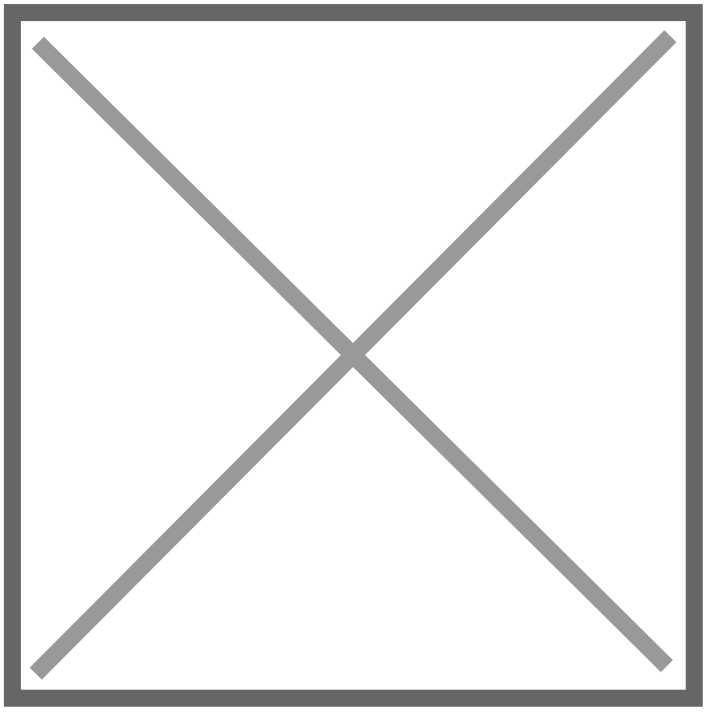
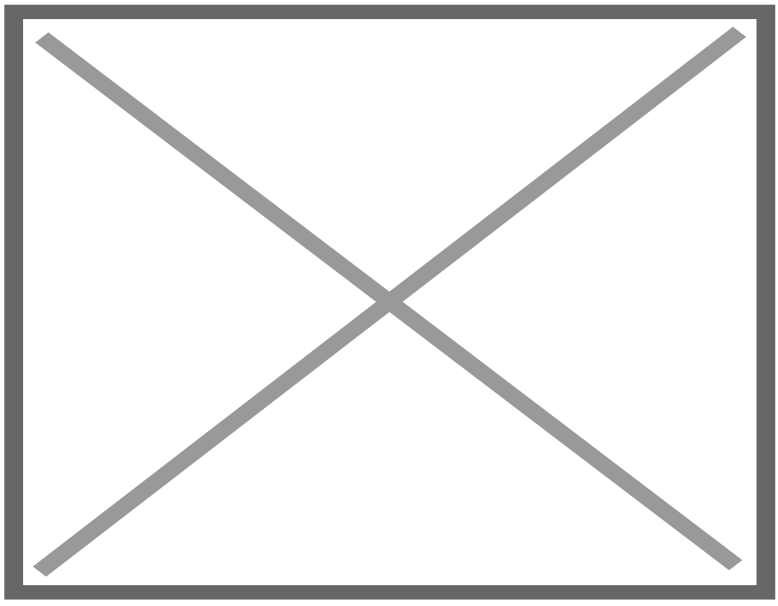
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After Bt cotton

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The benefits of Bt cotton have been realized. It is time to introduce other technologies to maintain the boom in cotton cultivation



In Maharashtra, over the past one year, has seen a drop in yield and production of Bt cotton, especially in the dry regions of Vidarbha that receives low rainfall. This is despite the fact that today 95 percent of the total land sown in the state comes under Bt cotton cultivation. According to statistics provided by the Maharashtra Cotton Growers Marketing Federation Limited, the total sown area in Maharashtra between 2011-12 was 41.26 lakh hectare. Out of this, the total area sown under Bt cotton was 39.20 lakh hectares in 2011-12 as compared to 36.21 lakh hectare in 2010-11. However, the production saw a drop to 69 lakh bales in 2011-12 as compared to 74.73 lakh bales in 2010-11. Productivity saw a drop too with 2011-12 hitting a figure of 286 lint kg per hectare as compared to 322 lint kg per hectare in 2010-11.

Maharashtra grows 35 percent of India's total Bt cotton. The area under Bt cotton cultivation is much more but industry experts opine that more needs to be done by the government to bolster yield and incentivize farmers.

