ASSET Series A (2007) 7 (1): 237-241

ASSET
An International Journal

GENETIC CORRELATION AND PATH COEFFICIENT ANALYSIS OF YIELD AND IT'S COMPONENTS IN COTTON

S. Y. SIMON, *D. BELLO, AND D. CHUBADO

Department of Crop Production and Horticulture,
Federal University of Technology, P.M.B. 2076 Yola, Nigeria.
* Corresponding Author (e-mail: dancaleb2000@yahoo.com)

ABSTRACT

Ten divergent cotton varieties were crossed in a line x tester mating design. The F_1s (including parents) were evaluated in a Randomized Complete Block Design (RCBD) with three replications in two locations, for one year in Adamawa State. The objectives were to study the genotypic and phenotypic relationships among pairs of yield and yield components as well as their direct and indirect effects on lint and seed yield per plant. Results indicated that phenotypic correlation generally showed more significant associations between different pairs of characters than the genotypic correlations, indicating that the characters were more related phenotypically. The path analysis revealed that lint percentage and lint yield were significantly correlated and it also indicated that lint percentage has high direct effect on lint yield per plant. Days to boll opening and boll size had negative direct effect (-0.120) on lint yield but positive indirect effect via other characters, which more than counterbalanced the negative direct effects, resulting in positive correlation (0.947) of these characters with lint yield per plant.

Key words: *Cotton, varieties, correlation analysis, path coefficient analysis and yield components*