THE ASIAN JOURNAL OF HORTICULTURE
Volume 7 | Issue 2 | December, 2012 | 420-422

Research Paper

Article history :
Received : 22.06.2012
Revised : 06.10.2012
Accepted : 06.11.2012

Effect of organic manures or chemical fertilizers on yield and quality of banana fruits cv. BASRAI

K.M. PATEL, H.C. PATEL[1], K.A. PATEL[1], V.B. CHAUHAN[1] AND J.S. PATEL[1]

Members of the Research Forum

Associated Authors:
[1]Department of Horticulture, B.A. College of Agriculture, Anand Agricultural University, ANAND (GUJARAT) INDIA

Author for correspondence :
K.M. PATEL
Department of Horticulture, B.A. College of Agriculture, Anand Agricultural University, ANAND (GUJARAT) INDIA

ABSTRACT : A field experiment was conducted to see the effect of organic manures/chemical fertilizers on yield and quality of banana cv. Basrai during the years 1994 to 2000 at Horticultural Research Farm, B. A. College of Agriculture, Anand Agricultural University, Anand. The experiment was laid out in Randomized Block Design (RBD) with eight treatments and four replications. Among different organic manures and chemical fertilizers, the treatment T_2 recorded significantly the highest fruit yield *i.e.* 17.50 kg/plant in year 1995. While treatment T_7 recorded significantly the minimum physiological loss in weight *i.e.* 10.04 per cent in year 2000.

KEY WORDS : Banana, Organic manures, Chemical fertilizers, Yield, Quality

HOW TO CITE THIS ARTICLE : Patel, K.M., Patel, H.C., Patel, K.A., Chauhan, V.B. and Patel, J.S. (2012). Effect of organic manures or chemical fertilizers on yield and quality of banana fruits cv. BASRAI, *Asian J. Hort.*, **7**(2) : 420-422.

Banana and plantain represent the largest fruit crop produced in the world. They are cultivated in 130 countries, mainly in the tropical and subtropical regions of the southern hemisphere (FAO, 2010). Banana is grown in area of 8.03 lakh hectares in India, with an annual production of over 297.8 lakh tones (Anonymous, 2011). The vast majority of producers are small-scale farmers growing the crop either for home consumption or for local market. Besides being a cheap and easily produced source of energy, it is rich in vitamins A, C, B6, and is a good source of minerals. Vegetative and floral structures of banana were comprehensively described by Morton (1987), Stover and Simmonds (1987) and Robinson (1996).

Banana is a fast-growing plant which requires continuous supply of nutrients for higher yield. These nutrients may be supplied as organic manures and inorganic chemicals. Optimum fertilizer application is generally needed to satisfy plant requirements for obtaining profitable production. Banana requires large amounts of macronutrients, that is, nitrogen, phosphorus and potassium (Twyford and Walmsley, 1974a, b, c; Lahav and Turner, 1983; Lahav, 1995). Poor agricultural and field management practices, especially improper nutrition, in developing countries lead to large losses in yield and fruit quality. Little research has been conducted on banana fertilizer in organic as well as inorganic form. This research aimed to study the vegetative growth, yield, and fruit characteristics of 'Basrai' banana as affected by different organic manures and chemical fertilizers.

RESEARCH METHODS

A field experiment was conducted at the Horticultural Research Farm, Department of Horticulture, B. A. College of Agriculture, Anand Agricultural University, Anand during the years 1994 to 2000. Details of treatments are mentioned below. T_1 = Recommended dose of chemical fertilizer *i.e.* 10 kg FYM, 180 g N + 90 g P_2O_5 + 180 g K_2O/plant, T_2 = 10 kg FYM + 180 g N in organic form (castor cake) + 90 g P_2O_5 + 180 g K_2O/plant, T_3 = 10 kg FYM + 180 g N in organic form (Bone meal) + 90 g P_2O_5 + 180 g K_2O/plant, T_4 = 10 kg FYM + 180 g N in organic form (press mud) + 90 g P_2O_5 + 180 g K_2O/plant, T_5 = 10 kg FYM + 180 g N in organic form (FYM), T_6 = 10 kg FYM + 180 g N in organic form (castor cake), T_7 = 10 kg FYM + castor cake + bone meal + press mud (Similar dose of NPK but in form of organic) and T_8 = 10 kg FYM + 6 kg dry leaves (Sapota) embedded in a Randomized Block Design with four replications. The observations were recorded on no. of functional leaves/ plant at harvest, stem circumference, plant height, no. of hands/