



Tropentag, September 14-16, 2010, Zurich

“World Food System —
A Contribution from Europe”

Economic Profitability and Adoption of Bt Cotton and non-Bt Cotton in North India

PURAN MAL¹, KRISHNA KAKUMANU REDDY², MANJUNATHA ARAHALLI VENKATARONAPPA³,
SIEGFRIED BAUER¹

¹*Justus-Liebig University Giessen, Institute of Farm and Agribusiness Management, Germany*

²*International Water Management Institute (IWMI), India*

³*Justus-Liebig University Giessen, Institute for Agricultural Policy and Market Research, Germany*

Abstract

Cotton is one of the major cash crop in India accounting an area of 9.4 Million hectares and 4.39 Million tonnes to production. In India, Bt cotton is the first genetically modified crop introduced in 2002 and currently it covers more than 75 % of the area under cotton. The adoption of Bt cotton is high in India in comparison of other countries. There is a phenomenal change in area, cotton yields and input use for Bt cotton compared to non-Bt cotton over years. There exist strong favour and strong protest in the adoption of Bt cotton. The current paper clarifies the debate by analysing Bt cotton and non-Bt cotton farmers profitability and adoption in Haryana and Punjab states of India considering primary data from 160 Bt cotton farmers and 40 non-Bt farmers using simple random sampling. Results are analysed using partial budgeting and logistic regression. Results indicate that Bt farmers are getting three times more returns than non-Bt farmers reflecting economic profitability of Bt cotton. In econometric analysis for adoption, it was found that farmers can benefit significantly from technology. Farmers are adopting Bt cotton due to higher yields and reduction of insecticide use even though seed cost is high in comparison of non-Bt cotton. Education and farmer's network played an important role in adoption. But the adoption factors varied from state to state. Punjab state farmers are earlier adopter than Haryana Farmers. In Haryana state, cotton experienced farmers are adopting more this technology. The results will give crucial information for the policy makers for promoting production of Bt cotton aiming at improving farmers socio-economic status.

Keywords: Adoption, Bt cotton, India, profitability