

Effect of different sources of organic and inorganic plant nutrients on fruit growth, yield and quality of guava (*Psidium guajava* L.) cv. Allahabad safeda

Srinivas Mammindla, V.M. Prasad and Saket Mishra

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ABSTRACT : An experiment was conducted to study the effect of different sources of organic and inorganic plant nutrients on fruit growth, yield and quality of Guava (*Psidium guajava* L.) cv. Allahabad safeda at the central field of Department of Horticulture, Allahabad school of Agriculture, SHIATS, Allahabad (U.P.) during 2012(July) – 2013(January). The experiment was laid out in Randomized Block Design (RBD) with 10 treatments and 3 replications. For the investigation, different sources of organic and inorganic plant nutrients viz. FYM, Neem cake, Vermicompost, Urea, DAP, MOP and Micro nutrients (B and Zn) in different combinations were used. The results revealed that effect of organic manures and inorganic fertilizers along with micro nutrients was more effective in increasing fruit growth, yield and quality of guava than the inorganic fertilizers alone. Among the various combinations, treatment T₅ (50% Recommended dose of NPK (300g N: 100g P₂O₅ : 200g K₂O Per tree) + 15 kg FYM + 5 kg Neem cake + Micro nutrients (0.3% B and 0.3% Zn)) was found the best over all the treatments in respect to physical parameters like days to first flower initiation (24.67 days), fruit yield per tree (62.01 kg) and fruit yield per hectare (9.67 tonnes), chemical parameters like TSS (12.80 °Brix), ascorbic acid (224.89 mg/100 ml of juice), minimum acidity (0.31%), total sugars (11.08%), reducing sugars (6.10%), non reducing sugars (4.98%), sugar/acid ratio (35.90%) and shelf life (13.33 days) and also economic net returns (660.44 Rs.) with Benefit Cost Ratio (3.44), respectively.

Key Words: Organic manures, inorganic fertilizers, micro-nutrients, fruit growth, yield, quality.