Karnal bunt Resistance in Bread Wheat. (C01-mujeebkazi124812-Poster)

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Abstract:

Karnal bunt (KB), caused by Tilletia indica (syn. Neovossia indica) is a disease that affects the wheat grain, and when infection is high the grain quality is adversely affected. Hence exist stringent quarantine measures that limit the exchange and distribution of grain from disease prone locations. Genetic resistance in conventional and related germplasm is thus a major strategy to counter the disease, and using alien genetic diversity is one option. This approach is reported. From an elite set of 95 synthetic hexaploids (SH) derived from Triticum turgidum/Aegilops tauschii tested over six years, 60 entries selected are immune to KB. These immune SHs were crossed to elite but KB susceptible bread wheat (BW) cultivars, and segregating generations advanced by the pedigree method. The advanced BW/SH derivatives evaluated over 5 years under artificial tests conducted in Obregon, Mexico have led to identification of good agronomic type progenies ranging in disease infection between 0.69 to 1.97% (3.0% being the acceptable limit). WL711, the susceptible control, averaged 30.0%.

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