

Overseers of Highways, or Pathmasters as they are familiarly termed, are also enjoined to carry out the provisions of the Act on the public roads within their respective districts, and are invested with summary powers for putting the law in force wherever the holders of property disregard its injunctions. What, however, is the result? Not, alas! What sanguine legislators expected, — not what honest and energetic farmers hoped for, — not what Utopian dreamers believed and predicted; but simply, with one or two praiseworthy exceptions, NOTHING AT ALL! Here and there, where a farmer is hard working and understands his business, the fields are free from weeds, because he knows it is for his own best interests to keep them so. Here and there a diligent pathmaster who is not afraid of hurting the feelings of his neighbours, has cleared the road-sides, and obliged those about him to do the same for their farms. But, unfortunately, the lazy, the careless, the improvident are the rule, while the laborious, the careful, the understanding, are the exception. And hence follows, what we have been so sorely grieved to see, both in the neighbourhood of Toronto and elsewhere, fields of grain ripening for the harvest under the genial season that a beneficent Providence has again vouchsafed to us, but so obscured by the purple bloom of the hateful thistle as almost to prevent the recognition of the crop that had been sown, road-sides, too, and railway slopes covered with the same noxious weed, and preparing ere long to spread far and wide the seeds that will produce a manifold larger crop next year. We are not exaggerating; would that the case permitted our doing so, we are but telling the simple truth.

But not only do we wish to wage an exterminating war against the Canada thistles, there are other noxious weeds almost as pernicious, and fully as abundant as they. Look at the roadsides for hundreds of miles throughout the country, and you will see the borders white with, we may say, thousands of acres in the aggregate of that disgusting weed commonly called the Wild Chamomile, or May weed, the *Marula cotula* of botanists. Not only is this weed disagreeable from its sickening odour, and an eyesore from the general aspect of untidiness it gives our beautiful country, but it is also rapidly becoming a nuisance to the gardener and the farmer, invading their fields and beds, and growing up everywhere with pertinacious celerity. There is further to be found on the borders of all our roads and streets, and in every waste piece of ground or common, an abundance of the troublesome Bur-weed, or Hound's tongue (*Cynoglossum officinale*, Linn.) At this season of the year, a man or woman can hardly take a walk for any distance along our public highways, much less across neglected fields or commons, without bringing back quantities of the nutlets or burs adhering to their garments. And the nuisance they are to cattle and sheep is beyond comparison, we have frequently seen cows with their heads and necks one mass of burs, and sheep whose fleeces could hardly be distinguished from the same cause. These things, surely, ought not so to be.

There are many other noxious weeds that we might mention, which are more or less restricted to particular sections of the country; such, for instance, as the Wild Mustard, or Charlock, which is so abundant in the Counties of Northumberland and Durham. On many a farm—shame be it to the occupiers that we should have to say it,—whole fields are perfectly yellow with the blossoms of this pernicious weed, and worse than all, they have presented this brilliant but at the same time most melancholy aspect every summer for nearly twenty years! We know that there are many excellent farmers in that part of the country, but it is evident that there are many slovenly ones also, or such a state of things would never have been suffered so long. Charlock is no doubt a difficult weed to exterminate, but still it can be got rid of by a determined effort. Summer fallow a field in which it is abundant, and every time it comes above the surface plough it well under; about six ploughings during the season will be sufficient, and you will have for the next year a crop well-tilled and perfectly clean piece of ground. To get rid of the weed is well worth the labour, and the loss of one year's crop.

But our limited space would not permit us to enumerate all the weeds whose presence in our fields is a nuisance and a shame to us. We have mentioned some of the chief of these enemies, whose office no doubt it is to make us fulfil the sentence passed upon Adam in the beginning, and earn our bread by the sweat of our brow. Let us now consider briefly what can be done to obviate, or at all events lessen the evil. In the first place, we would urge upon each municipality in the country to see that the law is firmly and rigorously carried out within its own jurisdiction without respect of persons; and that it obliges its own pathmasters to perform the duty that devolves upon them implicitly and carefully. This of itself would be quite sufficient, and would speedily effect a vast decrease in the quantity of noxious weeds. For we think the law should be extended to many other plants besides Canada thistles. But we fear that this remedy, as heretofore so in the future also, will prove inoperative in very many cases, and simply for this reason because the judicial tribunal of the Council is composed of the very offenders themselves. All action is then, of course hopeless. However, if no interference can be made with private property, let every city, town and village corporation in Canada employ the poor despicable old men, some of whom are objects of charity in every place, in cutting down all the weeds along the road-sides, and on the public property; thus they will provide easy work for those who would otherwise be almost destitute, and at the same time abate the prevalent nuisance to a considerable extent. The country municipalities might also do the same. Again, let our farmers understand thoroughly, and as one of the veriest rudiments of agriculture, that it is much more expensive and infinitely less profitable to raise weeds than to keep their land clear of them. What we want is determined and united action; not one man here and there doing his duty, while his neighbours on either side do their best to render his efforts useless; but each and everyone striving as well as he can to keep his own land clean and proper and thus the whole community mutually benefiting and assisting each other. Let, in fine, what is "everybody's business" be attended to by everybody, and not left to the tender mercies of the mythical "nobody," who ought long ago to have been completely overwhelmed with the amount of work thrown upon him.

Tricks of Seed Merchants.

