Egypt. J. Appl. Sci., 8 (6) 1993 641-658

GENETIC STUDIES ON OKRA (Abelmoschus esculentus L. MOENCH) III. PATH ANALYSIS OF DRY SEED YIELD AND ITS COMPONENTS

By

Aggour, A.R.

Dept. of Hort., Fac. of Agric. Moshtohor, Zagazig Univ., Egypt.

ABSTRACT

Phenotypic, genetic and environmental correlation coefficients were calculated for dry seed yield and its components in the reciprocal crosses between two parental inbred lines of okra: P_1 (derived from cv. Clemson Spineless) and P_2 (derived from cv. Golden Coast). Dry seed yield/plant showed positive genetic correlation with number of fruits/plant but negative genetic correlation with seed weight and number of days to first flower. Significant positive environmental correlations were observed between dry seed yield/plant and both number of seeds/fruit and number of fruits/plant, indicating similar response of involved traits to the enviroment. However, the environmental correlation between dry seed yield and number of days to first flower was negative due to dissimilar response of the two traits to the environment. Large differences between the genetic and environmental correlation were observed between dry seed yield/plant and either number of seeds/fruit or seed weight which indicated that genetic and environmental sources of variation affected the involved character through different physiological mechanisms. Significant positive phenotypic correlation was found between dry seed yield/plant and either number of seeds/fruit or number of fruits/plant. Significant negative correlation was detected between dry seed yield/plant and number of days to first flower.