



**RESEARCH ARTICLE :**

## Resource productivity and resource use efficiency in Bt cotton production in Beed district

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**SUMMARY :** Investigation was carried out during the year 2013-14. About 96 Bt cotton growers were randomly selected from eight villages of two tehsils of Beed district. Cross sectional data were collected from Bt cotton growers with the help of pretested schedule by personal interview method. Data were related to Bt cotton outputs and inputs like human labour, bullock labour seed, manure, fertilizer and plant protection as resources. Cobb-Douglas production function was fitted to the data. The result revealed that, regression co-efficient of area under cotton was 0.247 followed by that of manure (0.142) which were positive at 5 per cent level. Regression co-efficient of nitrogen was 0.093 which were negative at 5 per cent level. Regression co-efficient of human labour was 0.234 which was positive at 1 per cent and bullock labour 0.129 which was negative at 1 per cent. Regression co-efficient of phosphorus, potash and irrigation were positive but non-significant. Co-efficient of marginal product of area under cotton growers was 6.803 quintals followed by that of seed (1.057q), plant protection (0.332 q) manure (0.209 q) and human labour (0.098 q), phosphorus (54.45 q) and so on. MVP to price ratio with respect to phosphorus was (5.27) followed by manure (3.97), potash (3.13), seed (2.51) and human labour (2.33). Hence, preference might be given to increase human labour on priority basis in cotton production. Optimum use of area under cotton was found to be 1.76 hectares. Co-efficient of multiple determination ( $R^2$ ) was 0.847 means 84.70 per cent effect of all independent variables on main produce.

**KEY WORDS :**

Bt-cotton,  
Resource  
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