

## Reaction of Cluster Bean Varieties and Plant Age to Infection by *Alternaria cyamopsidis* Rangaswamy and Venkatarao

*Alternaria cyamopsidis* is one of the important pathogens of cluster bean causing leaf spot, blight and defoliation in later stages of the crop. The present study was taken up to know the effect of age of host plant and varieties on disease severity.

For testing effect of plant age, seeds of CV Dharwad local was sown in pots containing sterilised soil at 10 days interval, so as to get plants of different ages. Twenty four hr. before inoculation, the plants were sprayed with sterile distilled water and were covered with polythene bags to provide high humidity. The plants were sprayed with a 15 days old culture suspension ( $10^4$  spores per ml), and were enclosed in polythene bags for next 49 hr. Twenty days after inoculation, 5 plants were scored for per cent leaf area infected, on individual leaflet and the mean per cent disease area per leaflet was calculated. Disease grading and PDI were calculated as per the procedure of Mathur *et al.* (1971). Eighteen varieties obtained from Regional Research Station, Raichur were raised in field with 3 replications, each replication consisting of 2 rows, during *kharif* 1989. One month old seedlings were inoculated with a  $10^4$ /ml spore suspension of *A. cyamopsidis*. After thirty days of inoculation disease scoring was made as suggested earlier.

Results obtained indicated that the plants of all the ages were susceptible (to the attack of pathogen). There was progressive increase in disease severity with increase in age of the host. Disease index (5.26) was low during early stage of the crop growth (10 days old plants) which increased to 46.23 per cent on 70 days old crop. At early stages symptoms were confined only to older

leaves but as the age of the crop increased, symptoms were also noticed on the subsequent leaves indicating that the pathogen is a low sugar fungus. The PDI were 5.2, 16.3, 27.4, 29.1, 30.0, 42.9 and 46.2 on plants of 10, 20, 30, 40, 50, 60 and 70 days old respectively. The results are in agreement with Rowell (1953), who reported that *A. solani* (Ell and Mart) Jones and Grout invaded the leaves of all the ages, but was mostly confined to older leaves.

Out of 18 varieties screened, only two GG-3 and HFG-408 were found to be resistant while varieties RGC. 197, HGC-182, RGC-912, 160, IC-11521, HFG-581, 244, DSE-21, F.S.-277, HG-25 were moderately resistant, RGC-416, HFG-363, HFG-281, Hissar local moderately susceptible and RGC-471 and Dharwad local were susceptible.

Dept. of Plant  
Pathology,  
UAS, Dharwad

S. T. YENJERAPPA  
G. M. PADAGANUR  
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