Studies on bunch characters and yield of banana as influenced by planting systems and density

C.V. PUJARI, S.K. MARBHAL, R.D.PAWAR AND C.D. BADGUJAR

ABSTRACT

An investigation on the effect of plant density due to different planting systems and planting densities on bunch characters and yield of banana cultivars Grand Naine (AAA) and Basrai (AAA) was carried out at Banana Research Station, Jalgaon (Mahatam Phule Krishi Vidyapeeth) during 2006-07, 2007-08, 2008-09. Analysis of the economics of the cost of cultivation was also worked out. The planting system and plant density had pronounced effect on bunch characters and yield. Highest bunch weight (14.93 kg) was observed in pair row planting system with planting single sucker per hill spaced at 0.9x 1.5 x 2.1 (P3) which was 10.83% and 11.06% more than P1 (2x3 m with two suckers per hill with 5001 plants per hectare) and P2 (1.8x 3.6 m with two suckers per hill with 4629 plants per hectare) planting systems. However, lower bunch weight was compensated by total yields. Per hectare yield was more in high density population and it was highest (68.90 mt/ha) in P1 (2x3 m with two suckers per hill) due to accommodation of number plants per hectare. Although total yields increased with the increase in plant population, number of hands per bunch, number of fingers per bunch, finger girth and finger length decreased with the increase in plant population. In general the cost of cultivation increased correspondingly with an increase in plant population due to accommodation of more number of plants per unit area. Maximum net returns were realized in pair row planting system with planting of single sucker per hill spaced at 0.9x 1.5x 2.1m with a population of 4444 plants per hectare. An overall assessment revealed that pair row planting system with planting of single sucker per hill spaced at 0.9x 1.5 x 2.1m) with a population of 4444 plants per hectare appeared to be optimum for both Grand Naine (AAA) and Basrai (AAA) cultivars of banana.

Key words: Banana, Planting density, Planting systems, Sucker arrangement, Bunch characters, Yield