



Research Article

Economics of transplanted Bt. cotton (*Gossypium hirsutum* L.) to different plant geometry under irrigated condition

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Abstract : The field experiment was conducted during 2010-11 at Main Agricultural Research Station Farm, Raichur to assess the economics of transplanted Bt. cotton under irrigated condition. The results of the investigation indicate that the row spacing of transplanted cotton 90 cm x 60 cm registered significantly higher net returns (Rs. 1,07,118 ha⁻¹) but was found at par with row spacings of 90 cm x 45 cm (Rs. 1,03,109 ha⁻¹) and 120 cm x 45 cm (Rs. 99,639 ha⁻¹) of transplanted cotton than other spacings of transplanted cotton. The row spacing of 120 cm x 45 cm of dibbled cotton registered significantly lower net returns (Rs. 76,258 ha⁻¹) as compared to all the row spacings of transplanted cotton. The transplanting treatments with different plant densities recorded relatively higher cost of cultivation which was ranged from Rs. 33,009 to 37,638/ha compared to dibbled cotton. Benefit cost ratio was significantly higher with the 90 cm x 60 cm spacing of transplanted cotton (4.00) as compared to transplanted cotton at the row spacing of 90 cm x 45 cm (3.73) and dibbled cotton at the row spacing of 90 cm x 60 cm (3.78) and 120 cm x 45 cm (3.58).

Key Words : Bt. cotton, Dibbling, Economics, Plant geometry, Transplanting, Seed cotton yield

How to cite this Article: Sajjan, Shashidhar and Rao, Satyanarayan (2011). Economics of transplanted Bt. cotton (*Gossypium hirsutum* L.) to different plant geometry under irrigated condition, *Internat. J. Forestry & Crop Improv.*, 2 (2) : 144-146.

Article Chronical : Received : 17.07.2011; Revised : 08.08.2011; Accepted : 24.10.2011

INTRODUCTION

Cotton is an important fibre crop of India contributing about 85 per cent of raw materials to textile industry. It is the most important global cash crop and controls economy of many nations. The projection made in India for cotton lint for 2020 AD is around 47.5 million bales. India has the largest acreage (10.5 m.ha) under cotton and ranks second in production (310 lakh bales) after china. The productivity per ha in India is 518 kg lint/ha, which is very low when compared to world's average productivity of 767 kg lint/ha

(Anonymous, 2010). There is much scope to increase cotton productivity through optimization and adaptation of appropriate agro-techniques. Among several production practices, planting geometry and time of planting have greater role in boosting the yield of cotton (Bhalearo *et al.*, 2008). The actual yield levels are lower compared to the potential yields. Some of the reasons for low productivity are delayed sowing by dibbling method due to late release of canal water and poor germination. Under such situations, techniques like raising seedlings in polythene bags in a nursery well in advance and transplanting in to the main field may increase the yield and also mitigate the ill effects and compensate the yield of delayed sowing. Hence, it is necessary to adaptation of transplanting technique for Bt. cotton under late sown situations. In the present study, attempt was made to study the economics of transplanted Bt. cotton (*Gossypium hirsutum* L.) to different plant geometry under irrigated condition.

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