

Experimental Farms.

BY BOB BARCLAY, BALMORAL, MAN.

A few years ago I was, like many more, inclined to think that these establishments were a mere fad and had in a great measure been formed for the purpose of affording soft snaps and easy sits for government hangers-on, and that like many other schemes would draw money from the hard workers to make a few lazy independents happy and keep them in luxury; but after carefully watching these farms from the start and following their work closely, as well as beholding the benefits which have been generally derived from them, I have changed my mind, and must admit that they are in my opinion the most advantageous venture for a country such as ours that any government has ever promulgated or put forward; and if our farmers were, as they certainly ought to be, better acquainted with the workings of these farms and the benefits to be derived even from correspondence with the officers in charge (whom I might state I at all times find very obliging), as well as a full perusal of the regular reports furnished, they would be greatly benefitted, not to say anything of the splendid opportunities given to every farmer of trying different varieties of all classes of new grains and roots, free of charge, and at little or no expense. Above all, one of the greatest boons, more especially to those located upon the prairie settlements, is in providing them with that which they sadly want—very young trees and tree seeds which will assuredly grow well. As "Rome was not built in one day," we need hardly look for or expect to find perfection at once in the arrangements of any concern, more especially of large ones, depending, as these do, so much upon weather and seasons, and including so many different species of vegetation.

About a twelvemonth ago I was much pleased to see that the Alberta people were moving for the establishment of a farm in the vicinity of Calgary, but I am afraid the matter must have fallen through, as I have heard nothing further of it since; if so, it is to be much regretted. There is not the slightest doubt that if an Experimental Farm is to be of any use or service, the proper place for it is in the district it is intended to benefit. This idea has been clearly shown as between the one at Ottawa and that at Brandon, especially as far as the tree department is concerned. In giving you my experience you also get that of others, and it is to the following effect, viz.:—That the cuttings from Ottawa are of no use, as they arrive in this country too early in the spring for setting out, and I do not care how well you tend them, you cannot save them in good order, for if you keep them dry they die out, and if you follow the instructions sent along with them they are sure to damp off, and when planted out succumb to what is generally called dry rot, and if you get one or two small living trees at the end of the season out of a hundred, you may consider yourself lucky. I have tried them myself and got others to do so different seasons with the aforesaid result. On the other hand, those received from Brandon, with exactly the same treatment in planting and cultivation, were just the reverse, and the loss by deaths only amounted to somewhere about three per cent. The rooted trees from Ottawa grew, but never were vigorous; they made comparatively little growth throughout the first season. This, I presume, arose from the fact that they were out of the ground so long in the spring. The loss by death in this class was from seven to ten per cent., while it only was two in those received from Brandon Station.

The trees raised in Manitoba were, in the first place, much finer and healthier plants, and made more headway in one season than the eastern ones did in two. In drawing your attention to this matter, I do not wish it to be understood that I am finding fault with the people at Ottawa; I am simply writing for the benefit of the farmers and others in this province, as there is really nothing more tantalizing to anyone than preparing ground and spending time and labor upon that which turns out in the end to be useless. Every one who wishes to have trees around their habitation desires to have them grow speedily, and thereby acquire a good and lasting protection in the shortest time possible; therefore it is that I say, by all means let us have our young trees for Manitoba farms raised and sent out from the Brandon establishment. And there is still a stronger reason for pressing this home to those in power, viz.: Everyone is by this time thoroughly convinced that southern-raised material does not, as a rule, succeed well in a northern climate; the only exception that I know of is that raised in Rochester, N. Y. When talking upon this point to some leading worthies, I was kindly reminded that our friends in the east would kick against the transfer of the arboriculture, as this would mean doing them out of a portion of their present employment and taking money out of their pockets; but I say, let them grumble—the sooner the change is made the better, if it is going to save money at that end and a deal of vexation and trouble at this. Mr. Editor, before closing, I would like to draw the attention of those in charge at Brandon to some current cuttings that were sent out by them last spring; they were for the most part taken from old wood which would have been nothing more or less than dead wood upon the bushes at the end of the season, only fit for pruning and burning. Now any one who really knows his business in nursery work is well aware that such stuff will never make healthy bushes, even if they

