all the ploughings which it is possible to give to a piece of ground would not effectually eradicate: so that when the soil, through mismanagement or some other cause, becomes infested with them, they have either to be hand-weeded, or carefully raked or gathered out, when the soil is finely pulverized, or else the land has to be sowed with grass-seed, and allowed to remain unmolested until the roots of those weeds decay and are thus got completely rid of.

Among the numerous weeds infesting arable lands, we will enumerate a few which may be considered among the most pernicious to the interests of the agriculturist; but since the same weeds are not common to every part of the country, persons whose practical knowledge is confined to particular local districts cannot be supposed to be familiar with them all.

Annual darnel-grass, commonly called white darnel, has ever been considered among the greatest pests of corn crops; but the ridiculous notion that it was produced from bad seed-wheat is now generally explored. When used in either bread or beer, it used formerly to be believed that it caused feelings near akin to drunkenness; and, even at the present day, it is considered bad for the eyes, and sometimes believed to produce vertigoes. It is an annual weed whose seeds ripen at the time the corn does among which it grows: so that where plants of it have been permitted to grow up with the crops, some of the seed is usually shed, and lays the foundation of future injury.

Colts-foot, or foal-foot, is a very common weed, principally infesting light gravelly soils, and is very difficult to extirpate. It propagates its species both by its seed and long running roots, every piece of which,

when cut by the plough, or torn asunder by the harrow, will produce a new plant; so that in order to get rid of it completely, the land requires to be well and carefully dressed, for every piece of the roots of this plant has to be gathered, and burned, or otherwise destroyed. The plants while young may be pulled up the hand. The plants of this weed increase so rapidly, and take such complete possession of the soil, that they greatly impoverish any crop of grain among which they grow.

Charlock, or, as it is sometimes called, chadlock or wild rape or wild mustard, is among those worst of plants that are known to infest crops of grain, particularly oats and barley. There are but few farmers, who have not, at one time or other, had the mortification to find whole fields, or otherwise promising crops of corn, quite yellow with an unexpected growth of Charlock, or wild mustard, completely overtopping the young grain. The term unexpected is used because this is one of those peculiar weeds, the seeds of which will remain dormant in the soil for a long term of years, the seed being of so oily a nature, that it does not decay; so that when by-lands are ploughed up, or a deeper furrow exposes new soil, in which the seed has formerly been deposited, to the action of the air, the farmer is annoyed by finding his crops, during the beginning of July, assume more the appearance of rape or mustard than either oats or barley. The plants of this pernicious weed are frequently so numerous, that it would be impossible to weed them out without destroying the crop of grain. Some farmers, therefore, when the charlock is in blossom, (if it can be done before the corn spindles up for earing), skim over the whole field with the sythe, cutting off the principal part of the blossoms of the charlock without seriously injuring the corn; but as many plants will still mature and shed their seed, much cannot be said in favour of this plan."

It is nearly impossible, by fallowing, to destroy this pernicious weed when once it has got possession of the soil. It is only by seeding down the land for meadow, that this weed and the Canadian thistle, can be effectually checked.

#### CULTIVATION OF WHEAT.

To the Editor of *The Mark Lane Express*.  
Sir,

I this autumn tried an experiment on wheat-sowing; our crops of wheat in this district are very apt in our clay soils on the banks of the Forth called *Carrie*, to be thrown out in the spring, by alternate nights of frost and days of sunshine, whereby the roots, if the plants are not entirely destroyed, are so injured, that to support nature the plants puts outside shoots, and there being no firm hold of the ground, becomes what in England is called root-tallen, and lodges long before the grain is ripe, thereby producing grain of an inferior quality as well as quantity. To endeavour to get the better of these faults, I tried what drilling my wheat as beans are drilled in our farms would do. I sowed my wheat by a plough drawn by two horses, five or six inches deep, and covered it with the next furrow at ten or twelve inches breadth. I never harrowed it after sowing, and horses foot never trod on it. The wheat was covered by the deepest part of the furrow. and to my surprise, and that of my neighbours, the wheat thus sown and covered, came up sooner than wheat sown the same day in the common broad-cast way on some adjacent ground of

similar quality, and the fallow treated in exactly the same way, as to ploughing, hilling, &c., through the summer. As it is well known that wheat prefers a stiff soil to a loose one, I attributed the rapidity of the growth to the stiff soil and sowing the wheat more than the loose broad-cast, for it not only came up sooner, but kept the start it got, and now, after heavy rains and frost, looks better, the ground not being run together and battered with the winter rains, as the broad-cast wheat is; and having examined it during severe frost, I found that the roots of the plant had not suffered by it, whilst that sown broad-cast had. The roots of the drilled, wheat actually considerably longer than the broad-cast sown the same day; I have, therefore, little doubt that I shall most probably have a standing crop of wheat in place of a lodged one, or at least not so soon lodged, and that I shall escape the root falling from the spring frost. It is well known that in England, an instrument called the presser is used in light soils to firm the ground, and also that sheep are often pastured or driven over it for that purpose. Another advantage of this plan of sowing is, that all trouble and time of harrowing is saved; and if sudden rain comes on, the sowing is stopped at once, without the risk of being half harrowed; the ground is also much more cloddy in winter, thus affording shelter to the young plants, and an excellent cover for the grass-seeds, if sown in a dry, bleak, frosty morning, without harrowing, by the decomposition, and falling down or mouldridge of the ground as the day advances, and the effects of the sun are felt on it. My experiment extended over two fields comprehending about twenty acres: and I harrowed part of the one field, and I think the part unharrowed looks better than the part harrowed; however, time will show which has succeeded best. I was thrice stopped by rain during the sowing, but as I said before, felt no inconvenience from it.

My drill machine is fixed between the stults of the plough, and one horse is sufficient, the same man ploughing and sowing, and no harrowing being required considerable labour is saved. As to the cron, that cannot be determined till harvest, but I am satisfied with the experiment so far as it has gone.

Yours, &c.,  
W. M.

STERLING, N. B., March 8th, 1842.

The above communication may serve to give very useful suggestions on the cultivation of wheat in Canada. We have very little doubt but the same method might be very profitably adopted with us, and that it would effectually prevent root-falling, or the throwing out the roots by spring frosts, which causes the greatest damage to fall sown wheat in this country. As we have no regular drilling machines, a simple drilling machine that would deposit the seed in the furrow made by the plough as it works, and that could be fixed between the stults of the plough as above described would answer well, perhaps better than a machine of any other construction. An expensive machine, that would sow from ten to eighteen drills at a time, would require that the soil should be well prepared, and free from all obstructions, or it might be very soon damaged or broken. We strongly recommend the above mode of sowing, at least, by way of experiment, on a small scale. Indeed we cannot see any cause why it should not succeed if the machine is constructed of the proper size to sow the seed regularly and in due quantity.