

Identification of Diverse Genotypes of Fieldpea (*Pisum sativum* cv. *arvense*)

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ABSTRACT

Thirty genotypes of fieldpea were evaluated for ten qualitative characters to assess genetic variability and diversity. The genotypic and phenotypic coefficients of variation were higher for number of pods per plant, biological yield per plant, seed yield per plant and minimum for days to maturity. Heritability was higher for biological yield per plant, seed yield per plant, plant height, and number of pods per plant and lower for number of seeds per pod. The expected genetic advance as percent mean was recorded high for pods per plant followed biological yield per plant, moderate for plant height and 100 seed weight and observed low for number of seeds per pod. The genotypes studied were grouped into six clusters. Among six clusters, cluster II emerged as the largest with 11 genotypes followed by cluster III and IV with 7 genotypes each, cluster I with 3 genotypes and clusters V and VI were monogenotypic. The maximum inter-cluster distance (D^2) was observed between clusters I and V followed by clusters I and VI, indicating wide divergence between these clusters. Therefore divergent genotypes may be selected from these clusters with better mean performance for different characters to be used as parents in hybridization programme. . Percent contribution to genetic diversity was found maximum for biological yield per plant and plant height. Hence due consideration should be given to these characters during selection.

Key words :Divergence, Fieldpea, Genetic advance, Heritability.