

VARIABILITY, HERITABILITY AND EXPECTED GENETIC ADVANCE IN GENE POOL OF PEA (*PISUM SATIVUM* L.)

Chandan Kumar, Anand K. Singh, V. Manju Vani, Harit Kumar and B.V. Rajkumar

*Department of Horticulture, Institute of Agricultural Sciences,
Banaras Hindu University, Varanasi – 221 005*

Abstract: Twenty genotypes of pea were evaluated with an objective to study of variability, heritability and genetic gain. All the 15 yields and yield attributing traits varied significantly among the genotypes. Pod yield ranged from 140.20 q/ha to 349.10 q/ha and most of the genotypes exhibited significantly highest pod yield. A wide range of variability along with high estimates of GCV and PCV recorded for protein content, number pods per plant, number of primary branches per plant and plant height, whereas, rest of the characters showed moderate to low value of these traits. High value of heritability was observed for all the characters under studies except pod width and number of seeds per pod. protein content followed by 1st pod initiation, days to 1st flowering, plant height and days to 50% flowering. The expected genetic gain was high for protein content followed by number of pods per plant, plant height, number of primary branches per plant, average seed weight, pod yield per plant and per hectare and average pod weight.

Keywords: Pea, *Pisum sativum*, gene

REFERENCES

- Burton, G.W. and De Vane, E.M.** (1953). Estimating heritability in tall fescue from replicated cloned material. *J. Agron.*, **45**: 474-481.
- Hanson, G.H., Robinson, H. F. and Comstock, R.E.** (1956). Biometrical studies of yield in segregating population of *Korean lespedeza*. *Agron. J.*, **48**: 267-282.
- Johnson, H.W., Robinson, H.F. and Comstock, R.E.** (1955). Genotypic and phenotypic correlations in soybean and their implication in selection. *Agron. J.*, **47**: 477-483.
- Kumar, B.**, (2008). Variability, heritability and genetic advance in pea (*Pisum sativum* L.). *Int. J. Plant Sci.* **3**: 211-212.
- Kumari, N., Srivastava, J.P. and Singh, B.** (2009). Heritability and genetic advance in vegetable pea (*Pisum sativum* L.). *Ann. Hort.*, **2**: 224-225.
- Nawab, N. N., Subhani, G. M., Khalid Mahmood, Qamar Shakil and Akthar Saeed** (2008). Genetic variability, correlation and path analysis studies in garden pea (*Pisum sativum* L.). *Journal of Agricultural Research* (Lahore), **46**(4): 333-340.
- Sharma, B. B. and Sharma, V. K.** (2013). Genetic variability, heritability and genetic advance studies in garden pea under mid hill conditions of Garhwal Himalaya. *Environment and Ecology*, **31**(1A): 296-301.
- Singh, J.D. and Singh, I.P.** (2006). Genetic variability, heritability expected genetic advance and character association in field Pea (*Pisum sativum* L.). *Legume Res.*, **29**:65-67.