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Feasibility study of gravity drip irrigation for small scale farmers

Abhishek Mishra and Arpan Sherring

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See end of the Paper for authors' affiliation

Correspondence to :

Abhishek Mishra
Sam Higginbottom University of Agriculture, Technology and Sciences, **Prayagraj (U.P.) India**
Email: akmishra_69@rediffmail.com

ABSTRACT : Gravity fed drip irrigation techniques have been used in the small agricultural production as an advanced water saving irrigation method in recent times. However advantageous this method, there are still some difficulties in projecting the efficiency of such systems. Most especially, feasibility study of gravity drip irrigation for small scale farmers is very important in order to set up an efficient irrigation system. This study is focused to test the feasibility of the drip irrigation the experiment was run and Uniformity co-efficient and Distribution uniformity. In the study, the discharge of emitters at 1.0 m and 0.5 m emitter spacing and 1.0 m lateral spacing and for four irrigation durations (15 minutes, 30 minutes, 60 minutes and 120 minutes) was measured. The results clearly indicates that the selected emitters of 4 LPH rated discharge and 2.0 kg/cm^2 pressure when used under gravity drip irrigation and at about 0.5-0.8 kg/cm^2 pressure, discharges between 1.8-2.5 LPH. 6. The gravity drip irrigation can meet the water requirement of vegetable crops with acceptable UC and DU and can be a better solution for small scale farmers of the region in order to save the scarce fresh water resources.

KEY WORDS : Gravity drip irrigation, Irrigation durations, Uniformity co-efficient, Distribution uniformity

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