Yield Loss Assessment of Wheat, Barley and Triticale Caused by Crown/Root Rot Inoculation under Field Conditions. (A06-mergoum165011-Poster)

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Abstract:

Crown, foot or root rots are among the major diseases of wheat world wide, particularly in the dryland areas of West Asia and North Africa (WANA). In order to assess the effects of root and crown rots diseases on grain yield of major grown cereal crops in the region (wheat, triticale and barley), a study was conducted in Konya Research Center, Turkey, during the 1999-2000 and 2000-2001 crop seasons. An artificial inoculation of seeds with Drechslera sorokiniana (Cochliobolus sativus), Fusarium culmorum and Fusarium avenaceum pathogens was used in these studies. These pathogens had been reported in previous studies to be widespread in the region. The experiment included 10 genotypes (5 bread wheat, 2 durum wheat, 2 barley, 1 triticale). The experiment was layed out in a in a Split Plot design with four replications. The cultivars were the main factor and inoculations (inoculated vs. non-inoculated) were the sub-factor. Each entry was planted on an 8 rows, 7 m long plot at planting, and 6 rows, 5 m long at harvesting.The results showed an average of 34% yield reduction due to root rot inoculation. The highest yield reduction, 54% occurred in durum wheat cultivar Kiziltan-91 while the lowest, 13% was observed in triticale cultivar Tatlicak-97. Hence, in terms of tolerance, triticale was the most tolerant followed by barley then bread wheat and durum wheat genotypes were the most susceptible to root rots.

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Presentation Information:

Presentation Date: Monday, November 11, 2002
Presentation Time: 2:00-4:00 pm
Poster Board Number: 434

Keywords:

Crown/root rot, Yield losses, Wheat, Barley and triticale, Inoculation