did start, and certainly they would never bear fruit worth picking. I know of a case where there were only some three or four out of a parcel of fifty showed any vitality; I do not think any of them will survive the winter. These cuttings were given. In a word, I do not and cannot see why the Brandon farm, if necessary, should not be enlarged and the staff increased so as to provide everything in the shape of not only trees and bushes, but also roots and seeds for the farmers of our province, as it is an undoubted fact that northern seed and other things suit our climate and soil far better than anything produced south of us. If we are to get supplied away from home, I say, let us get them from Alberta or some other northern point. Can you see any reason for the local government charging postage on what might be termed the business of a government concern? I consider it anything but generous, and militates materially against the benefits of the most useful institution under their supervision.

Fifty Years Ago.

BY T. B. WHITE, CLARKSBURG, ONT.

(Continued from page 398.)

The more I notice these Forestry Reports the more I think they are at fault in trying to build up a theory of which so little is known, and consequently, notwithstanding all the labor and ingenuity employed, only producing a lot of incongruous and fragmentary compositions for our instruction. In Report for 1887, page 36, we read: "I notice in American papers some criticism of an idea which should now be removed from criticism—the well-known influence of forests on rainfall. We are no longer left to conjecture on these matters," &c. Then on page 36, Report 1891, four years later, we read: "The opinions of our greatest climatologists have been divided as to the influence of forests on precipitation. But evidence, carefully and scientifically scrutinized, is accumulating which tends to show that under certain conditions at least, such influence may not be improbable." This seems like moving it from criticism the other way, and shows the folly of being so positive about things we don't know.

In Report for 1886, page 67, we are told that a cabbage emits twenty-five ounces of moisture daily, while a forest transpires millions of gallons daily. A great difference in quantity certainly, but then, there is an unmeasurable difference between a definite and an indefinite article, and to pit a cabbage against a forest to show how the farmers are drying up the country by making the change is great logic.

On page 76, same Report, we read: "The question has been asked, How is it that the great prairies of the Western States were ever fertile, while trees are said to be so necessary to fertility? This is easily answered. These prairies were in the first place of exceptional fertility, so far as regards the quality of the soil." Then turn back to page 49, and we read: "State after State is going to be drowned out, until some day the coral insect may again build his pretty castles where the people of Iowa are now digging wells for water." This last quotation is more in line with geology, which teaches that these now prairies were in the first place water, and second, that the corals built the rock foundation. Then in the third place comes the starting point for the farmer, and we ask the question: How came those bare rocks to be over-laid with ten, twenty, or more, feet of vegetable soil? This problem solved is the key to successful farming in perpetuity. But to say the prairies were in the first place of exceptional fertility as regards the soil, only shows how little some people do really know about it.

Then, in my opinion these Reports are equally astray in representing the clearing of the forests as having such a dreadful effect on the country, in causing the rivers to be so much more destructive in carrying the soil into deep waters at one time, and at other times drying them up so as to be of very little practical use; for, though there is some difference caused by this change, the alarm is a great deal more imaginary than real. If Capt. Eads did (page 49, Report, 1886) exclaim when emptying a pail of mud and water over his jetties, "There goes a mixture of one-tenth Missouri, one-tenth Illinois, one-tenth Iowa," &c., it is no reason why we should not take an intelligent view of this matter, and as far as it affects the farmers reduce the question to figures and facts, which will show there is nothing to get excited about.

It is said that the river Thames, England, carries 11,000,000 cubic feet of solid matter into the sea every year, but as the river drains an area of 6,100 square miles, it is only 1,800th part of an inch, equal to about one inch off this acreage since the Norman Conquest. I have read that Prof. Gekie has made a calculation showing that at the rate Great Britain is being washed into the sea by its rivers and streams, it will be 3,500,000 years before it is reduced to water level.

Then there is another side to this question of what the waters are doing, and though I have seen miles of muddy water in Georgian Bay, caused by summer floods down Beaver river, we are now using a gravel pit about two miles from its present limits which has evidently been the beach at some time. And in this two miles we have the busiest part of our township—our markets, our principle plum orchards, our railway, &c. So that if the tendency of the waters are to lower the mountains,

and in return build up more level or rolling land, the change, we should say, is for the better. And if, in place of going into hysterics over what we see going down the rivers, we gave more attention to keeping the land in grass along runs of water which are apt to flood, we would help to graduate this process to our present advantage. Under-draining also acts as a strainer in keeping the soil. But this cry about the farmers tearing out the heart of the country with their plows and dumping it into the sea is quite unnecessary.

