

Screening for resistance in local and global wheat germplasm against *Fusarium culmorum* and *F. pseudograminearum*, causal agents of crown rot in Tunisia

S. Gargouri (1), I. M'tat (1), L. G. Kammoun (1), M. Zid (1), S. CHEKALI (2), J. M. Nicol (3), M. S. Gharbi (1)

(1) Institut National de la Recherche Agronomique de Tunisie, rue hédi karray 2049, TUNISIA; (2) Ecole Supérieure d'Agriculture du Kef, Tunisia; (3) International Maize and Wheat Improvement Center, CIMMYT, Emek, Ankara, Turkey

Phytopathology 99:S41

Crown rot caused by *Fusarium* species is a major constraint to cereal production in many rainfed regions of the world including North Africa. *F. culmorum* and *F. pseudograminearum* are the dominant casual agents in Tunisia and have been found to cause up to 40% of yield reduction in wheat. Screening for genetic resistance, which constitutes one the best methods to control this disease is difficult and requires many repeats to ensure useful data. Collaboration with ICWIP-CIMMYT started three years ago to adopt a screening method under greenhouse conditions. Advanced lines of the national wheat breeding program and specific Crown Rot International CIMMYT nursery were screened using a modified CIMMYT protocol. Many of the CIMMYT lines have shown repeatable valuable results for resistance for one or both species of *Fusarium*. Ten lines with effective sources of resistance already confirmed around the world, have been validated against the local Tunisian *Fusarium* isolates. In addition a few lines from the national wheat breeding program showed promising results in one year data screening. Further work is needed to validate these sources in the field. The most useful source of resistance should serve as a valuable source of resistance for breeding programs.