

country, whose soil contains enough of the elements of fertility to produce fair crops with the aid of ordinary manuring, (if only these elements were come-atable) but which, by reason of their soggy and unpleasant condition, would do less injury to their owners if they were hopelessly barren. In the spring and early summer they are moist and cold more like putty than like arable land in July and August they are baked to a crust, and when the fall rains come they revert again to their weeping state. Any effort to make good land of such a farm as this without draining is simply an effort wasted. Neither labour nor manure can do much to drive away the demon of 'bad luck,' by which every path of its owner is beset. I have scores of letters from the occupants of such farms and I have had for years. The gambly advising this and that make-shift, when it was claimed that the expense of draining could not be borne, but I have finally learned to say, point blank, to any man who is trying to make his way on this kind of a farm. 'Either drain it or give it up!' You can make more money by working at day's work, on good land, than by fighting year in and year out, against the established laws of nature. If you can't do better, sell off your stock and if necessary, work for a neighbour enough of the time to earn your bare living. Spend the rest of your time and all the money you can raise in draining the *best* field you have got. Don't imagine that your case is to be an exception, but accept the fact, now that you *can't afford* to farm wet land—either own up that you are only fit for a day labourer, or buckle to and make your land worth cultivating.

"There are two great obstacles to the advancement of underdraining, viz.: One is, the idea that land which suffers from *drought* does not need draining, when the fact is that land often suffers from drought just because it needs draining—take out the water and let in the air, so that the soil can be put in proper tilth, and it will be able to withstand drought. The other is, the not unnatural notion that the first land to be drained is that which is now the wettest. In my judgment the improvement should be first applied to those fields which are just dry enough to be considered arable, but which, two years out of three, disappoint the farmer's hopes and produce barely enough to pay the cost of cultivation. If such land as this is drained it will pay a profit. If a back lot swamp is drained it may be years before it will do more than pay the expenses of its management. Begin with the very best land that needs draining at all, and make it produce a profit, and then take the next best and bring that to a profitable state, and so on until the back swamp comes in its turn. What we want is not so much large crops as profitable crops. A hundred dollars' worth of corn that has cost a hundred dollars, had better not have been grown. It don't pay to work over large areas

for meagre produce. Pile on the steam! Crowd the production to the most remunerative point! and then extend your operations to the next best field, and make that pay a round profit. This is the soundest principle of good farming, and in carrying it out we shall have no more efficient aid than is rendered by thorough draining on the best lands that need draining. When this is accepted as the correct principle, we shall see draining extending in all directions. So long as the chief object of draining is to convert innocent waste lands into fields for unprofitable work, its progress will be but halting, and farmers will continue to cry out against its great cost. Cost? Why suppose it costs as much to drain an acre of land as to buy an adjoining acre. This is no argument against it. The one acre drained would pay a handsome profit—the two acres undrained would pay no profit at all, and had better be left to grow wood. What is wanted, as the foundation of the best improvement, is a conviction in the minds of the farming public that it is better to have good farms than to have large farms. That point being gained, all the rest will come as a matter of course. Let us confine ourselves to such areas as will give us the most money for our farming, and leave the rest of the land to take care of itself."

The Wheat Question.

I am one of those who have observed nature's powers of recuperation, and have a considerable respect for her ability in this respect. Our latter-day agriculturists prescribe artificial manures readily enough; but in this country I notice but few practically following for any length of time this valuable and expensive, as well as learned advice. And this reminds me of the position of a friend of mine, a doctor with a very large country practice, who was taken ill, and called in a learned brother practitioner from the city to prescribe. Tongue, pulse, heart, and lungs, all in their turn underwent examination, but no special disease could be made apparent, as the cause of the illness. So our city physician ended his examination by prescribing rest. *Rest* to a country doctor! Why, the remedy was absurd, and altogether impracticable. What hope had he that he could take rest, who rarely had one whole night's sleep, and often took it by instalments. So the learned doctor was dismissed, and my friend attacked his own case in his own way, following such course as was practicable to him, and consistent with his duties and means.

So it is with our farmers and their farms; we want some help, we want some cure, but the remedy proposed by the learned men of the age is very much like prescribing rest for the doctor, all but impracticable; in fact, it will not pay. I should like to see any of our farmers use artificial manures in quantities with wheat at seventy to eighty cents a bushel. We cannot do so, and some other remedy must be found. We have not gene-

rally the capital, even if it would pay, to adopt this course, and we must, therefore, follow the plan of my friend, and dismiss our learned city doctors, and attempt our own cure with the means we possess.

No doubt, a knowledge of what would be certain to cure our complaint, namely, poverty, and make our farms pay better, is of great value; but we are as far off as ever from recovery, if we have to trust to expensive artificial manures as the only means to effect a cure, for at present prices they will not pay. And besides, I, for one, am not afraid to enter the lists with those learned gentlemen, and to show that although they may be, and probably are, quite correct in what they say in some cases, namely, that the application of certain chemical manures to certain barren lands will produce a good crop, the greater portion of our lands are not absolutely barren, and we are not therefore bound to this course as the only remedy. Is there no other help for us when it is so palpably apparent that this one can not easily be followed, with our capital? I will venture to say that such is not the only course open to us. God pity us if it were, as there would soon be an end to Canadian farming and its comforts.

The opinions of many of these gentlemen of abstract principles, when their ideas are carried into practice, are found to be at variance with known facts. For instance, our new land is just as good as it ever was, but it fails to produce as good crops of wheat. To meet this one great fact we must look farther for the remedy than to the use of artificial manures. Many excellent farmers know this to be true, and are also quite aware that it cannot be attributed to an absolute change of season, such as would continue from year to year for a series of years, as no such great alteration is perceptible.

My opinion, therefore, and that of many others, is that one great cause for short yields under such circumstances is the depreciated quality of the seed wheat; that it is less productive than heretofore under the same circumstances, of course putting aside loss by midge for the present. That some kinds are running out is well known, and, in fine, this tendency to run out attends other kinds of vegetable growth. Why, therefore, may not the same principle affect the various kinds of wheat also? Hallett, the well-known wheat improver in England, has given his whole attention for a number of years towards improving the different sorts of wheat, and has been enabled to grow, without serious difficulty, on good land eighty to eighty-five bushels per acre. Our own countryman, Mr. Arnold, of Paris, has given much attention to hybridizing wheat, endeavouring thereby to produce new and useful varieties; and so important do I conceive the simple plan of increasing our yields of wheat to be, that I would freely vote that a large sum of Government money should be awarded to enable Mr. Arnold to complete his experiments.