

## Effect of Sugar Mill Effluent on Growth, Yield and Soil Properties of Ratoon Cane in Cauvery Command Area

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**Abstract :** A field experiment was conducted in the premises of M/s Sri Chamundeshwari Sugars Ltd., Bharathinagar, Mandya District Pvt. Ltd., during 2014 to study the effect of sugar mill effluent (SME) on growth, yield and soil properties of ratoon cane with eight treatments replicated thrice using RCBD design. Significantly higher growth parameters like cane height (249.77 cm) and number of tillers per clump (12.22) were recorded in treatment which received cycle of 3 irrigations with freshwater + 1 irrigation with sugar mill effluent + RDF as compared to other treatments. Significantly lower growth attributes were recorded in treatment which received irrigation with sugar mill effluent alone. Significantly higher cane yield (104.93 t<sup>-1</sup>) was recorded in treatment which received cycle of 3 irrigations with freshwater + 1 irrigation with sugar mill effluent + RDF as compared to other treatments. Significantly lower cane yield (87.40 t ha<sup>-1</sup>) was observed in treatment which received irrigation with sugar mill effluent alone. Soil properties like pH (7.84) was higher in treatment receiving Alternate irrigation with freshwater and sugar mill effluent + RDF. But EC was significantly higher in treatment which received Cycle of 1 irrigation with freshwater + 2 irrigations with sugar mill effluent + RDF as compared to other treatments.

**Keywords :** sugar mill effluent, sugarcane, irrigation, cane yield

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