



Effect of high density planting on the growth and development characters of the banana (*Musa paradisiaca* L.) cv. GRAND NAINE

S.S. PALKAR, N.L. PATEL, D.A. MHETRE* AND G.B. MANDALIK

Department of Pomology, ASPEE College of Horticulture and Forestry, Navsari Agricultural University, NAVSARI (GUJARAT) INDIA (Email : dmhetre@rediffmail.com)

Abstract : An experiment was conducted at Regional Horticultural Research Station, Navsari Agricultural University, Navsari to study the effect of high density planting on growth and development characters of banana (*Musa paradisiaca* L.) cv. 'GRAND NAINE' during the year 2005-2006. Five treatments viz., 2.1 x 1.5 m(T₁), 1.0 x 1.2 x 2.0 m(T₂) (triangle planting), 1.0 x 1.2 x 2.0 m (T₃) (rectangle planting), 1.5 x 1.5 m(T₄) and 1.8 x 1.8 m (T₅) (control) spacings were laid out in Randomized Block Design with four replications. Banana planted at wider spacings (T₅) induced vigorous growth in terms of pseudostem girth and total leaf area. Also the results indicated that the vegetative growth of banana in terms of height and girth of pseudostem was found maximum (187.50 and 65.68 cm) in closed spacing and wider spacing, respectively. Inflorescence emergence and maturity were also significantly affected by various treatments. The minimum days (391.85 and 297.75) for maturity and inflorescence were found in wider(T₅) spacing, respectively.

Key Words : Banana, High density, Grand Naine

View Point Article : Palkar, S.S., Patel, N.L., Mhetre, D.A. and Mandalik, G.B. (2012). Effect of high density planting on the growth and development characters of the banana (*Musa paradisiaca* L.) cv. GRAND NAINE. *Internat. J. agric. Sci.*, 8(1): 201-204.

Article History : Received : 17.03.2011; Revised : 08.10.2011; Accepted : 25.11.2011

INTRODUCTION

'Grand naine' is a tall mutant of 'Dwarf Cavendish'. It is gaining popularity among growers of South Gujarat. It is more vigorous and robust with well-spaced hands, fingers of bigger size and heavy bunches. In India, banana is fourth important food crop in terms of gross value exceeded by paddy, wheat and milk products.

Now a days, concept of high density planting has become extremely significant. Accordingly, efforts have been made in different parts of world to find out the optimum spacing for the different fruit crops along with the related technologies so as to derive the maximum return per unit area. The available land area for the fruit cultivation has become a limiting factor by day due to rapid urbanization, fragmentation of land holding and industrialization. In addition to the present day constraints like shortage of the suitable land, high management cost,

restriction of water use, labour problems and necessity of early return on the investment, have made it necessary to think in terms of the maximum possible returns with the minimum costs.

MATERIALS AND METHODS

The present investigation on effect of high density planting on vegetative characters of banana (*Musa paradisiaca* L.) cv. GRAND NAINE was carried out during year 2005-2006 at Experimental Farm of Regional Horticultural Research Station, Navsari Agricultural University, Navsari. The treatments contained five spacing treatments viz., 2.1 x 1.5 m, 2.0 x 1.2 x 1.0m (Triangle method), 2.0 x 1.2 x 1.0m (Rectangle method), 1.5 x 1.5m and 1.8 x 1.8m(control). The experiment was laid out in Randomized Block Design and replicated four times. The total experiment area was 62.2 x 24

* Author for correspondence.