

There are included in the preceding list ten of the new cross-bred sorts which have been produced at the experimental farms. The following are their names and parentage.

Brandon.....	Giant Cluster female,	with	Prize Cluster male.
Russell.....	Prize Cluster	do	“ Giant Cluster do
Cromwell.....	Prize Cluster	do	“ Giant Cluster do
Pense.....	Black Tartarian	do	“ Early Gothland do
Miller.....	Banner	do	“ Doncaster Prize do
Master.....	Prize Cluster	do	“ Giant Cluster do
Oxford.....	Giant Cluster	do	“ Prize Cluster do
King.....	Banner	do	“ Doncaster Prize do
Medal.....	Prize Cluster	do	“ Giant Cluster do
Olive.....	Black Tartarian	do	“ Early Gothland do

These are all the results of special work done in cross-fertilizing with the varieties named at Brandon in 1892, by Dr. A. P. Saunders. The single kernels thus obtained were sown in the spring of 1893 at the central farm and multiplied there until the spring of 1896, when they were first sent out for test at the branch farms.

There were several objects in view in making these crosses. One was to endeavour to start in this way new and vigorous strains of productive sorts, others were to ascertain the effect of crossing sided oats with branching, thin hulled oats with thick hulled, oats with long kernels with others with short kernels, yellow oats with white, and black oats with white. Many interesting results in the way of intermediate forms have been obtained, but some of these will need to be selected probably for several years to come before uniformity of character in the grain is secured.

SIBERIAN OATS.

It has for several years past been a matter of surprise that the Siberian oat grown by the experimentalist on the college Farm at Guelph, Ontario, has given uniformly much better crops than the oat grown under the same name at Ottawa. Through the kind courtesy of Mr. C. A. Zavitz, the Central Experimental Farm was supplied last season with enough of the seed of the Siberian oat grown at Guelph to sow a plot of 1-20th of an acre. As this seed was not received early enough to be included in the uniform test plots, it was sown separately, and proved to be very productive and gave a crop equal to 82 bush. 12 lbs. per acre, but it was a branching oat, whereas the Siberian which has been grown at Ottawa is a sided variety. The seed used at the central farm is from an importation made in 1888 from Haage & Schmidt, the well known seedsmen of Erfurt, Germany, while the Siberian oat grown at Guelph was supplied by an English seed firm. These oats are distinct varieties, and the Guelph seed has thus far been the most productive, but which of them is the true Siberian has not yet been determined.

TREATMENT OF OATS FOR SMUT.

Smut has occurred to a greater or less extent in some varieties of oats at the Central Farm for several years past, and in some instances the crops obtained from the experimental plots have been materially reduced from this cause. With the object of preventing the recurrence of such loss all the varieties, which had suffered in the past have been treated this year with a solution of potassium sulphide as follows:—

Dissolve 1½ lbs. of potassium sulphide in 25 gallons of cold water and soak the oats in this solution for 24 hours. Drain off the liquid and spread the oats thinly in some suitable place where they will dry quickly and sow the following day. If the seed thus treated is not dried quickly it is liable to sprout before sowing. In every instance where the seed was thus treated the grain was practically free from smut.