

first of these afflictions particularly, was a very great injury to agriculture in Lower Canada, and it was the more felt, because farmers did not immediately adopt the remedy of cultivating other crops instead of wheat, but clung to the cultivation of the latter grain before they had discovered any means of checking the ravages of the fly, by substituting new varieties of seed, and sowing at a later season than usual, remedies which have been found to check considerably the power of the fly to damage the crop, though it does not prevent the injury altogether. Under present circumstances the wheat fly is not so serious an evil as it has been. By skilful management some farmers are able to grow very fair crops of wheat, and if some farmers can do this, others may do so by adopting the same means. The great advantage of skill in agriculture is, that it enables the farmer to understand and overcome difficulties that may arise in the practice of his profession, which the unskilful farmer is unable to cope with. The markets of the United States, which are open to us at present, render the cultivation of peas, barley, and oats, as profitable as wheat, particularly if these latter grains are substituted for wheat on lands that are not suitable for producing it in the greatest perfection. Farmers may rest assured that a good crop of peas, barley, or oats, which I may add, are certain crops here when cultivated properly, will pay much better than an inferior crop of wheat, or any crop of wheat that is under a fair average. The markets of the United States were not only closed to us by heavy duties twenty years ago, but there was a considerable importation of agricultural produce from that country. Now these markets are open to us, and the importation of agricultural produce to Canada may be said to be at an end. These advantages are more than sufficient to compensate us for the damage of the wheat fly and the potato disease, particularly now that a remedy for both these afflictions is better understood. I have no doubt that with the advantage of the Reciprocity Treaty, Lower Canadian farmers will find it their interest to grow barley, peas, and oats, rather than wheat, where there is any uncertainty of a fair crop. It is better to allow those who can, to grow wheat, and we can exchange the grain we grow in perfection for wheat. It appears to be a very proper subject of enquiry, whether our agriculture has made that progress in improvement within the last twenty-five years which might reasonably be expected, under all the favorable circumstances I have enumerated. So far as I am acquainted with the subject, I have no hesitation in saying that very considerable improvements have been introduced, and with every prospect that these improvements will rapidly extend; but, at the same time, it must be manifest, from this review which I have attempted, that our agriculture generally is still in a very backward state, and is susceptible of vast improvement in every department. My chief object in preparing this review is to bring this subject, that is of such vital importance to Canada, prominently before the public, and agriculturists in particular, that means may be adopted to correct any defects that are found to exist in our system of husbandry. I know that the progress of agricultural improvement must be slow but at the same time we should accelerate its progress as much as possible. I must, however, conclude for the present,

but I shall have to trespass upon you on a future occasion.

WM. EVANS.

Montreal, December 28, 1854.

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—:—: AGRICULTURE.

The sustenance, clothing and comforts of the human race come mainly from the soil; and whilst commerce is absolutely necessary to distribute its fruits, yet it is evident that we cannot too highly appreciate the dignity and importance of that profession, which produces them. The cultivation of the soil is the first and most important of all secular employments, and so it should be brought, even more than to any other, all the powers of intellect and all the attainments of science.

Nor does the soil yield an ungrateful return for the application of intellect and science. The man who first applied the principle of rotation of crops more than doubled the produce of Britain. The man who introduced the cultivation of turnips and other root crops doubled it again. The man who applied thorough draining to the soil introduced a principle which has doubled or will double it once more. Thus, with the same area and natural capabilities to work upon, the surface of Britain produces probably eight times as much as it did a century ago, and we may well ask where is the limit to this progression? The old Fly Coach yielded to the Royal Mails, dashing along at a speed of eleven miles an hour, and those who thirty years ago chronicled this marvelous change, doubtless thought that the utmost limit of rapid locomotion had been attained. But in that short time, all these dashing coaches have been hopelessly distanced and driven off by the long Railway Train. And even that, for the transmission of intelligence, has been left creeping behind by the Electric Telegraph. In like manner, the present perfection of Agriculture in the Lothians, East Anglia, and Belgium, may be utterly distanced by some future application of the simple principles of science. The great truth, that the man who doubles the depth of his productive soil virtually doubles its extent as much as if he had added another farm of equal dimensions, is capable of indefinite application: and it is, we confess, in this direction that we look for the greatest improvements in modern agriculture. Thorough draining and deep ploughing are approximations; but, inasmuch as the roots of most plants will, under favorable circumstances, penetrate to a depth of three, four, or five feet, we think there can scarcely be said to be a commencement made yet in the science of deepening the soil.

Were every intelligent farmer to consider his farm, in some respects as a laboratory, and he himself as a scientific experimenter, with a view to benefit not only himself but the human family; were he to obtain all the information he can, and then to proceed with a continual series of such experiments as

would not materially interfere, even should they not prove successful, with his profits; and farther, were he to communicate to the public, through a Bureau of Agriculture, the results of these experiments, he would find his mind cultivated, enlightened, and expanded, and his profession invested with a dignity and importance of which the mere mechanical routine farmer can form no conception; whilst the aggregate of such experiments acted upon and applied by so many different minds, would be certain to elicit great results.—*The Witness*.

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THE CULTIVATION OF POTATOES.

A light soil abounding in rich organic matter is found by experience to produce the largest crops of potatoes; but since the visitation of the mysterious scourge the "Potato Disease," it has been found advantageous to cultivate them on light, *poor* soil, for while the rich soil in many instances continues to grow the largest crop, the tubers are diseased and unpalatable so that a small sound crop is more profitable. The poor sandy soils around this city are now planted with potatoes to an extent that almost exceeds belief. We were in the town of Watervliet a short time since, and called upon several farmers in the town in order to ascertain a few facts in regard to the cultivation and yield of their staple crop. We went along three roads, enclosing a triangular piece of land containing somewhat more than a square mile, and called on thirty farmers whose houses were near the road. These thirty farmers raised the past year *seventy-six thousand, six hundred and twenty-two bushels of potatoes*. Several of the farms were more than half planted every year with potatoes, and on two or three farms three-fourths of the land was thus occupied. On one farm, that of L. & A. Gore, 8750 bushels were raised this year. D. D. T. More, on 55 acres, raised 6255 bushels. The Messrs. Osborn on 88 acres, 7710 bushels. J. Ferris, 7500 bushels, and many others raise annually three, four and five thousand bushels of potatoes.

The yield per acre is not large; the average of these farms where we could ascertain the number of acres planted, was 102½ bushels per acre, the highest farm being 133 bushels per acre—in this instance three fourths of the farm, (a small one,) was in potatoes.

Peruvian guano is used to a considerable extent, and is found a cheap and effective fertilizer. In one instance we found a field where potatoes had been grown four years in succession manured with guano, and the crop this season was the best it had ever produced, averaging 150 bushels per acre. It is somewhat remarkable that this light, sandy soil, which we should suppose poor in all the mineral elements of plants but especially in potash, should thus annually yield a fair crop of potatoes, which of all our agri-