INFLUENCE OF DIFFERENT LOCATIONS AND SOIL TYPES ON THE ECONOMICALLY IMPORTANT CHARACTERISTICS OF SUGARCANE (*SACCHARUM OFFICINARUM* L.)

By

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ABSTRACT

Six sugarcane varieties (Saccharum spp.) were planted in six contrasting environments, using the same experimental design and cultural practices.

Data was collected from each environment for quality and quantity measures. The economically important parameters and their relationships were studied. Sugarcane yield, sugar percentage and fibre percentage were identified as the most appropriate characters among the economically impoirtant parameters. Critical levels of fibre percentage, sugar % and cane volume for the maximum sugar yield were also detected.

Estimation of the stability parameters for different genotypes were worked out for the above three characters by using the modified ANOVA model , site, soil type and genotype interactions were studied seperately.

Recommendation of varieties for each environment was done on the basis of the analysis of variance for different traits.

None of the genotypes included in this study showed general adaptability for these three traits. However some of the genotypes, K 7785 and Co 62175 showed general adaptability and stability for sugarcane yield and sugar percentage. Therefore it is suggested that the above mentioned genotypes which have high mean values and general adaptability for the particular triat could be exploited for sugarcane breeding programs.