Response of Emmer Wheat x Goat Grass Derived Synthetic Hexaploid Wheat to Leaf Rust, Stripe Rust, and Septoria Leaf Blotch. (C08-lage094822-Poster)

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Abstract:

A set of 194 synthetic hexaploid wheats derived from crosses between Triticum dicoccum (emmer wheat) and Aegilops tauschii (goat grass) were, together with their 22 T. dicoccum and 15 Ae. tauschii parents, evaluated in the field for leaf rust, strip rust, and septoria leaf blotch resistance. The plants were grown in 1m plots at two location near CIMMYT, Mexico City, one for leaf rust evaluation, the other for stripe rust and septoria leaf blotch. Results from two cycles revealed diversity for leaf and stripe rust resistance in all entries. The responses varied from completely susceptible to resistant in the synthetics and both parents. Disease progress curves for leaf rust indicate the presence of slow rusting genes in the T. dicoccum parents and the synthetic hexaploids. Rust resistance expressed in the synthetic hexaploids was derived from both parents. However, suppression of resistance was observed, suggesting the presence of suppressor genes. The septoria leaf blotch evaluation showed high level of resistance in all the synthetic hexaploids. The resistance is suspected to be derived from the T. dicoccum parents, but since the Ae. tauschii parents was screened for septoria leaf blotch, the actual donor remains unknown.

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