On page 56, Report for 1891, we read: "For several years past the engineers of the waterworks department of Philadelphia have been making examinations of all possible sources of a suitable and adequate supply of water, and they have recently discovered how seriously the Schuylkill river, from which the city has ever drawn its supply, has been affected by the clearing of the forests, &c." The river, we are told, has in about sixty years decreased from 500,000,000 to 250,000,000 gallons per day. Well, supposing this is so, though it should not have taken much engineering to have discovered that difference, it is still 250 gallons per capita, and would be 10 gallons per day for each up to 25,000,000 people. Then it is no secret that the Delaware river, with ten or more times as much water, borders along their front street; and if the engineers have not seen it, though ostensibly looking for water, they must have really been looking for ways and means how to keep their positions and consequent remunerations. But the reason the city has hitherto drawn its water supply from the Schuylkill is, because it is the more rapid stream and furnishes the power to pump the water into Fairmount and other reservoirs as required; and any Ontario farmer who saw the Corlis engine and the exhibit of pumps at work at the Centennial will not be alarmed but they will be able to raise water out of the Delaware when needed, saying nothing about the great change in producing motive power since then. On next page we are asked: "Where will New York's water supply come from in the year 1900, when her population will aggregate 5,000,000 souls? Where does London's supply come from? They have nothing like the natural reserves to draw from that New York has, and if when they have 10,000,000 people they have to tap Lake Champlain, they should be better able to do it than they were to tap Croton when they did; and if that time does come, I think they will need the land to grow cabbages and other vegetables, rather than trees. We will have to employ some more economical way of holding water for a constant supply than re-foresting the country, as these Forestry Reports say will have to be done.

"All the rivers run into the sea; yet the sea is not full; unto the place from whence the rivers come, thither they return again." Perpetual motion!

The Farmers' Mill.

"Embracing the first opportunity, our representative visited the new farmers' roller mill," says the Portage la Prairie Liberal.

"The building of the mill originated in the desire of our farmers to have one where they could get gristing and exchange work done. The stock was readily subscribed, the work of building was let to Messrs. Stable & Gray, and the machinery was purchased from the North American Mill Building Company, of Stratford, Ont. The mill cost about \$5,000, the machinery \$15,000, or a total of \$20,000.

"The mill building, 38x50 feet, four stories high (30 feet), stands about 40 feet west of the farmers' elevator. This intervening space, roofed over, sheeted with iron inside and outside, constitutes the engine room from which power is transmitted to mill and elevator by a steel shaft 115 feet long, passing through all three divisions.

"The engine room is divided off by a brick wall, the machinery from the boilers. There are two of the latter, one 90, the other 40-horse power, solidly bricked in. There are two engines, the principal one a Brown automatic cut-off 100-horse power. The other is a 30-h. p. one. The fuel is largely obtained from the tailing and chaff of the elevator cleaners.

"Mr. Jas. Nummy is head miller. It was he who drew the plans for the mill. The work of construction was carried on under the supervision of Mr. Wm. Johnston, head millwright for the N. A. M. B. Company, of Stratford, who supplied the machinery.

"The present capacity of the mill is from 175 to 200 barrel per 24 hours, but everything is so arranged that with very little expense the capacity could be greatly increased."

The Howell Pear.

The editor of the Horticulturist has the following to say of the Howell pear:—Of the pears grown for market at Maplehurst, one of the most satisfactory of its season is the Howell. Its size, freedom from scab, wormholes and other blemishes, and clear, yellow skin at maturity, combine to make it a very attractive pear for market. It ripens about the end of September, just when the Bartlett season is over. In the estimation of fruit growers generally, the Howell is one of the best of the varieties of American pears. The tree is an upright, vigorous grower, and very productive. The quality is good, season September and October. This variety originated with Thomas Howell, of New Haven, Conn.