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Research Note

Performance of bitter gourd under drip irrigation system with modified crop geometry

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Introduction

Drip irrigation is an innovative irrigation technology which helps in water saving and increasing the yield of many vegetable and horticultural crops. With the aim of finding any reduction in the initial cost of the drip irrigation system along with the assessment of performance of bitter gourd crop, it was planned to study the different crop geometries under drip irrigation.

Material and Methods

The study was done at the vegetable research farm of CCS Haryana Agricultural University, Hisar.

The three different geometries taken are shown in the plates 1, 2 and 3. These were also compared with the traditional surface irrigation method also.



Plate 1: Crop geometry G₁-45X150cm



Plate 2: Crop geometry G₂-45 X 150cm

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Plate 3: Crop geometry G₃-90 X 150cm

Results and conclusions: it was found that the crop geometry G₂ was able to produce almost equal yield (98 q/ha) with traditional surface irrigation method with less than half irrigation water requirement. The total seasonal irrigation in case of surface irrigation method was about 50 cm while for crop geometry G₂, it was found to be only 22.4 cm. Also the crop geometry G₂ was found superior economically as compared to crop geometry G₁. A saving of Rs 9000 per hectare was observed in case of G₂ compared with G₁.