Contribution of Alien Germplasm for Fusarium Head Scab Resistance in Wheat. (C01-mujeebkazi111614-Poster)

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Abstract:

Germplasms categorized under interspecific and intergeneric hybridization are candidates for harnessing new genetic diversity for head scab resistance caused by Fusarium graminearum. Within the interspecific area, our emphasis has been on utilizing Aegilops tauschii accessions through its derived synthetic hexaploids (SHs); Triticum turgidum/Ae. tauschii, 2n=6x=42, AABBDD. Based upon multiyear tests in Toluca, Mexico, a sub-set of 36 SHs was formed with each entry possessing a Type II infection level of 15% or less; similar to, or better than the resistant Sumai-3. Evaluations for Type I, III, and IV are conducted by a collaborating group. This resistance level from several synthetics has been transferred to elite but scab susceptible bread wheat cultivars and approximately 150 advanced lines with diverse Ae. tauschii accessions are now available for wheat breeding. Few mapping populations have also been produced and distributed for molecular study. A promising response for Type II has further been identified in A and B genome hexaploid stocks and some intergeneric hybrid derivatives which shall enhance genetic diversity further.

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