

The Commercial

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EXPERIMENTAL FARMING.

Continuing our article of last week regarding the work of the Manitoba Experimental farm during 1892, we will first take up the experiments with oats. The year is not considered a good one for oats, owing to prevalence of rust. A number of new varieties were tested. The highest yield obtained from 35 varieties was 37.2 bushels per acre, from white Hungarian. Australian stood second, yielding 35.30; Banner third, with 32.12 and Abundance fourth, with 31.26 bushels per acre, and so on downward, the lowest yield being 50 bushels, obtained from Rennie's Prize White. The Volcome oat, a well-known variety, yielded 72.32 bushels. The weight per bushel varied from 29½ to 43 pounds, Bonanza giving the highest weight, with a yield of 60 bushels per acre.

The yield of barley on the farm did not equal 1891, but some very fair returns were secured. Many varieties lodged badly, indicating the value of stiff strawed varieties. The superintendent makes the following suggestions regarding barley: Summer fallow land preferred. Never sow on fall plowing; it is generally too dry. If sown on spring plowing, sow and harrow the same day, so as to retain the moisture, always use a drill, press drill preferred. In a test of twenty-one varieties of barley, on black loam, sown on May 20th, the highest yield was 67.24 bushels per acre, from Goldthorpe variety, two row. Italian returned 60.40 bushels, Swedish 57.14 bushels; Sharp's improved 56.32 bushels and Duck Bill 56.32 bushels per acre, and so on down to 27.44 the lowest yield. The weight varied from 40 to 58 pounds per bushel. Another test of twenty-one varieties was made on gravelly loam soil, the highest yields being: Swedish 58.6 bushels; Prize Prolific, 51.32 bushels; Sharp's Imperial, 47.34 bushels; beardless, 44.28 bushels. In this test Goldthorpe, which headed the list in the first test, only came in twelfth, with a yield of 36.42 bushels.

Tests of drill sowing for barley bear out previous experiences, showing a heavy loss from broadcast sowing. The Duck bill variety was used for this test. The press drill returned 58.16 bushels, used with wheel covers and 49.18 bushels when used with chain covers. The common drill gave 52.44 bushels, and broadcast 47.4 bushels.

Experiments were made as to date of sowing, with two varieties of barley. The first sowing was on April 23, and each week thereafter until June 4, six sowings in all. The earliest sowing gave the poorest yield in each case. The last sowing, on June 4, gave the largest yield of one variety, 61.33 bushels, from Kniver Chevalier, and the other variety, Goldthorpe, returned its largest yield from the sowing made on May 21, indicating that the best results were obtained from rather late sowing. The early sowings suffered from rust, but the late were not affected.

A similar test with oats, sown on the same

dates as the barley, gave the best returns from the sowing of May 28 for Prize Cluster, and May 7 for Banner. The first sowing gave the poorest return for each variety.

Peas is a crop which speaking generally, we may say is not grown in Manitoba. On the experimental farm this crop has always been a successful one, and there would appear to be no good reason why it should not be successful with others. The following directions are given for growing field peas: Sow on soil naturally well drained, on land free from weeds. well rotted back setting or clean summer fallow preferred. Sow deep as possible, with a drill, 2½ to 3½ bushels per acre, according to size of seed. Crown, Prince Albert and Multiplier have been found most suitable. The yield last year, from eleven varieties, ranged from 19.40 to 31.50 bushels per acre.

Buckwheat was grown very successfully on the farm last year.

A great deal of attention has been given at the Manitoba farm to the production of hay and fodder crops. This is a very important matter for Manitoba. Heretofore our farmers have depended mainly upon the native prairie grasses for hay, but as the country becomes more closely settled up, this source of supply is being cut off. Farmers will be obliged to go more generally into cultivated hay and fodder crops, and it is very necessary to discover what varieties are best suited to the country. Good yields were obtained on the farm from mixed grain, sown to cut for fodder. Oats and tares sown together, returned 3 tons 975 pounds of dry fodder, and oats and peas gave a slightly smaller return—namely, 3 tons 925 pounds. Wheat and peas returned the same as oats and peas. Barley and peas gave 3 tons 300 pounds, barley and tares, 2 tons 25 pounds from the first cutting, and 1 ton 1,150 pounds from the second; rye and tares, 1 ton 1,125 pounds from the first cutting, and 1 ton 25 pounds from the second cutting.

