

The Commercial

WINNIPEG, MAY 14, 1894.

THE EXPERIMENTAL FARMS.

The annual report of the experimental farms for 1893, is to hand. It is a bulky volume of over 350 pages, with illustrations, and is perhaps the most interesting annual report of the experimental farms yet issued, which is saying a good deal, as we have always regarded these reports as about the most interesting of the many volumes sent out by the government each year. About 200 pages of the book are taken up with an account of the work done at the Central farm at Ottawa during the year, opening with a report of over sixty pages from Professor Saunders, director. There are also separate reports from the superintendent of each department of the Central farm, such as the agriculturist, the horticulturist, the chemist, the entomologist and botanist, and the poultry manager. The superintendents of the five branch farms, located at Nappin, Nova Scotia, Brandon, Manitoba, Indian Head, Assiniboia territory, and Agassiz, British Columbia, also furnish reviews of their year's work. We naturally turn first to the very full and interesting report from Mr. Bedford, of the Brandon farm, as being of first interest in the West.

Mr Bedford states that last spring was the most backward ever experienced. Wheat was not sown until the first of May, fully two weeks later than the average season. The weather, however was very favorable from that date forward, and there was every prospect of a heavy crop, until the dry, hot windy weather which occurred late in July, materially reduced the condition of the grain crops. The first killing frost occurred on September 16, but all the grain was out of the way by that date, and no damage was done. Mr. Bedford states that the season has emphasized the necessity of a shorter course of rotation of crops. He thinks that two, or not over three crops at the most should be grown, and then the land should be fallowed. This process frees the land from weeds and ridges it of unrotted stubble which accumulates during the crop years. The great advantage is that the fallowed land retains the moisture much better than loose land filled with stubble.

Wheat is of course the first grain crop dealt with in Mr. Bedford's report. Thirty nine varieties of wheat were sown on May 3, on summer fallow, with common drill, $1\frac{1}{2}$ bushels per acre. The seed was bluestoned, and all were free from smut. Only one variety—the Anglo-Canadian—suffered from rust to any extent, though three or four other varieties had traces of rust. The rest were free from rust. Colorado and Campbell's Triumph were the earliest to ripen, on August 12, followed two days later by Ladoga and a number of other varieties. White fife, red fife and old Red river were ripe on August 21. The most of the other varieties were ripe between August 15 and 21, an average of 104 to 110 days in maturing. Two or three varieties were later than August 21 in ripening, two being on August 24 and one on September 3, but the latter was

the rusted variety. The best yielder proved to be goose wheat, giving 36 bushels per acre, or $3\frac{1}{2}$ bushels more than the next best, this being Harrison boarded. Goose also weighed the heaviest, 62½ pounds per measured bushel. Red fife gave 29 bushels, 20 pounds per acre, followed by Red River, with $\frac{1}{2}$ bushel less, each weighing 60 pounds. There were six varieties yielding from $\frac{1}{2}$ to seven bushels per acre more than red fife, and thirty one varieties yielded from 16 to 29 bushels per acre. The rusted variety yielded only seven bushels. Though goose gave the best yield, it was one of the three latest in ripening, on August 24. This test of wheats included fourteen new varieties, originated at the Central farm, from crosses of red and white fife with Ladoga. They are all early ripeners, coming in about August 14 and 15. The largest yield from any of these was 30 bushels, from Preston variety, while several others were at the bottom of the list.

A number of wheats have been grown for several years, and show the following average yield for four years: Blue stem, 34 bushels, 42 pounds per acre, 134 days in maturing; Pringle's champion, 33 bushels 18 pounds, 125 days in maturing; White Connell, 32 bushels, 8 pounds, 128 days in maturing; Gio Grande, 32 bushels, 2 pounds, 129 days in maturing; Hungarian mountain, 31 bushels, 57 pounds, 125 days in maturing; red fife, 31 bushels, 56 pounds, 130 days in maturing; white fife, 30 bushels, 32 pounds, 123 days in ripening, etc. Campbell's Triumph and Red Calcutta were the earliest varieties, ripening in 120 days, but they were the two lowest in yield, out of twenty four varieties. Ladoga was the third lowest in yield, and ripened on an average of 122 days. The objection to blue stem is its late ripening habit, though a wheat grown extensively in the southwest states. Hungarian mountain is a hard variety of promise, which ripened on an average 5 days earlier than red fife.

