



## Effect of liquid fertilizers through drip irrigation on quality of suru sugarcane

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### ABSTRACT

A field experiment was carried out at AICRP on water management Project, Mahatma Phule Krishi Vidyapeeth, Rahuri during 1997-98 on vertic Ustropept. The experiment was conducted in Factorial Randomized Block Design (FRBD) with three replications and eight treatments, The treatments consisted of (a) four levels of N,P and K through Richfield water soluble fertilizers (RWSF) viz., 50(T<sub>1</sub>), 75(T<sub>2</sub>), 100 (T<sub>3</sub>), 125(T<sub>4</sub>) percent of recommended dose, (b) four levels of NPK through straight fertilizers (SF) viz., 50(T<sub>1</sub>), 75(T<sub>2</sub>), 100 (T<sub>3</sub>), 125(T<sub>4</sub>) percent of recommended dose. The quality parameters such as brix, pol, ccs, purity, reducing sugar, non reducing Sugar, N & P contents in cane juice were found to be maximum due to application of RWSF when compared with SF. Application of RWEF through drip had increased the brix, pol and C.C.S. by 3.78, 2.79 and 2.98 per cent than that of SF. Application of 125% of RD was found to be significantly superior to those of 50% RD.

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**Key words :** RWSF, SF

### INTRODUCTION

Sugarcane (*Saccharum officinarum* L.) is one of the important pride cash crops of the tropical region and is the main source of sugar and sugary by-products in India. Sugar industry is important agro-based industry and has great impact on socio economic development in rural areas. Plant nutrient like N,P and K are the most critical factors, which seriously limit the growth, quality and yield of crops. Nitrogen fertilizer is costly input and every effort is needed to improve the utilization of applied nitrogen by a crop. Apart from source of nitrogen, the method and time of application are important deciding factors for the increase of its efficiency.

Applying fertilizers directly to crop root zone through drip irrigation and fertigation is thus an answer for judicious use of precious commodity such as water and fertilizer. Therefore, the study was undertaken to find out the effects of water soluble fertilizers through drip on growth and yield of Suru sugarcane.

### MATERIALS AND METHODS

Field experiment was carried out at Mahatma Phule Krishi Vidyapeeth, Rahuri during the year 1997-98 on medium black and clayey soil having pH 8.35, The Soil of experimental plot was low in available N (114.3kg/ ha) and P (10.8 kg/ ha) and high in available K(773 kg/ha). The experiment was carried out in Randomized Block Design (Factorial) having three replications. The treatment comprised of

– **Sources of fertilizers viz.**

- Conventional fertilizers
- Richfield water soluble fertilizers RWSF

– **Level of fertilizers**

- 50% recommended dose
- 75% recommended dose
- 100% recommended dose
- 125% recommended dose

Water soluble fertilizer as a sources were urea

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