



**RESEARCH ARTICLE :**

## Performance of sugarcane ratoon under precision water and nutrient management

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**SUMMARY :** Field experiment was conducted during 2014-15 at Agricultural Research Station, Mudhol, to evaluate different methods of irrigation to achieve higher target yield levels on performance of ratoon sugarcane. The experiment was laid out in split plot design with 12 treatment combinations and three replications. Among the irrigation methods, subsurface (137 t ha<sup>-1</sup>) and surface drip irrigation (125 t ha<sup>-1</sup>) recorded significantly higher cane yield and yield parameters. Among the target yield levels, significantly higher cane yield was observed with target yield of 200, 250 and 300 t ha<sup>-1</sup> than RDF. Subsurface drip irrigation in combination with 300 t ha<sup>-1</sup> target yield level recorded significantly higher cane yield (179 t ha<sup>-1</sup>) which was on par with surface drip irrigation with 300 t ha<sup>-1</sup> target yield level (161 t ha<sup>-1</sup>). Lower cane yield was recorded in furrow irrigation with RDF (76 t ha<sup>-1</sup>). The drip irrigation saved 71.6 per cent of irrigation water during ratoon crop as compared to surface irrigation besides improving water use efficiency. The other quality parameters like brix, CCS and purity % were did not show any significant difference due to treatment effects.

**KEY WORDS :**

Quality parameters,  
Ratoon, Sugarcane,  
Water use efficiency,  
Yield

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