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Response of okra to different levels of drip irrigation on growth, yield and water use efficiency

R. GANESH BABU, I. BHASKARA RAO AND K.N. RAJA KUMAR

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See end of the Paper for authors' affiliation

Correspondence to :

R. GANESH BABU
Department of Soil and Water
Engineering, College of
Agricultural Engineering,
BAPATLA (A.P.) INDIA

■ **ABSTRACT** : A field experiment was conducted at College of Agricultural Engineering, Bapatla during *Rabi* 2014 to evaluate the response of different levels of irrigation through drip irrigation to find out appropriate irrigation level which leads to higher water use efficiency and yield of okra. The irrigation water was applied at 1.00 CWR (Crop water requirement), 0.80 CWR and 0.60 CWR through drip irrigation system. The crop water requirement was estimated for vegetable crops at study area as 516.3 mm during *Rabi* season using CROPWAT based on the climate data, rainfall data, crop data, cropping pattern data and soil data. Okra crop irrigated with drip irrigation at 0.80 CWR recorded the better growth *i.e.* good plant height and root length than the other treatments. Okra crop irrigated with drip irrigation at 0.80 CWR recorded the highest benefit cost ratio *i.e.* 3.15, which recorded 21.47 per cent more yield than the traditional method of irrigation and it was recorded the better water use efficiency as 0.143 t/ha-cm.

■ **KEY WORDS** : Okra, Drip irrigation, Different irrigation levels, CROPWAT

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