

SHORT COMMUNICATION

Identification of Resistant Sources to *Turcicum* Leaf Blight in Maize**VK Rathee, SK Guleria, BK Sharma and G Katna**

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Key Words: Leaf Blight, Resistant Sources, *Turcicum*

Maize (*Zea mays* L.), is an important staple food crop of mid hills of Himachal Pradesh. Crop losses from *Turcicum* leaf blight may vary from 27.6 to 90.7% in grain yield (Chenulu and Hora, 1962). Reduction in yield depends upon time of first appearance of the disease which is largely determined by the weather conditions (Ulstrup, 1961). The disease can be managed by chemical and cultural management practices but the indiscriminate use of fungicides for the control of disease have several disadvantages particularly the cost of fungicide and their residual effects, which cause health hazards and some time pathogen develops resistance against fungicides. Use of resistant material is the best environment friendly approach, therefore, efforts were made to identify resistant sources to *Turcicum* leaf blight of maize.

Turcicum leaf blight caused by (*Exserohilium turcicum* (Pars.) Leonard and Suggs. (*Setosphaeria turcica* (Luttr.) Leonard and Suggs.) is the most serious and prevalent disease in sub-humid zone of Himachal Pradesh.

Two hundred eighteen and 237 maize genotypes/lines during 1996 and 1997, respectively, were evaluated under artificial epiphytotic conditions at the station (hot spot for the disease). The entries were sown/planted in two row plot of 5 m length. All recommended agronomic practices were followed in raising the crop. All entries were inoculated with dry powdered inoculum (obtained from grinding the heavily infested mature leaves of previous season). The inoculum was inserted in the whorl of each plant. In the dry season water was sprayed to increase the relative humidity. The inoculation was repeated

twice at one week interval. The disease data/observation were recorded at dough stage by using 0-5 scale.

The critical evaluation of maize germplasm led to the identification of five highly resistant (<1) genotypes, viz., KH-559-A, KH-5367, Bio-9696, PNZ-117 and Bio-41015 and six resistant (<2) genotypes, viz., X-1283-M, BH-1089, X-1265-D, KH-5364, Pro-320 and Bio-9720. It is concluded that resistance mechanism of these genotypes can be exploited in breeding programme for developing high yielding varieties, resistant to *Turcicum* leaf blight to minimize yield losses. Similar types of results were obtained by Brewbaker *et al.*, (1989) and Rathee *et al.*, (1999).

Acknowledgement

The authors are highly thankful to Dr NN Singh, Project Director, Directorate of Maize Research, New Delhi, for providing maize germplasm for evaluation.

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