

Susceptibility of Different Clones of Eucalyptus Species against Gall Wasp, *Leptocybe invasa* Fisher and La Salle in Punjab, India

Authors : Ashwinder K. Dhaliwal, G. P. S. Dhillon

Abstract : Eucalyptus is one of the most important forest tree species that can tolerate and grow well on degraded and unfertile soils which are not suitable for other tree species. Besides this, these trees have a short rotation and good economic value. However, the gall inducing wasp *Leptocybe invasa* Fisher and La Salle has been reported from many countries throughout the world. The spread of *L. invasa* is of huge economic concern as more than 20,000 ha of young Eucalyptus trees have already been affected in southern states of India. The host plant resistance being the first line of defense against insect pests demands the screening of different germplasm source against *L. invasa*. Keeping this in view, fourteen different clones of Eucalyptus spp. were evaluated for their susceptibility to *L. invasa* from a replicated clonal trial planted at Punjab Agricultural University, Ludhiana. The degree of gall infestation was recorded from three plants of each clone in each replication. Three branches selected from the lower, middle and upper canopy of the trees were selected for recording the total number of galls induced by *L. invasa*. The statistical analysis was done as per the procedure laid down for completely randomised block design (CRBD), analysis of variance (ANOVA), critical difference (CD) and variance components using Proc GLM (SAS software 9.3, SAS Institute Ltd. U.S.A). All possible treatment means were compared with Duncan's multiple range test (DMRT) at 1 % probability level. The results showed that the clones C-9, C-45 and C-42 were completely free from the infestation of *L. invasa*. However, there was minor infestation of *L. invasa* on C-2135, C-413, C-407, C-35, C-72 and C-37 clones. The clone C-6 was severely infested by *L. invasa* followed by C-11, C-12, F-316 and C-25 clones. The information generated by this study will be helpful for future breeding and use in afforestation programmes.

Keywords : eucalyptus clones, gall wasp, *Leptocybe invasa*, screening, susceptibility

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