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MINING THE GENE POOL FOR NOVEL RESISTANCE SOURCES TO *ZYMOSEPTORIA TRITICI* IN TUNISIAN DURUM WHEAT LANDRACES

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Septoria tritici blotch (STB), caused by *Zymoseptoria tritici*, is one of the most universal and significant disease of wheat worldwide. Disease incidence could be higher under minimum tillage practices where crop residue provides higher levels of inoculum. The high level of genotypic diversity in *Z. tritici* also indicates that ascospores produced during the course of a season could provide secondary as well as primary inoculum. With the high genetic variability of the pathogen, it seems likely that most resistance genes will not last long so there will be a continual need to identify new strategies for effective disease management. Many approaches are being tested to maximize the time for symptom expression before leaf senescence. CIMMYT (CRP-WHEAT) is exploring alternative methods of precision phenotyping at key STB hot spots (natural and artificial inoculation performed) at Tunisia, Ethiopia, Uruguay and Mexico. Screening durum wheat germplasm for STB resistance in Tunisia over last three years under field conditions showed that assessment at seedling and adult growth stages could provide breeders better information on the use of novel resistance sources. 325 Tunisian durum wheat land races were assessed for their respective resistance at seedling and adult growth stages. Six classes were identified, class I includes accessions that show resistance at seedling and adult growth stages whereas class VI has accession that are susceptible as both growth stages. Other resistance combinations classified as II to V classes will be illustrated. Tunisian durum wheat landrace accessions within each class could carry novel seedling and adult plant resistance genes to STB that can be exploited on various breeding strategies.

ABSTRACT