"Studies on Alternaria blight of mustard crop and approach to its control in Bastar plateau"

by

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ABSTRACT

The present investigation entitled "Studies on Alternaria blight of mustard crop and approach to its control in Bastar plateau" was conducted during 2003-2004 and 2004-2005 at S.G. College of Agriculture and Research Station, Jagdalpur. The studies on identification of pathogen; occurrence of disease; extent of infection; disease development in different varieties and sowing dates; losses in yield and integrated management of Alternaria blight of mustard were undertaken.

The pathogen associated with mustard leaves, stems and pods was identified as Alternaria brassicae on isolation and pathogenicity tests.

Prevalence of Alternaria blight in Jagdalpur and Dantewada districts was carried out during winter 2003-2004. Alternaria blight in mustard was found to be widely prevalent in different locations of Jagdalpur and Dantewada district and the severity varied from 25.40 to 21.51 per cent.

Alternaria blight of mustard was noticed at 55-65 DAS in all the varieties during both the years, 2003-2004 and 2004-2005. Maximum air temperature was found to have positive influence on development of Alternaria blight whereas, relative humidity during morning, noon and wind velocity have negative influence on disease development.
In assessment of yield losses, the number of pods/plant and grain yield kg/ha were found to be significantly increased under protected conditions. However, no significant difference in grain weight/1000 seeds was recorded under protected as well as unprotected conditions in all the varieties under test.

Twenty five entries were evaluated against Alternaria blight of mustard among them, EC-399301 was found to be resistant to Alternaria blight during two years of testing, 2003-2004 and 2004-2005.

Seven plant extracts were evaluated among them leaf extracts of Callotropis procera and Bachkand were found to be highly effective in inhibiting the radial growth of Alternaria brassicae at 10000 ppm under in-vitro. Under field conditions, leaf extract of Nagbail was found to significantly reduce the disease and increased the yield.

Among the common cultural practices, the incidence, severity of Alternaria blight and grain yield of mustard were found to be significantly higher in early and mid sown crop during both the years of cultivation.

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