KOTA, A RUST-RESISTING VARIETY OF COMMON SPRING WHEAT.

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Resistance to stem rust of wheat (Puccinia graminis tritici) is a quality lacking among the varieties of common spring wheat now grown commercially in the hard spring wheat sections of the United States. Following the introduction of the Marquis variety, claims were made for its rust resistance, but further tests showed that it merely escaped rust.

True resistance, however, has long been recognized in many varieties of durum wheat. The introduction of the durum wheats, and later of the Marquis, into the hard red spring wheat region were epoch-making events. These wheats won their way almost entirely because of their increased yield over the varieties already in cultivation, the increase being due in large measure to the relation of the wheats to stem rust. The durums were resistant and the Marquis evaded rust by ripening early.

In an endeavor to originate a rust-resistant variety of common spring wheat, resistant varieties of durum wheat have been crossed with commercial varieties of common wheat. This, apparently, afforded the most practical means of obtaining the desired end. Results up to the present, however, have not been very successful. No high-yielding hybrid of common wheat having the rust resistance of the durum and the good milling and baking qualities of Marquis has yet been originated.

The authors believe that the Kota, the variety of common wheat here discussed, possesses the rust resistance sought. It also gives promise of being a high yielding and an excellent bread-making wheat. If the variety does not in itself possess all of these qualities, it is hoped that its discovery will obviate the necessity for further crossing durum and common wheats in breeding for rust resistance.

History.

Kota wheat first came to the attention of the authors in 1911, when they were located at the Dickinson Substation, Dickinson, N. Dak.

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