Dr NP Hirani, chairman of Maharashtra Cotton Growers Marketing Federation Limited, says, Ã¢â?¬Å?Low irrigation facilities in the state has been a big problem for farmers. If you draw a comparative picture with other cotton-growing states, such as Gujarat, Andhra Pradesh, Punjab and Haryana, Maharashtra has the lowest area under irrigation. We have 15 percent of the cultivated area under irrigation, out of which four percent is surface irrigation and 12 percent is well irrigation. In Gujarat, irrigation comes up to around 40 percent, while in Punjab and Haryana, it is 99 per cent. In Andhra Pradesh, it is 39 percent.Ã¢â?¬?

To take Bt cotton to its next level of growth, irrigation and tools for water availability will play a crucial role in the coming months. Dr Gyanendra Shukla, director, Mahyco Monsanto Biotech (MMB), says, Ã¢â?¬Å?On the whole, India faces a water scarcity. In such a situation, the government, rather than giving monetary packages, should be thinking of providing such technologies as to how a farmer can store water and use them for his crops.Ã¢â?¬? Against this backdrop, companies are

already working on drought-resistant seeds.

States like Gujarat and Rajasthan have been heavily investing in irrigation technologies over the past 10 years, with Gujarat reporting an impressive yield and acceptance from farmers. Dr BR Shah, director, Agriculture and Co-operation Department, Government of Gujarat, says, Ã¢â?¬Å?There is a very good response to Bt cotton from farmers. After introduction of Bt cotton, the area under Bt cotton has increased, while area under other crops has shown decreasing trend. There was a continuous rise in acceptability of Bt cotton in Gujarat.Ã¢â?¬? The total area in Gujarat under Bt cotton cultivation is 24.62 lakh hectares out of 29.62 lakh hectares of total area under cotton in kharif 2011. Also, nearly 52.89 lakh packets of seeds of Bt cotton were sold in Gujarat during 2011-12.

Also, cost of cultivation is taking a toll on farmers. Labor is scarce. The cost of cultivation for a farmer ranges between 15,000 and 20,000 per acre. This excludes land rentals. Labor for picking and weeding takes 60 percent of the cultivation cost. Ã¢â?¬Å?The seed packet prices might have gone up but that consitutes just seven-to-eight percent of the total cultivation cost,Ã¢â?¬? says Dr Shukla. Bringing in technologies that can control both sucking pest and weeding can significantly reduce cultivation costs.

Â Need of the hourÂ

- **Improved technologies to increase yields:** It is time now to move on and bring in other improved technologies such as sucking pest tolerance technology; drought resistance technologies; saline tolerance technologies; and weed management technologies.
- **Bring down cost of cultivation:** Cost of cultivation constitutes a major portion of a farmers' cost. This includes cost of labor for picking of cotton, weeding and cost of seeds. Introduction of new technologies can drastically bring down costs while increasing yields.
- **Improve irrigation facilities:** Cotton in India is largely a rain-fed crop. The government should look at providing irrigation facilities or water storage facilities
- **Incentivize research:** Prices of seeds should be fixed in such a way that seed companies are incentivized to invest in more research on new technologies, while not burdening the farmers.
- **Attractive procurement prices:** The current low market prices of cotton could result in farmers shifting to other crops that generate better returns. The government needs to increase the price from its current level if Bt cotton is here to stay.
- **No change in policies in the middle of the year:** Import or export policies on cotton should be announced in the beginning of the season, so farmers can take the right decision before sowing.

Market price is a hurdle

Industry experts are unanimous in the view that though the increase in the price of Bt cotton seeds has not had any impact on the yield, the price or returns they get from the market will affect it. Fluctuations of cotton prices in the international market over the last one year has greatly affected the prices procured by Indian farmers. Ã¢â?¬Å?The price hike in Bt cotton seeds have not shown any adverse effect on cotton cultivation in Gujarat, but the fluctuating market price of during last two cotton trading season may affect cultivation of Bt cotton in the next kharif season,Ã¢â?¬? says Dr Shah.

According to industry experts, farmers may shift to other crops if there is no certainty on returns from Bt cotton. Ã¢â?¬Å?If cotton prices go up by 20 percent then we can see the area under Bt cotton cultivation to remain the same, but if it continues to remain in the current level, then we will see a shift to other crops, such as soybean or maize,Ã¢â?¬? informs Dr Shukla.

The government should constitute a policy regime where it can maintain a fine balance between commodity price for cotton and price that farmers procure in the market. New technologies can make a difference. The benefits of Bt cotton have been realized and it is time to move to the next level.

Ã¢â?¬Å?The country has procured all the benefits of Bt cotton. Whatever improvement has to happen has taken place. It is time that we move to other technologies, which will improve yields. For example, sucking pest or drought-resistant technologies that many companies are working upon,Ã¢â?¬? says Mr Dhiren N Sheth, president, Cotton Association of India, while adding Ã¢â?¬Å?all stakeholders should come out with a consensual solutionÃ¢â?¬?.

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