



Genetic improvement in niger (*Guizotia abyssinica* Cass) by using study of variability, correlation and path analysis

HARSHAL E. PATIL*, RAVIKIRAN S. MALI, AVDHUT R. GIRI AND SACHIN B. THAWARI
Department of Agricultural Botany, Seed Monitoring Cell, Directorate of Research, Dr. Panjabrao Deshmukh
Krishi Vidyapeeth, AKOLA (M.S.) INDIA
(Email : mailme.harshalpatil@rediffmail.com)

Abstract : In forty genotypes of niger (*Guizotia abyssinica* Cass) substantial genetic variability was observed for nine characters studied. Heritability estimate was low for primary branches/plant, moderate for seed yield/plant and high for remaining all characters. Significant positive and higher genotypic correlation of seed yield with seeds/capitulum, days to flower and days to maturity was observed; while it was moderate with 1000 seed weight and plant height. A positive phenotypic as well as genotypic correlation among days to flower, days to maturity, seeds/capitulum and 1000 seed weight and their positive association with seed yield was observed, indicating that these were the major yield components in niger. However, on the basis of correlation and path analysis, days to maturity, seeds/capitulum and 1000 seed weight were the major yield components. Since late maturity beyond limit is not desirable, greater emphasis should be laid on seeds/capitulum and 1000 seed weight. Hence, strategies for genetic improvement by using study of variability, correlation and path analysis in niger have been strongly adopted for further crop improvement.

Key Words : Niger, Crop improvement, Variability, Path analysis and correlation

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