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## Study of micro irrigation in soil less media for tomato in polyhouse cultivation

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The field experiment on micro irrigation in soilless culture was conducted at Department of Soil and Water Conservation Engineering, Tamil Nadu Agricultural University, Coimbatore, to study the effect of drip irrigation on different soil less media and fertigation under naturally ventilated poly house for tomato. The highest yield per plant (2.16 kg/plant) and yield per hectare (112 t/ha) was registered in Peat:Vermicompost (T4F2) and the lowest yield per plant was recorded in Coir pith:Vermicompost T2F1 (1.07 kg and 55.48 t/ha) respectively under polyhouse condition. The highest water use efficiency (1972.87 kg/ha.cm) was obtained in T4F2 and the lowest was obtained in T2F2 (977.30 kg/ha.cm) in poly house. The highest N fertilizer use efficiency (700 kg/ ha.kg of N) was recorded in T4F2 at 80% of fertigation and the least efficiency was noted in T2F1 (277 kg/ ha. kg of N). The highest K fertilizer use efficiency (560 kg/ ha.kg of K) was recorded in T4F2 at 80% of fertigation and the least efficiency (222 kg /ha.kg of K) was noted in T2F1. The highest benefit cost ratio 2.33 was recorded in T4F2. The physico-chemical properties like bulk density, particle density, water holding capacity, EC and pH have positive influence on tomato yield. Addition of peat would influence the physico-chemical properties of soil less medias.

### Biography

Barikara Umesha is pursuing his PhD at University of Agricultural Science, Raichur (Karnataka). He completed MTech (Ag Engg.) from TNAU, Coimbatore. He was awarded with Senior Research Fellow by Council of Scientific and Industrial Research (CSIR), New Delhi and was selected for Student Fellowship by Tamil Nadu Council for Science and Technology, Chennai. He worked as Research Associate and Senior Research Fellow in different institutions for a period of two years. He has published more than 10 papers in international and national reputed journals, 25 abstracts, 4 popular articles, 4 practical manuals. He is the Life member in Indian Society of Agricultural Engineers (ISAE) New Delhi, Life member in Indian Institute of Engineers (IIE), Life member in Bose Science Society and Fellow of Bose Science Society (TN).

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