

# **THE INFLUENCE OF CHARACTERS ASSOCIATION ON BEHAVIOR OF SUGARCANE GENOTYPES (*SACCHARUM* SPP) FOR CANE AND SUGAR YIELD UNDER THREE SOIL TYPES**

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## **ABSTRACT**

The research was conducted at Metahara Sugar Estate, Ethiopia (8° N latitude and 39° 52' E longitude) during the season of 2014/2015 on three soil types. Fourteen sugarcane genotypes were evaluated in a randomized complete block design with three replications to study association of characters influenced the final behavior of fourteen sugarcane genotypes regarding cane and sugar yield characters namely; number of tillers and millable cane, stalk height, stalk diameter and recoverable sucrose (%). The results indicated that genotypes CP 96 1252 and NCO 334 had shown superiority for cane and sugar yield per ha under medium soil. While, CPCL 02926 and VMC 96120 for cane yield CPCL 02 926 and CP 96 1252 for sugar yield under heavy soil; and B 52-298 and CP 04 1935 for cane yield and CPCL 02 926 and CP 04 1935 for sugar yield under light soil had shown superiority. Characters association results showed sugar yield was mainly determined by recoverable sucrose percent under heavy soil while it is by cane yield and its components number of tillers, milable stalks and plant height under medium and light soil types.

**KEYWORDS:** Sugarcane (*Saccharum* spp), Genotype, Correlation