

Fertigation Studies in Tomato

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Abstract

A field trial on fertigation studies on tomato was conducted at the Department of Vegetable Crops, Horticultural College and Research Institute, Coimbatore. The experiment include totally seven treatments viz., Soil application of normal fertilizers at 100 percent RDF (T1), Soil application of normal fertilizers at 100 percent RDF and drip irrigation (T2), drip fertigation with normal fertilizers at 100 percent RDF (T3), drip fertigation with normal fertilizers at 75 percent RDF (T4), drip fertigation with water soluble fertilizers at 100 percent RDF using MAP, Multi K and Urea (T5), drip fertigation with water soluble fertilizers at 75 percent RDF using MAP, Multi K and Urea (T6) and drip fertigation with water soluble fertilizers at 50 percent RDF using MAP, Multi K and Urea (T7). The experiment was laidout in a randomized block design and replicated thrice. The results of the study revealed that drip fertigation with water soluble fertilizers at 100 per cent RDF using MAP, Multi K and Urea significantly increased the plant height, dry matter production, leaf area index, total chlorophyll content, number of fruits per plants, fruit weight and yield per plant. It was followed by drip fertgation with water soluble fertilizers at 75 percent RDF using MAP, Multi K and Urea and drip fertigation with normal fertilizers at 100 percent RDF using Urea, Single Super Phosphate and Muriate of Potash. Similarly, the same treatment also recorded increased values for quality traits viz., TSS, titrable acidity and ascorbic acid content of fruits. Higher nutrient uptake and fertilizer use efficiency were observed by drip fertigation with water soluble fertilizers at 75 perent RDF using MAP, Multi K and Urea and drip fertigation with normal fertilizers at 100 percent RDF using Urea, Single Super Phosphate and Muriate of Potash.