RESEARCH ARTICLE

CORRELATION AND PATH ANALYSIS STUDIES IN FORAGE SORGHUM

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Abstract: Analysis of variance for all the characters *viz*., days to 50% flowering, plant height, leaf breadth, leaf length, leaf area, stem girth, leaves per plant, leaf stem ratio, total soluble solids and green fodder yield, revealed significantly high variation, indicating that presence of great deal of diversity among the parents with respect to fodder yield and yield contributing attributes. Genotypic and phenotypic coefficient of variation was found high (more than 25%) for leaves per plant, leaf stem ratio and green fodder yield, which indicated that more variability and scope for selection in improving these traits. High heritability coupled with high genetic advance as percent of mean was recorded for plant height, leaf area, stem girth, leaves per plant, leaf stem ratio, total soluble solids and green fodder yield per plant which indicated that these traits were highly heritable and selection of high performing genotypes is possible to improve these attributes. Green fodder yield exhibited significant stable and positive correlation with stem girth, leaves per plant and leaf stem ratio at genotypic and phenotypic level. These characters may be considered as important yield component in forage sorghum. Leaf breadth displayed high order of direct effect on green fodder yield per plant followed by leaf area, plant height and leaves per plant at phenotypic and genotypic level, which indicating that the contribution of individual characters to fodder yield is of importance in planning a sound breeding programme for developing for high yielding varieties in forage sorghum.

Keywords: *Sorghum bicolor*, Variability, Correlation, Path analysis

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