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Sustaining sugarcane production in western zone of Tamil Nadu

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ABSTRACT

Tamil Nadu is one of the major cane growing states in India. Sugarcane productivity was 126.66 t/ha in safe and semi-critical areas while it was 123.72 t/ha in critical and over exploited blocks in the Western Zone. The total cost of cultivation (variable cost) was Rs.79272 per ha in critical and over exploited blocks whereas it was only Rs.75802 per ha in safe and semi-critical blocks. Strategy to maintain or increase the current Western Zone cane production can be done by continuation of sugarcane production only in the safe and semi-critical blocks (13 blocks) and expansion of the sugarcane area in safe and semi-critical blocks, which presently has minimum area under sugarcane cultivation.

Key words : Sustainable sugarcane production, Ground water level, Cost of sugarcane cultivation

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INTRODUCTION

India is the largest producer of sugarcane next to Brazil and this crop is cultivated under diverse situation in India. It forms the basis for many important industries like Gur, molasses, alcohol, sugar beverages, chipboard, paper, confectionery and provide raw materials to mainly other industries such as chemicals, plastics, paints, synthetics, fibre, insecticides, detergents etc. (Alam, 2007). The area under sugarcane rose from 1.47 million hectares in 19543-1950 to 4.08 mha in 1998-99 before declining to 2.995 mha in 2003-04 at all India level. The production of cane also increased accordingly from 50.14 million tones to 293.73 million tons before declining to 230.18 million tons, respectively, in the above periods. However, the average productivity of sugarcane has increased from 34.13 tons to 78.86 t/ha. Sugar and its by-products play a pivotal role in agriculture and agro-industrial economy and contributed to nearly two per cent of GDP (Verma, 2004). The evapotranspiration (transpiration that occurs in the leaves, corresponding to the water losses, higher evapotranspiration means higher losses) of sugarcane is estimated at 8–12 mm/tons of cane and the total rainfall required by sugarcane is estimated to be 1500–2500 mm/yr, which should be uniformly spread across the growing cycle (Macedo, 2005).

In India more than 61 per cent of the cane is used for white sugar extraction and 26.5 per cent is diverted for manufacture of Gur and *kandsari* sugar. Resource use on sugarcane farms varies with the size of a farm business (Swaibu and Nieuwoudt, 1998)

Tamil Nadu is one of the major cane growing states in India, contributing 6.41 per cent of national cane and producing 7.64 per cent national cane production in 2003-04. There are 37 sugar mills of which three (Bannari Amman Sugars Ltd., Sathyamangalam; Sakthi Sugars Ltd, Bhavani and the Amaravathi Co–operative Sugar Mills Ltd.,Udumelpet) are in the Western zone of Tamil Nadu comprising Erode and Coimbatore districts. Western zone is an intensive irrigated agriculture area covering 52.86 per cent and 43.59 per cent of the net sown area by irrigation in Coimbatore and Erode districts, respectively. The sugarcane production of western zone contributes 9.81 per cent of the state production from 10.24 per cent of the state area.

METHODOLOGY

The study was conducted in 2007 and the study area was western zone of Tamil Nadu *i.e.*, Coimbatore and Erode districts. The areas of cane expansion with greater future potential are those that combine the three conditions *i.e.* more fertile soils, financial resources for irrigation purposes, cost of the energy used in irrigation with perspectives of a positive evolution in terms of logistics (Goldemberg *et al.*, 2007). So, this area has been classified into