

BULLETIN 103.

EXPERIMENTS WITH WINTER WHEAT.

By C. A. ZAVITE, B.S.A., EXPERIMENTALIST.

One hundred and thirty-three varieties of winter wheat have been tested at the Ontario Agricultural College within the last seven years. Of this number, fifty-three varieties have been grown for five years, and the remainder have been tested from one to four years. Besides testing the varieties, there have been experiments conducted in different dates of seeding, methods of seeding, selection of grain for seed, quantities of seed per acre, application of fertilizers, sowing of spring grain to act as a mulch for winter wheat, the yield and quality of wheat cut at different stages of maturity, and the value of seed from wheat cut at different stages of maturity. These different experiments have occupied eight hundred and eighty-five plots. This bulletin gives a summary report of the principal experiments conducted under these heads in 1896, and the average results of some of the experiments conducted for several years in succession.

CONDITIONS OF SOIL.

The field in which the grain was sown in 1896 is a good average clay loam, quite uniform in character, and has a very gentle slope towards the south-west. No manure nor commercial fertilizers had been applied to the land since the spring of 1893, when twenty tons per acre of farm-yard manure were used. The land produced a crop of corn in 1893, a crop of grain in 1894, and a crop for green manuring in 1895, which was plowed under in July of that year. No other plowing was done, but the land was well cultivated up to the first of September. The plots were made of uniform size for the different experiments, each containing one one-hundredth of an acre.

CONDITIONS OF SEASON AND GROWTH.

The seeding for all the experiments took place in the month of September. The germination was quite satisfactory throughout, and the growth of the wheats in the autumn was good. On examination of the crop in the following April, it was found that many of the varieties showed but little signs of winter killing, while others had been considerably frozen out, thus affording ample data for a comparison of the different plots in respect to hardiness.

Several thousand farmers visited our winter wheat plots in the month of June, and appeared to be much interested in the comparative growth shown by the different experiments.