



## Cost and returns in Bt cotton cultivation across different farm sizes in northern Transitional Zone, Karnataka

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**Abstract :** Karnataka is one of the nine major Bt cotton-growing states in the country. Northern transitional zone is the major cotton growing zone of Karnataka *i.e.* 40.19 per cent of the total cotton area of Karnataka. It focused on the socio-economic characteristics of Bt cotton farmers and the efficiency of resource use in Bt cotton production under different farm sizes. Two taluks having highest cotton area were selected from the zone for study. The present study was conducted with primary data collected entirely based on a multistage sampling technique from 180 Bt Cotton growing farmers. The study pertained to the agricultural year 2010-11. The total variable cost of Bt cotton was Rs. 22192.15 where large farmers incurred high cost *i.e.* Rs. 23256.85. The total cost of Bt cotton was Rs 30920.56 and it was high in large farmers Rs. 32723.9. The net return in Bt cotton was Rs. 79456.36 and net returns were seen high in case of large farmers Rs. 84677.9. The yield per ha was 24.98 q. and medium farmers got high yields *i.e.* 25.54 q. Bt Cotton technology has positive impact on socio- economic status of farmers by increase in yield and reducing cost on inputs thereby increase in income and also standard of living

**Key Words :** Bt Cotton, Yield, Small farmer, Medium farmer, Large farmer

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### INTRODUCTION

Concerns and controversies notwithstanding, India embarked upon commercial deployment of genetically modified crops in form of Bt (*Bacillus thuringiensis*) cotton in 2002 to address the agrarian and ecological distress with the belief that its resistance against the most devastating American bollworm (*Helicoverpa armigera*) insect pest will help in containing colossal yield loss, reducing the burgeoning consumption of expensive, toxic and environment damaging pesticides as well as assuring better yield, income and health to farm families. Though there have been mounting claims and counter claims with respect to beneficial and adverse impacts of Bt cotton,

Bt cotton, which confers resistance to important insect pests of cotton, was first adopted in India as hybrids in 2002. There were 54,000 farmers who grew approximately 50,000 hectares of officially approved Bt cotton hybrids for the first

time in 2002 which doubled to approximately 100,000 hectares in 2003. The Bt cotton area increased again four-fold in 2004 to reach half a million hectares. In 2005, the area planted to Bt cotton in India continued to climb reaching 1.3 million hectares, an increase of 160 per cent over 2004. In 2006, the adoption record increased which continued with almost a tripling of the area of Bt cotton to 3.8 million hectares. This tripling in area was the highest percentage year-on-year growth for any country planting biotech crops in the world in 2006. Notably in 2006, India's Bt cotton area (3.8million hectares) exceeded for the first time, that of China's 3.5 million hectares. In 2007, the Indian cotton sector continued to grow with a record increase of 63 per cent in Bt cotton area from 3.8 to 6.2 million hectares, to become the largest hectare of Bt cotton in any country in the world. In 2008, the Bt cotton area increased yet again to a record 7.6 million hectares from 6.2 million hectares in 2007. Maintaining double digit growth, the Bt cotton area increased to 8.4 million hectares in 2009, over 7.6 million hectare

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