We copy the following suggestive article from the editorial columns of the *Mark Lane Express*. We are not in a position to assert that such scandalous practices are attempted in this Province; but, whether or no, the article will well repay an attentive perusal.

"Every farmer is aware of the value of good seed, but few are familiar with the frauds practiced by some seedsmen, in order to obtain a dishonourable profit. We shall here confine our remarks on this subject to the seeds—as the various species of turnip, cabbage and cauliflower—the most easily tampered with, there being other seeds of the same tribe (*Brassicæ*) much inferior in value, but so similar that it is impossible for a common observer to detect these, or, in fact, to perceive the difference between such and the genuine seed. Thus, rape-seed may be purchased at about half the price of turnip seed from the grower, and may be mixed without the least fear of detection. Charlock also may be obtained still cheaper than rape, and although smaller than many species of the turnip, may be equally employed in adulteration with impunity. The temptation, therefore, to substitute these for the genuine seed is too strong to be resisted, and the consequence is that the sale of spurious seeds has become a regular though secret trade; and we have known wholesale seedsmen who would deliver turnip seed mixed in any proportion required, with from fifty to eighty per cent. of good seed, the price being regulated by the proportion.

But if the mixture were sold without any precaution, it would, in its growth, tell tales, and lead to detection. The dealer in the O. O. O. seed, as it is called in the trade, finds means to destroy its vegetating power, either by hot water, dry heat, or a chemical preparation. All these means have, we believe, been used, but the latter is now the most approved and common method. In any case, however, the seed becomes innocuous because impotent; and as much more seed is generally sown than is required

to produce a crop, unless the seedsmen is too covetous, the fraud escapes detection, although the farmer may fancy that the plant is "too thin." But there are so many other casualties—the fly, for example—that will destroy the turnip plant in the first stages of its existence, that this circumstance is ascribed to anything rather than adulteration of the seed, and thus the fraud is not suspected.

Mr. Buckland has done good service by the exposure of this nefarious practice in his recent work on "Science and Practice in Farm Cultivation." In order to bring to the proof the fact and the extent of adulteration of turnip seed (and cabbage seed is equally liable to it), he instituted a series of experiments upon different samples obtained from seedsmen, the results of which are given at full length in the work. Thus in one case of ten sorts of good turnip, out of a hundred seeds of each sort, an average of 92 came up, the lowest being 81, and the highest Sutton's improved Green Globe 98 per cent. These seeds were of the growths of 1850 and 1860, in which latter year they were sown. But in order to show the effect of keeping the seed too long, he sowed some of the same in 1862, when the result was very different, as the following statement will show.

Name and date of Seed.	Came up in 1860.	Came up in 1862.
1. Mousetail, 1859	96	46
2. White Globe, 1859	86	44
3. Nimble Green Round, 1859	96	94
4. Lincolnshire Red Globe, 1860	90	58
5. Yellow Tankard, 1859	82	62
6. Smart Mousetail 1860	98	92
7. Green topped Stone, 1860	84	88
8. Sutton's Imperial Green Globe, 1860	98	80
9. Green topped Scotch, 1860	90	86
10. Early Six Weeks, 1860	90	70
Average grown	92	72
Ditto failed	8	28

"Thus, by keeping the seeds two years, they sustained a loss averaging 20 per cent., but in one case of 50 and in another of 42 per cent. Be it observed, however, that there is no charge of adulteration in these samples, the experimenter considering them good seeds, and not containing more than a natural proportion of defective seeds, although the deficiency in No. 2 was 14 and in No. 7 16 per cent. It should also be observed that the seeds in the first year came up at intervals between seven and eleven days.

In four other experiments the averages that came up were respectively 68, 77, and 70; the first being from nine to fifteen days, the second from ten to seventeen days (with one exception), the third from four to eleven days, and the fourth from four to eight days. These four parcels of seeds, of ten kinds each, were "market samples," and of course the year of their harvesting could not be ascertained. Every precaution was taken to preserve the vegetative power of the seeds, and to favour their growing by keeping the temperature of the house at the proper range, say between 60 and 70 degrees Fahr.

The axiom laid down by the Professor is, that "all well-grown well-preserved seeds should be capable of germinating to the extent of at least 90 per cent., but that seeds in general, and more especially turnip seeds, as usually delivered to the farmer, are generally incapable of germinating to the extent of from 25 to 30 per cent., and frequently more even."

Professor Buckland endeavoured to procure a sample of the O. O. O. seed, or killed seed. But although he could have been supplied with some bushels of it, as if for sale, no one could procure a sample of it, a suspicion being at once excited that it was wanted for experimenting. A letter is inserted in the work, addressed to Messrs. Sutton and Sons, of Reading, from some person at Southampton, offering an invention for killing the seeds of Rape and charlock expeditiously and effectually without any danger of detection. Mr. Sutton had the curiosity to call on the fellow, and found it was a genuine affair, but instead of ordering one of the machines, he sent the letter to Professor Buckland, who, on writing to the inventor was promised a machine if the money was sent first; but having apparently felt the undesirable nature of paying in advance, he declined the risk.

Mr. Buckland recommends farmers to make trial of all seeds before purchasing, by sowing a given number and noticing how many of them vegetate, and in what time. Above all, he cautions growers to purchase their seeds from men only of character and long standing, or who are known for integrity and uprightness in their dealings."