



The Field.

"Finger and Toe" in Turnips.

We learn from *The Farmer* that the above disease has become very prevalent in some parts of North Britain. Occasionally it shows itself in this country, though we are not aware that it has ever come to be a very troublesome or wide-spread affection. On the principle, however, that prevention is better than cure, it may be useful to give the gist of what our able contemporary says in reference to this evil, and the modes of guarding against it.

There would seem to be some reason to think that "finger and toe" and "clover sickness" are parallel in their nature. Soils which yield good crops of red clover are but little liable to produce "finger and toe;" while soils that are charged with the oxides of iron, or that have a great redundancy of vegetable matter, are not favourable either for clover or turnips. Too frequent repetition of these crops is unfavourable to their success. Lands fertilized with barn-yard manure in moderate quantity are more likely to throw healthy crops than those lands which have been over-dosed with either natural or artificial manures. Swede turnips are more liable to attacks of this disease than any other sorts, and it chiefly prevails on dry and light soils. It is highly probable that this affection is caused by a deficiency of alkalies and alkaline earth within the plant itself, and that, therefore, some deficient or unfavourable condition of the soil usually occasions the trouble.

Cure of this disease, when once it has fastened on the plant, is out of the question; therefore preventive measures only are practicable. Among these, liming the land well is strongly recommended. *The Farmer* is inclined to think that disuse of lime in sections where it was freely used formerly is one great cause of "finger and toe," and states that having had experience in land so badly affected with this ailment that it was considered almost hopeless to attempt to grow root crops, "a sufficient application of hot lime never failed to effect a cure." Lime should not, however, be applied to a limestone soil, as bad effects have resulted from so doing. Lime when applied to land requires a certain time to act, as it does not operate by furnishing food for the plant so much as by decomposing and otherwise chemically changing vegetable matter already in the soil.

Deep ploughing is also urged, especially if the land has previously been subjected to only shallow tillage. Drainage is very necessary; indeed it is remarkable how many troubles that afflict the tiller of the soil, may be prevented or removed by these two last named prescriptions: deep tillage, and thorough drainage. Add to these a fair supply of barn-yard dung, and not much remains to be said about the prevention or cure of evils connected with the culture of the soil.

It should be observed that only general rules are given above in regard to the affection in question. To all general rules there are exceptions. Thus on some soils clover is produced with constantly recurring frequency without sign of sickness, and Mr. Lawes has grown turnips for several years in succession on the same ground. Still there is no denying the general rule, notwithstanding these exceptions to it. So of other rules.

We have sometimes heard this and other plant affections ascribed to defective seed, and there can be no doubt that both seedsmen and their customers would do well to take the greatest pains in procuring the very best samples of seeds that can be had. To this point it is impossible to attach too much importance, whether in regard to root or grain crops.

Wearing Out Land.

To the Editor of THE CANADA FARMER:

SIR,—There is too much reason to believe that, instead of growing richer, as proper cultivation would make it, much of the cultivated soil of Canada is growing annually poorer. The same is the case in the United States. As far as Canada is concerned, if you will allow me the use of your columns, I will say something as to the cause, and suggest a remedy.

To keep land in heart, it should be taken care of at first. Much of it is irreparably injured by trying to work it before the stumps are out, when the plough cannot get down deep enough to mix the soil. The top only is used, and the crop carries away, in one season, those chemical constituents which are needed to unite with the lower strata.

The root of the evil was, that ignorant men got hold of the land—soldiers, sailors, blacksmiths, masons, carpenters, tailors and shoemakers, with European farm labourers. These last, generally, mindful of the expensive appliances of Europe, think themselves too poor to farm well. Those unskilful parties got hold of our unfortunate soil. Now, ask one of the above tradesmen, if a batch of farmers came into his shop and started business for themselves, how much stuff and tools would they spoil before they made it pay. He will say, they would never make it pay—they would break down. So it is when one goes to learn farming on his own land. He should learn that trade, like any other, on another's work.

The system of farming which an untaught man pursues, is generally to crop land unremittingly as long as it pays—the time of paying depending on the original richness of the land. In a few years it don't pay, he sells and moves back; tries it on new land again till it don't pay; moves back once more, and if he lived long enough he would do it *ad infinitum*.

A good deal of our land has been gone over by such men. Then, again, more of it has been worked by farmers who are well aware of better methods,

but who maintain that in the circumstances in which they were placed they were compelled, in common parlance, to "run" their lands, in order to live at all.

Now for the remedy. It is, I think, to be found in deeper cultivation. Our land, if underdrained and subsoiled, would, I believe, yield an average of double the amount per acre. More work would be spent on the land per acre. Less land on each farm would, consequently, be put into wheat. More grass land would be available, more cattle kept, more roots grown, more manure made on the farm. Last, but not least, more farm labourers would be needed, and could be paid, and we should no longer see what I regard as a bad sign, namely, a great demand for harvest hands, but a small demand for men the rest of the year. All this is just what we want, and it could be obtained.

But, some may say, farmers are gradually doing all this—they are, in many instances, carrying on scientific farming, in good style. It is true, but I have two objections. First, too few are doing it; at the present rate we should not see it a general thing in a lifetime. Second—and it cannot be too strongly impressed—the land now deeply cultivated should have been so dealt with at first. The top soil is gone. What is wanted is something to encourage men in new townships to deepen their cultivation before they "run" the land. As soon as the stumps allow ploughing, the land should be underdrained and subsoiled.

What is wanted is some sweeping measure, some general stimulus to deeper work. If the thing were being done throughout the whole country, a class of skilled workmen would be brought into existence who could do it at one-third its present cost. But our farmers, as a whole, have not the means, to drain without borrowing; money costs them ten per cent. now, and if everybody was borrowing, it would cost them a good deal more. And I am afraid it is doubtful if money would pay at such a price.

There is but one way, Sir, in which the thing can be done so as to give the present generation any benefit; and that is for the Government to advance the money. This has been done in England to save rich squires from paying high interest (some of their land was entailed, some not). Let it be done here to save farmers from the same, and to give the whole farming population of Ontario the help they so much need. Our Local Government has, it is said, a surplus of half-a-million on hand. Now, instead of putting this into Dominion stock or any other stock, let them lend it for a term of years (for underdraining solely) to our farmers, at low interest, or better, at no interest, and you would hear no more of our young farmers leaving the farm, or of our young men going to the States. The land the money was lent on would furnish good security for re-payment, and a farmer who could not pay back money so expended, in a few years, had better be sold out. For my own part, I have eighty acres lying ready for the operation. It will be many a year before I can drain and work this properly myself, but I would do so at once, had I the chance of such assistance as I speak of.

RUSTICUS.