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Poster

MULTIVARIATE ANALYSIS, GENETIC DIVERSITY AND PHENOTYPIC CORRELATION OF NINETEEN EXOTIC GROUNDNUT (*ARACHIS HYPOGAEA* L.) ACCESSIONS

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ABSTRACT

Groundnut (*Arachis hypogaea* L.) is one of the major oil seed crops in Sri Lanka, belongs to the family Fabaceae. Germplasm received from the International Crops Research Institute for Semi Arid Tropics (ICRISAT), India was evaluated under local conditions to identify the genetic diversity to select parental combinations for hybridization programmes. Nineteen groundnut genotypes received from ICRISAT were evaluated in a non replicated trial and the characters were subjected to multivariate analysis to study the variability within the genotypes. The first five axes of the principal component analysis captured 78% of the total variability and identified yield parameters such as number of pods per plant, pod weight per plant and growth parameters *viz*, number of branches per plant, plant spread, and pod characteristics as the characters contributing mostly to the total variation. Axes 1 contributed 30% of the variation. Phenotypic correlation analysis revealed that the yield has positive correlation with the characters such as number of pods per plant and number of branches per plant. Wards clustering method has grouped the genotypes into 3 distinct clusters. The results are being applied in order to strengthen the future ground nut breeding program at GLORDC, Angunakolapalassa.