

Manitoba Experimental Farm, Brandon, Man.

This farm, situated one mile from Brandon, on the north bank of the Assiniboine River, containing six hundred and forty acres, is most admirably adapted for the purposes for which it was selected. In this vast area is found all the different varieties of soil of the Province, from a deep, rich loam on the flats, six feet in depth, to a light sand and gravel on the upland, and as the experiments will be duplicated or even triplicated if necessary, each one will give results on the various soils of the Province. The farm is watered by three spring creeks and a beautiful lake half a mile in length and six or seven rods wide. It is centrally located, three of the leading trails from the north converging at this point, and Brandon is fast becoming a railway centre. The farm is chiefly prairie, although there is some small timber and a belt of ash on it. Although this is the first season for it a great amount of work has been done. Six miles of fence has been built, consisting of a top rail of two by four scantling and four strands of barbed wire with posts eight feet apart, and is painted a reddish brown, which gives it a pleasing appearance. There is one hundred acres of good, natural meadow which will be appreciated by those who are acquainted with Manitoba farming. An excellent road has been graded across the place (one mile long), and is now being gravelled with gravel from a pit on the farm. This is being done by the Government on account of closing up the trail which ran angling across the farm. Old buildings have been utilized this year, but several new ones, which are much needed, will be built next year. Excavations have been made for the basement of the new barn, 108 x 50 feet, which will be completed in time for next season's crops. The basement will be ten feet high and serve the purpose of a stable, while the upper part will be for storing crops. The contract for building a residence for the superintendent has been awarded. Houses will also be built for the horticulturist and farm foreman in the near future. Other buildings are contemplated such as pig pens, sheep and poultry houses, &c. A belt of timber, one hundred feet wide and one and one-half miles long, has been planted, consisting of various evergreen and deciduous trees. Other belts of a similar nature will be planted through the farm in the future. Improvements have been made in the way of ditching and several places will be tile-drained in the spring. The object of this farm is to carry on experiments in all kinds of grain-growing that will be likely to prove beneficial to the Province, as well as in large and small fruits, forestry, dairying, cattle, beef and dairy breeds, sheep husbandry, swine and poultry. The experiments this year are not regarded as conclusive by the superintendent, although several valuable facts have been elicited, or, properly speaking, confirmed. Ladoga wheat has proved itself ten days earlier in ripening than Red Fife, which must be pleasing to Manitoba farmers. In some quarters there seems to exist a fear that this variety will not prove equal to the Red Fife, but from all we can learn it will not be far, if indeed any, behind it, and the early ripening will, in many seasons, place it far ahead of it. A new variety, the White Delhi, promises exceedingly well, but the superintendent feels that he is not justified in speaking confidently until further tests are made.

Perhaps the most valuable experiment in wheat this year was that of sowing in the fall. Red Fife wheat sown in November produced the largest crop, viz: twenty-two bushels per acre. The soil seemed to stand the drouth better than where it had been worked up in the spring. For fuller data and results of all experiments see the annual report which will shortly be issued, and which may be had on application.

The experiments with oats this season have proved satisfactory and will be continued another year. The root crop has not been entirely satisfactory, although the potatoes have proved remunerative at current prices. Special attention will be given to this department. The superintendent claims to have proved conclusively that a dry summer can be safely tided over by the growth of fodder crops.

The cultivation of native grasses has been a decided success; grass sown last spring grew large enough to be harvested from seed this season. Several varieties have been sent to the chemist of the Central Experimental Farm, Ottawa for analysis. Cultivation of clover, timothy, etc., have also been successful this season, but further experiments will be made. A number of small fruits have been planted, but no large quantities have been reached, as the plants have not passed through a winter yet. Special efforts will be made to produce varieties of fruit suitable for this country. Importations have been made from various quarters, and native seedlings will be planted. In the grain department the experiments have been of every imaginable kind—early and late sowing—varieties against varieties; manure and no manure; stubble vs. fallow; drilling vs. broadcast seeding, etc.

