



Effect of different plant growth regulators and micronutrients on fruit quality and plant micronutrient content of tomato

S.S. DESAI*, R.S. CHOVIATIA AND VIRENDRA SINGH

Department of Horticulture, Junagadh Agricultural University, JUNAGADH (GUJARAT) INDIA

(Email : researchsarvesh@gmail.com)

Abstract : An experiment was conducted to find out the effect of different plant growth regulators and micronutrient on fruit quality and micronutrient content of tomato at Horticulture Farm, Junagadh Agricultural University, Junagadh, Gujarat, India during 10 December, 2010 to 10 April, 2011. Eleven different treatments which consist of four plant growth regulators and three micronutrients were used, viz., T₁= (Gibberellic Acid) @ 50 ppm, T₂= (Gibberellic Acid) @ 75 ppm, T₃= (Naphthalene acetic acid) @ 50 ppm, T₄= (Naphthalene acetic acid) @ 75 ppm, T₅= Boron 50 ppm, T₆= Boron 75 ppm, T₇= Zinc 0.5%, T₈= Zinc 1%, T₉=Iron 100 ppm, T₁₀= Iron 150 ppm and T₁₁= Control (No application of plant growth regulator and micronutrients) in the study. The fruit quality and micronutrient content parameters in plant were significantly differed due to different plant growth regulators and micronutrient on tomato. The maximum acidity per cent (1.41%) and ascorbic acid (109.33 mg/100g pulp) were found in T₄= (Naphthalene acetic acid) @ 75 ppm, maximum reducing sugars (1.68%), non-reducing sugars (1.98%), total sugars (3.67%) and TSS (4.33 °Brix) were found in treatment T₂ (GA₃ 75 ppm), whereas maximum boron content (31.00 ppm), Fe content (31.00 ppm) and Zn content (22.33 ppm) were found in treatment T₈ (Boric acid 75 ppm), T₁₀ (FeSO₄ 150 ppm) and T₆ (ZnSO₄ -1%), respectively the minimum for all the parameters were found in control treatment.

Key Words : Naphthalene acetic acid, Gibberellic acid, Boron, Zinc, Iron, Growth, Yield and tomato

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