

Bt cotton

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Bt cotton is a genetically modified variety of cotton producing an insecticide. It is produced by Monsanto.

It is produced by Mahyco in India.^[1]

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Description

The bacterium *Bacillus thuringiensis* (Bt) naturally produces a chemical harmful only to a small fraction of insects, most notably the larvae of moths and butterflies, beetles, and flies, and harmless to other forms of life. The gene coding for Bt toxin has been inserted into cotton, causing cotton to produce this natural insecticide in its tissues. In many regions, the main pests in commercial cotton are lepidopteran larvae, which are killed by the Bt protein in the transgenic cotton they eat. This eliminates the need to use large amounts of broad-spectrum insecticides to kill lepidopteran pests (some of which have developed pyrethroid resistance). This spares natural insect predators in the farm ecology and further contributes to noninsecticide pest management.

However, Bt cotton is ineffective against many cotton pests, however, such as plant bugs, stink bugs, and aphids; depending on circumstances it may still be desirable to use insecticides against these. A 2006 study done by Cornell researchers, the Center for Chinese Agricultural Policy and the Chinese Academy of Science on Bt cotton farming in China found that after seven years these secondary pests that were normally controlled by pesticide had increased, necessitating the use of pesticides at similar levels to non-Bt cotton and causing less profit for farmers because of the extra expense of GM seeds.^[2]

Advantages

Bt cotton has a higher resistance to pests^[3] due to the toxic Bt toxin given out by the crop.^[4]

See wiki article on Advantages of genetically modified cotton

Controversies

In India, Bt Cotton has been enveloped in controversies^[5] due to it's links with crop and seed monopolies and farmer suicides. BT cotton accounts for 93% of cotton grown in India.^[6] But these BT cotton seeds are expensive and lose vigour after one generation, requiring farmers to buy new stock every year.^[7]

Also see the wiki article on Controversies on genetically modified crops

Notes and references

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See also

- Genetically modified cotton
- Genetically modified food controversies
- Bt brinjal

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Categories: Genetically modified organisms in agriculture | Cotton | Monsanto

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