

98. Agarwal, M.C., Ram Babu, Vishwanatham, M.K. and Joshie, P. 1984. Size and shape of plots and blocks for field experiments with *Eucalyptus* in Doon Valley. *Indian J. Soil Conserv.*, 12(1):41-48.

A uniformity trial was conducted on *Eucalyptus* spp. at Dehradun during 1978. The trees were raised at 2m x 2m spacing and were given uniform treatments and were nine years old in 1978. The data on weight in kg/tree and D.B.H. in cm/tree of all the individual trees in three different compartments (each of 12 x 8 trees) were recorded and analysed to find out the optimum plot and block sizes for conducting field experiments. It indicated that the coefficient of variation decreased with the increase in the plot size for both with and without blocking arrangements for all the three compartments for both the observations. The equation  $y = 0.0001x^2 + 0.0002x + 0.0003$  gave a good fit to the relationship between coefficient of variation and plot size in all three compartments for both the observations. The minimum number of replications and trees required to detect 15% difference in means to be significant at 10% level of significance also indicated that a plot of 4 trees appears to be most suitable. Plot elongated perpendicular to the slope showed smaller CV. The percentage block efficiencies also indicated that although in general blocks were efficient but bigger blocks were less efficient than smaller blocks. Blocks in the slopewise direction were found to be more efficient.