In other experiments with wheat, the largest yields were obtained from the earliest sown with one exception, and the poorest yield from the latest sown. The earliest sown was also the first to ripen. Red fife sown on May 2 was ripe on August 18 and yielded 28 bushels; sown on May 9 was ripe on August 21 and yielded 33 bushels 20 pounds; sown on May 16, was ripe on August 24 and yielded 29 bushels; sown on May 23, was ripe on Sept. 1 and yielded 26 bushels, 40 pounds; sown on May 30, was ripe on Sept 3 and yielded 22 bushels; sown on June 6, was ripe on Sept. 12 and yielded 19 bushels. Tests as to date of cutting indicate that wheat should not be cut before it is well matured, as there was a heavy loss in cutting green, and even in the dough stage there was a slight loss in quantity per acre, and a considerably lighter weight per measured bushel.

The earliest sown oats, on May 2, gave the best yield. The highest yield was the banner oats, giving 86½ bushels per acre. Barley gave the same results as to date of sowing, the early sowing giving the largest yields.

The value of drills is shown by the experience of four successive years. The common drill averaged 30 bushels, 44 pounds per acre of red fife wheat. The press drill gave 30 bushels,

29 pounds, and the broadcast machine 25 bushels, 18 pounds. This average result for four years indicates that drills should be used, though the press drill does not appear to have any advantage over the common drill, and the date of ripening was the same in each case. The average date of ripening was two days later with the broadcast machine. In barley the average result for three years was more favorable for the press drill, giving 57 bushels, 45 pounds, as compared with 53 bushels, 44 pounds for the common drill, and 40 bushels, 37 pounds for the broadcast sowing, the date of ripening being the same in every case.

The smut test for wheat has again proved the value of bluestone. In a square sown with smutty seed there were ten smutty heads from the seed treated with bluestone, and 306 heads from the same seed sown without treatment.

Forty-five varieties of oats were tested last year at the Brandon farm. The largest yield was obtained from the banner, 91 bushels per acre, abundance coming next with 85 bushels. Other varieties ranged from 82½ down to 51½ bushels, while only two varieties went under 51 bushels. This is a very good showing, considering that the hot, dry weather of the latter part of the summer was very trying upon oats. This good yield is probably due to the fact that the oats were sown on summer fallow, while the general custom of farmers is to sow oats on land unfit for wheat. The result with oats indicates the advantage of good farming all through the list. A number of new varieties were tried, but they did not stand high up in the list as to yield. The banner has proved the best yielder, the average yield for four years being 82 bushels, 8 pounds, English white being next with 78 bushels, 13 pounds, followed by Rosedale and white Russian with 74 bushels, and welcome with 73½ bushels.

In barley the best yield last year was Odessa, a six rowed variety, with over 57 bushels per acre. This variety of barley has averaged over 59 bushels per acre for four years. Duck bill and Goldthorp, both two rowed varieties, also yielded some pounds over 59 bushels per acre for four years, showing the three varieties to be about the same in point of yield. The Odessa, however, is an earlier ripener.

Pease, though a crop not grown to any extent in Manitoba, has always given good returns at the Brandon farm. From 25 to 36½ bushels per acre was the variation in the yield of peas. The labor of harvesting seems to be the drawback in growing peas here.

In the important matter of rotation of crops, experiments resulted in a larger crop of wheat grown on millet stubble and fodder corn land than was obtained from summer fallow land, while on barley and oat stubble the yield was poor. The stubble land was spring plowed. Further reference will be made to this season's work at the Brandon farm next week.

A QUESTION OF IMMIGRATION.

Mr. Austin, of the Winnipeg street railway company, who returned from England recently, has made a suggestion regarding immigration which is worthy of thought. In reply to the question, "How are the immigration prospects from England to Canada?" he is reported to have said:—