Many imported clovers and grasses succumbed to the winter of 1891-92, which was a severe one. The following proved hardy: Timothy, Bromus Inermis, Hard and Sheep Fescue, and White Dutch Clover. Native grasses have been tested extensively on the farm, from seed gathered from the wild prairie varieties, and they have proved very successful under cultivation. These native grasses have stood both drought and frost better than timothy, and have yielded from two to three times as much hay per acre. Native grasses sown several years ago are still vigorous, proving that they are all true perennials, and not likely to run out quickly. The native grasses yielded from 1 ton 1,050 pounds per acre of hay up to 3 tons 1,200 pounds; while the highest yield of timothy, from different plots, was 1 ton 720 pounds. Splendid success has resulted from corn sown for fodder. A large number of varieties of corn have been sown for fodder, yielding from 12 tons to 27½ tons per acre of green fodder for the silo. Corn may also be stocked and used for dry winter fodder. A dozen or so varieties of millet and Hungarian grass were grown, and produced a heavy crop.

Roots were very successfully grown the past season at the experimental farm. Rennie's

Purple Top Swede turnip returned 1,010 bushels per acre. Mangels yielded up to 1,460 bushels per acre, and carrots from 310 to 462 bushels per acre. Potatoes returned from 161 to 414 bushels per acre from a test of 21 varieties; and another experiment with 54 varieties produced a yield varying from 117 to 443 bushels per acre.

In the line of fruits, experiments with apple trees have not been very successful. Some varieties have stood the winter all right. They are grown in bush form. Crab apples have done better. Most of the plum trees were winter killed, but De Soto, Early Red, and Nichols seem to stand the winter. A few varieties of cherries have also survived the past few winters. Currants, gooseberries, raspberries, etc., have done well.

Considerable attention has been given to forestry. The best results have been experienced from native trees, such as the ash-leaf maple, white elm, cottonwood. Russian poplar and willows have also done well. Eastern elm have killed back each winter.

FEEDING GRAIN TO STOCK.

THE COMMERCIAL has pointed to the value of coarse grains and damaged wheat for feed, instead of exporting. In the recent annual report of the Manitoba experimental farm, is something which Manitoba farmers should have placed before them. The only report of experiments with live stock, relates to feeding steers with frozen wheat. Six shorthorn grade steers, two years old, were selected and fed as follows: Two steers fed 20 pounds of cut wheat straw and 16 pounds of No. 3 frosted wheat; two steers were fed 10 pounds of the frosted wheat, 20 pounds of turnips and 15 pounds of cut straw. The remaining two steers were fed 11 pounds of barley chop, 23 pounds of turnips, 6 pounds of native hay and 10 pounds of cut straw. They were all fed four and a half months, three feeds per day. The cost of each experiment was as follows: First two steers consumed \$12.84 worth of feed; the second two \$12.14 worth of feed, and the third \$13.96 worth of feed, during the entire feeding period. The first two steers gained 1,310 pounds per day, the second 1,710 pounds, and the third 1,910 pounds per day. They were purchased for 23 cents per pound, and sold for 4 cents per pound, live weight, making a profit as follows: First two, \$24.33; second two, \$21.51; third two, \$34.06.

This experiment first shows the advantage of feeding stock properly, instead of marketing them in a lean or partly fed condition. It is further shown that though frozen wheat is not the most valuable feed for stock, it is more valuable when disposed of in this way, than when sold as grain. In this experiment, the frozen wheat realized equal to 56 cents per bushel in the first instance, and 61 cents per bushel in the second test. This is fully double the market price of the grain. The trial of barley, with turnips and hay, gave even a more satisfactory return than the frosted wheat. The experiment indicates further that better results can be had from feeding turnips with the other feed.