

Bt cotton: The India story

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Export and import of cotton in India (2001-2010)

India accounts for about 32 percent of the global cotton cultivation area and contributes 21 percent of the global cotton produce, second after China. Cotton production in India also has a wide impact on the livelihood of the farmers and on the economy of the country, apart from international trade. It provides employment to around 42 million people directly or indirectly.

Globally, India ranks first in terms of cultivated area followed by China, the US and Pakistan. India more than doubled its production from 13.6 million bales in 2002 to 35.5 million bales in 2011. Over the past few years, India has even managed to produce at least six to nine million bales more than is required for domestic consumption.

From a meager 308 kg per hectare in 2001-02, the average yield of cotton increased to 526 kg per hectare in 2008-09 and stayed above 500 kg per hectare in 2010-11 as well. Statistics show that the leap has much to do with the increasing popularity of Bt cotton in the ten cotton-growing states of the country.

This boom in cotton production has also transformed India from being an importer of cotton to a net exporter of the same. Exports have seen a tremendous rise from a mere 0.05 million bales in 2001-02 to 8.8 million bales in 2007-08.

An important but unrecognized fact about cotton is that, in India, roughly 67 percent of the cotton produced is used for food or feed, whereas the remaining 33 percent is used as fiber in the textile industry. It is cultivated in about 10 million hectares in the country. The main products of cotton plant are cotton lint and cotton seeds. Cotton lint is the fibre of the plant that is used in the textile industry. Cotton seeds yields three important by-products: linters, hulls and kernels. Linters are short fibres that

are still attached to seeds after ginning. They are used for manufacturing products such as propellants used for gun ammunition. Hull of the cotton seed is used as animal feed. Oil extracted from the kernel is either used directly or is mixed with other edible oils for human consumption.

Cotton is the only oilseed crop that has shown tremendous progress after the introduction of Bt cotton hybrids in 2002. The production of cotton oil registered a three-fold increase from 0.46 million ton in 2002-03 to 1.20 million ton in 2010-11. In 2009-10, cotton oil contributed about 13.7 percent of the total edible oil production in the country.

The way forward

The history of Bt cotton in India is a unique example of rapid technology acceptance. It even prompted Home Minister Mr P Chidambaram to urge scientists to replicate the success of Bt cotton in cereals and food crops. However, there is a need for good public awareness programs, a well-regulated seed distribution system and conducive market condition for the produce. Equally important is the cooperation among seed developers in public and private sectors, extension workers and scientific officers of companies in disseminating factual and reliable information about Bt products and their performance.