

of—not entirely, however, as the rear end of the land side still touches, and rubs quite hard in its passage through the earth

Another important advantage gained by the double-furrow plough as now constructed is the support given by the wheels, which take off the friction from the bottom of the furrow, and thus again materially diminish the draught.

Mr. William Rennie, of Toronto, lately went to Scotland, and arrived the very day that a large and influential number of gentlemen and manufacturers had assembled to test the relative merits of various double furrow ploughs. The trial took place at Edinburgh. Some triple furrow ploughs were also tried, but did not seem to meet with general approval. The double furrows were found to work to a charm. On moderately light soil, two ordinary team horses are quite sufficient. On strong, tenacious soils, three horses can do, with more ease, double the work in a day that can be performed by two teams as ordinarily used.

The first prize was awarded to Messrs. Jack & Son, Maybole, Ayrshire; the second to Messrs. Jno. Gray & Co., Uddington, Scotland; the third to G. W. Murray & Co., Banff. Some of the ploughs were furnished with handles, which answered well for match work, but were quite unnecessary in ordinary farm operations. One or two ploughs were furnished with subsoil attachments, which possessed the advantage of avoiding any treading in of the subsoil thus moved. On the whole, the work performed was excellent.

### Eradicating Wild Oats.

Mr. John McKenzie, Chatsworth, wants to know how to destroy wild oats. To destroy wild oats is one of the most difficult tasks in agriculture; but, like most other things, it can be done, provided the proper means are used. I have had many years' experience in contending with this most noxious weed, and have come to the conclusion that it is absolutely necessary, in order to succeed in the destruction of the wild oat, that its eradication must be the first thought, and must be prosecuted altogether irrespective of the amount of trouble or apparent sacrifice involved.

Wild oats never rot. The seeds will lie below plough gauge for fifteen years, and probably twice as long, and directly they are brought to the surface and within the influence of light and air they will grow as well as if just thrashed. It therefore follows, that no sooner have you eradicated all that are near the surface, than from an accidental depression of the plough, up comes from below an abundant reserve of seeds, which within a week are all as green as if never buried at all. These are facts, and cannot be denied.

Now, it follows that any chance of destroying this pest lies altogether in getting the seed raised to the surface to vegetate, and by repeatedly killing all that grow, at length to get rid of all that can come from this source. Then, when there is little danger of burying fresh seed (that may have ripened during previous operations), let down the plough to its deepest gauge, and bring

up all that you are ever again likely to disturb, and proceed to treat them as you formerly did those that grew at that time on the surface.

You will naturally say "What an endless piece of work; it is more than the land is worth;" and so it would be, but the act of eradicating the wild oats by all this culture and care, will also bring the land into splendid condition. Meantime, to succeed with certainty, you must not have crops on the land by which the oat can get time to go to seed; and you must also recollect that if you cut down a wild oat before it has borne seed, and whilst the stalk is yet green, it will throw out abundance of seed shoots, which, although they may not reach more than six inches in height, and sprout as late as harvest time, say the end of July, yet before winter sets in this plant will have matured seed that will grow. I have often seen this exemplified, and gathered seeds that would grow well, the sprouts that bore them not being more than six inches high, and the parent stalk having been previously cut down to prevent ripening its seed in July. It follows, then, that to commence destroying this pest with any chance of success, say after harvest, the land must be first lightly ploughed or cultivated, say about two inches deep, and afterwards well harrowed; all seeds dropped at harvesting the previous crop will thus be made to germinate, and all young plants, or old ones, yet willing and ready for future mischief, will be pretty well done for. Directly the field is green again, and all seed within influence of the air has germinated, plough them under a little deeper than before. This must be done before the frost sets in. This, however, will not kill them at that time; they will come as good as ever in the spring about May, but it will retard their growth most materially. Now, some crop may be sown, like potatoes or roots, that requires cultivation, or very early peas may be dragged in, without ploughing, say as early as the first week in April. Peas of this kind, and thus sown, will harvest by the first week in July, and by this time the oat will be four feet high, and in full bearing, but the seed will be green; yet a great deal of it will grow even then. Cut the peas, and thrash them in the field. Do not on any account haul them home. Stack up the straw, and carefully protect it from the weather. Fence in half an acre, and feed the straw there and then to sheep. By this course you will have a crop from the land, and the straw, and you will have the only animal to consume it that can kill a wild oat by digestion (with the exception of a bird.) The second chewing that sheep give all they eat will effectually destroy all the seed they may swallow unmastered. If you haul home the peas to the barn, you will fill your manure with seed, and thereby seed every field you convey any out on. If horses or cattle eat the wild oats, they will grow afterwards quite freely.

Proceed again the following year as you formerly did, and you will probably thin out the crop of wild oats the next year to a great extent. But now persevere; do not "let up" on this pest because you have a few only.

In a year or two they will be as bad as ever; therefore stick to it for three or four years at least, and after that time you will only have to go through the standing grain and pull a few stalks here and there, and shortly afterwards the cure is complete. But any farm that is once overrun with wild oats will always be subject to a return of the disorder. Just on account of the extreme vitality of the seed, pasture or hay will not kill one seed, even if persevered with for ten years. Directly you plough you will have thousands again, unless you proceed as I have pointed out.

I have a field that has lain in grass pasture and meadow upwards of twelve years, and if I were to turn up the sod there would come up a splendid crop of wild oats; and to my certain knowledge not one plant has been seen for the above term of years.

### Eradicating Wild Oats

To the Editor.

SIR,—In a recent issue of your journal I noticed, under the above heading, a correspondent, signing himself "C," gives his opinion and advice to one John McKenzie, an inquirer. No doubt "C." is entitled to thanks for the attempt he has made towards helping his fellow tillers of the soil, out of a difficulty which, judging from his writing, has been to him a very grievous one. To follow out his suggestions, however, would entail endless labour, and should the farm be a large one, a man's head would be turning grey before he could hope for the complete victory over such an enemy as he describes the wild oats to be. I beg to differ with "C." in reference to the nature of the pest, and also to suggest another mode of treatment. I notice in "C.'s" article what I consider four errors: 1st. He says wild oats never rot; 2nd. Those now in the ground cannot by any chance be killed except by vegetation; 3rd. If they are harvested and carried to the barn with other grain, they will fill the manure with their seed; 4th. A piece of land once affected with them will be always liable to a return of the disorder.

In reference to the first error, I may state that I think he would have been correct if he had restricted his remark to the ordinary earth into which the seed may have fallen on ripening; but who ever knew wild oats to grow that had been exposed for any time to the heat of a dunghill? I believe that in this way few seeds are more easily destroyed.

Fermentation appears to be certain death to the wild oats. If you bury them by the bushel in a fermenting manure heap, you may spread the manure heap on your daintiest piece of land, and risk the result. In this neighbourhood nearly every one knows something about wild oats, and until within the last few years many almost despaired of ever waging a successful war against them; but of late they are losing ground, and causing much less alarm. If any one who may chance to scan these lines has a piece of land badly infested with wild oats, let him sum-