Divergence Studies in Sesame (*Sesamum indicum* L.)

G Pavani, S V S Gangadhara Rao, V Saida Naik and G Ramesh
Department of Genetic and Plant Breeding, Agricultural College, Naira 532 185, A P

ABSTRACT

Genetic divergence among 50 sesame genotypes based on 10 characters was studied using Mahalanobis' D^2 statistic and principal component analysis. Among the ten characters, number of seeds capsule^{-1} contributed maximum towards genetic divergence (42.53%) followed by days to 50% flowering (40.90%) and number of capsules plant^{-1} (10.04%). The PCA identified three principal components with eigen values more than one contributing 78.67% towards variability. The PCA enabled loading of similar type of variables on a common principal component. In both *Tocher's* and *Ward's minimum variance* methods the genotypes were grouped into eight clusters but vary in clustering pattern. Divergence studies indicated that genetic diversity is not always necessarily associated with the geographical diversity.

Key words : D^2 analysis, Sesame, Principal Component Analysis, *Tocher's* method, *Ward's minimum variance* method.