P-17

Genetic divergence among advanced lines of groundnut (*Arachis hypogaea* L.) under agro climatic condition of North East Hill (NEH) region

Mukul K[1*], Noren K[1], Jamini L[1], Nigam SN[2], Badigannavar A[3], Ranjit PH[1]

[1]Central Agricultural University, Imphal-795 004, Manipur, India
[2]International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru, Hyderabad-502 324, AP, India
[3]Bhabha Atomic Research Centre (BARC), Mumbai-400 085, MH, India
[*]Address for correspondence: mukulbreeder@yahoo.com

The introduction of groundnut germplasm in North East Hill (NEH) region of India is essential to enrich genetic resources for crop improvement. The soil under NEH region is characterized by with p^H less than 5.5 (acidic), Al toxicity and Ca, P, Mg and K deficiencies. The genetic diversity among sixteen advanced breeding lines along with two varieties were assessed for yield attributing traits and oil content by using Mahalanobis D^2 analysis. These eighteen genotypes were grouped into 4 clusters by Tocher's method. The average inter cluster distance varied from 16.54 to 22.28. The contribution of test weight towards divergence was maximum (30.06%) followed by days to maturity (29.41%) and pod yield (11.41%). Further, hierarchical clustering using between group linkage method and linkage distance as the interval in dendrogram classified the breeding lines into three major clusters (I, IIA & IIB) between 22.8 to 36.5 units. Based on inter cluster distance values(D), *per se* performance and disease reaction, the genotypes viz., ICGV 3057, ICGV 3063, ICGV 4148, ICGV 4122 and TDG 56 were identified as most potential donors in order to generating materials suitable for agro climatic condition of NEH region.

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54