

Genetic variability in landraces of spring onion (*Allium chinense*) of Nagaland

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ABSTRACT

Spring onion (*Allium chinense*) is an important condiment crop in Nagaland known for its diverse landraces. The present study was undertaken to assess the genetic variability and interrelationships among yield and yield- contributing traits. Significant differences were recorded among 20 genotypes in all studied characters except for pseudostem length and pseudostem diameter. The GCV and PCV for yield per plot, bulb size, weight of whole cluster, number of cluster and bulb diameter were high indicating presence of sufficient variation for these traits. In the present investigation, high values of heritability and genetic advance were obtained for bulb size followed by weight of whole cluster and number of cluster. Correlation analysis revealed that the degree of genotypic correlation was higher than phenotypic correlation. The path analysis showed that the traits like number of leaves, number of cluster, weight of the whole cluster and dry matter content could serve as selection criteria in future breeding programs for improving yield potential in *Allium chinense*. The 20 genotypes of *Allium chinense* were grouped into 4 different clusters. Cluster I & III showed maximum inter cluster distance followed by cluster I & IV. Among different characters studied, contribution of days to 80% maturity was maximum towards divergence followed by bulb size.

Keywords: *Allium chinense*, correlation, D²analysis, genetic variability, path analysis.