BULLETIN 108.

EXPERIMENTS WITH WINTER WHEAT.

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A good deal of attention has been given to the testing of winter wheat in the Experimental Department of the Ontario Agricultural College. Varieties obtained from the United States, England, Scotland, Germany, France and Russia have been carefully tested along with those secured from the wheat-growing sections of Canada. Besides testing the varieties, there have been experiments conducted in different dates of seeding, methods of soil preparation, methods of seeding, selection of grain for seed, quantities of seed per acre, application of fertilizers, treatment of smut-infested seed, 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 experiments have occupied over twelve hundred plots within the last nine years. This bulletin gives a summary report of the principal experiments conducted under these heads in 1898, and the average results of some of the experiments conducted for several years in succession.

Field Conditions.

The two hundred and three plots used for the experiments with winter wheat in 1898 were situated in the southern portion of the large experimental field which lies at the rear of the main College building. The land used for one of the experiments had a gentle slope towards the south, and that used for the other experiments was comparatively level. No manure had been applied to the land since the spring of 1896, when it received a dressing of twenty tons of farm-yard manure per acre. Commercial fertilizers had not been used for at least ten years. The land produced a crop of spring grain in 1895, a crop of roots in