Concerning the future of this farm no one can speak with certainty, but if the same zeal, economy, and general sound business principles are displayed that has characterized the management thus far, it cannot fail to prove beneficial. The selection of a superintendent was doubtless a matter of considerable difficulty to Professor Saunders, but in Mr. S. A. Bedford he has secured a man who will doubtless give general satisfaction. He has had an experience in Manitoba and the Territories, a considerable part of which was spent as a successful farmer on his own account. He seems to be the right man in the right place.

The Wheat Tester.

That grading wheat is a proper basis for prices most of our farmers will allow, but it is just as unanimously agreed that by the use of the small tester, that is, a thirty-second and sixteenth part of a bushel, as is now in general use, an injustice can, and has already been done. By its use in dishonest hands, quite a difference in the grade is quite possible. It also does not give credit for fractional weight; therefore, it is not as correct as the half-bushel or bushel weight. The fact is, in the past millers have taken matters in their own hands, and the old act, grinding for a twelfth, first in force nearly one hundred years ago, and still in force, has, in many cases, been a dead letter, and no doubt makes farmers careful how they endorse an innovation, such as the exchange table, also laid down by the Millers' Association, which pays a still higher premium for good wheat, while it is harder still on a light sample.

The proposal to have this matter settled by allowing the Minister of Agriculture and Secretary of the Millers' Association to appoint arbitrators, is, perhaps, as good a solution of the problem as any other. As it stands, none are quite satisfied. As far as the additional tariff on flour is concerned, the farmers of the Dominion should certainly hold up both hands for this

measure, as it is a decidedly further protection for their wheat, and would also give them the benefit of more and cheaper offal. The duty at present stands in favor of flour being brought in, there is a differential tariff of 21c. per barrel in favor of flour rather than wheat. It also favors American millers before our millers, grinding in bond.

This is a subject that our farmers should fully consider, and make their views on the matter heard. The more mills there are in Canada, the greater the home demand for our wheat.

The Ontario Agricultural College and Experimental Farm.

COLLEGE DEPARTMENT.

During the year just closing the attendance of students has exceeded that of 1888, the number now at the college being eighty-seven. The full courses of lectures have been given by various members of the staff, and the increasing attendance and interest not only indicate the greater value of the college during the year, but also the hope of still better work in 1890. The completion of the farm buildings and the addition of stock suggest still better work in the lectures on the care and handling of live stock. The laboratories and other departments of work are also fairly well equipped for work in connection with them. The addition of a complete system of sewage disposal is the most noticeable addition of the college buildings.

CHEMICAL DEPARTMENT.

In addition to the regular college work a great deal of analytical work has been undertaken in the chemical laboratory. Samples of the best Ontario oats have been analyzed and results published. Twenty-six samples of sugar beets, grown in the central counties of Ontario from German and Bohemian seed, have been carefully tested for their sugar, with a view to determining whether beets can be produced by Ontario farmers capable of producing good sugar. The results in some cases have been exceedingly favorable. At the time of making this report forty-two samples of corn grown by the Dairy Department are being analyzed in duplicate. The results of all this work would be too extensive to report here, but will appear in full in the College report.

FARM AND EXPERIMENTAL DEPARTMENT.

The most important point in connection with the farm during the past year has been the erection and completion of the new barns built to replace those consumed in 1888. Briefly, these barns are the old ones with improvements suggested by experience. They cost in the neighborhood of \$20,000, and are a credit to the province.

FARM AND EXPERIMENTAL DEPARTMENT.

The following is an outline of the work carried on at the College Farm this year:—An unusually large proportion of the farm was sown to grain, owing to the limited acreage of hay and pasture during 1888. Without any exception the crops produced a large amount of straw, although the grain yield is not proportionate; owing to the large acreage that lodged, the labor of harvesting was unusually heavy. The root crop was not very good, owing to the excessive wet of June, which delayed planting till in July. A field of rape was grown, and a number of lambs fattened upon it with a good deal of satisfaction all round. Several hundred dollars worth of pork was raised and marketed. The stock was gradually replenished throughout the season, so that now the barns are very well filled. All