Genetic divergence study for seed yield and its components in soybean [*Glycine max* (L.) Merrill]

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ABSTRACT : An investigation was carried out with 50 soybean genotypes to assess the diversity for yield and yield contributed traits. D^2 statistics was used to classify the divergent genotypes into different groups. The genotypes were evaluated for 12 different characters. Mahalanobis's D^2 analysis established group of the 50 soybean genotypes into four different clusters out of which one cluster was monogenotypicwith genotype JS-79-190. Cluster I consisted of 42 genotypes, while cluster II and III had 5 and 2 genotypes, respectively. Highest inter-cluster distance was recoded between cluster II and cluster IV (424.70). The intra-cluster distance range from 16.13 (cluster III) to 66.14 (cluster I). Based on the mean performance and genetic divergence, the geno-types, JS-79-190, J-202 and EC-7048 were identified as the suitable parents for crossing programmeso as to isolate the resistance segregants in the advanced generation for improvement of yield.

Key Words: Soybean, genetic divergence, D^2 analysis, seed yield trait.