A PRELIMINARY NOTE ON THE INHERITANCE OF RUST RESISTANCE IN OATS.¹

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Breeding for rust resistance in wheat has been carried on rather extensively, but in oats little has been done. Parker has made a varietal survey³ of oats with respect to rust reaction and also reported⁴ on the behavior in the F₂ of a cross between parents differing in their reaction toward crown rust (Puccin'a lolii avenae). In this cross susceptibility to crown rust was inherited as a dominant character.

During the summer of 1918, crosses⁵ were made between a selection of White Russian oats (Avena sativa orientalis) resistant to stem rust (Puccinia graminis avenae) and a selection from each of the two highest yielding varieties grown at University Farm. These varieties, Minota and Victory (both Avena sativa), are very susceptible to stem rust.

The F₁ plants were grown in the greenhouse the winter after the crosses were made and a limited number matured soon enough to permit growing a small F₂ generation the following summer. Ma-

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