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RESEARCH PAPER

Techno economic feasibility of drip irrigation for vegetable cultivation

Sucharita Senapti, D.T. Santosh* **and** L.P. Pholane
Centre for Smart Agriculture, Centurion University of Technology and Management, Paralakhemundi (Odisha) India (Email: santosh.dt@cutm.ac.in)

Abstract : Vegetable cultivation is a highly practised agricultural activity in India.Commercial horticulture includes the cultivation of both indigenous and exotic vegetables. Vegetable cultivation under the drip irrigation system provides favourable environment for crops growth to achieve higher yield and good quality produce. Adaption of improved irrigation method and supply of precision amount of irrigation water and nutrients to crops are the important in achieving greater yield and avoiding loss of water and nutrients. Micro irrigation can be used to irrigate vegetable crops efficiently in the greenhouse and open field conditions. Both the pan evaporation and FAO-56 Penman-Monteith methods have been adopted to estimate the water requirement of crops under greenhouse structures and in an open field condition. The fertilizer application along with micro irrigation system optimizes the water and fertilizer use efficiency. Vegetables require precision amount of irrigation and fertilizers application and suitable climatic conditions. A very limited information is available on the supply and management of these important inputs.This report presents the role of micro irrigation forthe cultivation of vegetable crops. The design and installation of micro irrigation system, estimation of irrigation requirement of various vegetable crops using micro irrigation are also presented in this manuscript of the report.

Key Words : FAO-Penman montieth, B:C ratio, Temperature, Solar radiation, Relative humidity

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*** Author for correspondence :**