

Study of genetic variability in soybean genotypes and their performance at Allahabad agroclimate

Udayraj Singh, Hemchandra and N.R. Rangare

Received May 19, 2014 and Accepted July 17, 2014

ABSTRACT : Information on the soybean character was derived from 12 soybean genotypes. The analysis of variance, GCV, PCV, Heritability and genetic advance were carried out for the data recorded for various observations and oil content. Results revealed that 11 characters were significant days to initial flowering, days to 50% flowering, plant height (cm), number of branches per plant, number of pods per plant, pod length (cm), days to maturity, biological yield, seed index (100 grains weight), harvest index, seed yield per plant (g) and 1 character number of grains per pod is non significant. NRC-86 and MACS1201 were found to be the best genotypes for grains yield per plant. The character seed yield per plant showed high GCV and PCV, whereas number of grains per pods followed by pod length, days to 50% flowering, days to initial flowering and days to maturity showed low GCV and PCV and plant height and seed index showed low GCV and moderate PCV. Days to maturity, number of pods per plant, plant height (cm), days to initial flowering observed the high values for heritability (broad sense). High heritability coupled with high genetic advance exhibited by characters like number of pods per plant, number of branches per plant and plant height suggested pre dominance of additive gene action in the expression of the traits. High genetic advance was observed for number of pods per plant, followed by seed yield per plant, biological yield per plant and harvest index, number of branches per plant and plant height.

Key Words : Soybean Analysis of Variance, GCV, PCV, Heritability and Genetic Advance.