



## Supreme Court Upholds Monsanto's Patent Claim on Bt Cotton Seed

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The Supreme Court has **allowed Monsanto Technology** to claim patent on its genetically-modified cotton seeds, giving a boost to firms developing new seed technologies.

The ruling overturned an order of a Division Bench of the Delhi High Court (2018) which invalidated the patent granted to Monsanto — acquired by German firm Bayer AG — saying the gene sequence responsible for the Bt trait that eradicates pests afflicting cotton plants is a part of the seed, and hence, **cannot be patented under Section 3(j) of the Patents Act, 1970.**

### Background

- With its ruling, the Supreme Court has also set aside an earlier order of the division bench of the Delhi high court, which had held that plant varieties and seeds cannot be patented under Indian law by companies.
- Mahyco Monsanto Biotech (India) (MMB) sells GM cotton seeds under license to more than 40 Indian seed companies. These Indian seed companies in turn pay a **“trait fee”** to Monsanto which is fixed by the government.

### Impact

#### Positive

- The **outcome is positive for foreign agricultural companies** such as Monsanto, Bayer, Dupont, Pioneer and Syngenta which have been concerned that they could lose patents on GM crops in India.
- The verdict validates that patents are integral to innovation and will encourage more companies to come out with **India specific innovations.**
- The ruling is expected to **encourage biotechnology firms** to step up investment in the country.

## Negative

- This long dispute led Monsanto to withdraw its **herbicide tolerant (HT)** seeds from the process of government approval. Indian farmers who need better quality seeds (global warming adaptation measures requires both drought- and flood-resistant seeds), will be worst hit.
- Most international companies have stopped releasing new technology in the Indian market due to the uncertainty over patent rule. Access to advanced technology is important to help Indian farmers compete with rivals overseas because Bt cotton cotton seed, the only lab-altered crop allowed in India, in 2003 and an upgraded variety in 2006, helped transform India into the world's top cotton producer and second-largest exporter of the fiber.

## Government's Response

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- The prices of GMO seeds and the royalty to Monsanto are **already under government control** thus keeping seeds affordable for the Indian farmers.
- Till recently, every seed firm **like Nuziveedu required an annual No Objection Certificate (NOC)** from Monsanto whose job was to ensure the right processes were being followed – this was critical if Monsanto was to be responsible for any problems with the seeds, however, the government removed the annual NOC requirement; as a result, if these firms choose to not pay royalty, there is little a Monsanto can do except to file a civil suit which can take decades to resolve.

## Bt Cotton

- **Bollgard II cotton** contains **two genes(Cry1Ac and Cry2Ab)** derived from the common soil bacterium *Bacillus thuringiensis*(Bt).
- India ratified the **Cartagena Protocol** which protects biodiversity from potential risks of genetically modified organisms and the products of modern biotechnology. The protocol requires setting up of a regulatory body.

## Genetic Engineering Appraisal Committee (GEAC).

- Currently the top biotech regulator in India is **Genetic Engineering Appraisal Committee (GEAC)**. The committee functions as a statutory body **under the Environment Protection Act 1986** of the Ministry of Environment & Forests (MoEF).
- GEAC, the apex body regulates manufacturing, use, import, export and storage of hazardous micro-organisms or genetically engineered organisms and cells in the country.
- GEAC is chaired by the **Special Secretary/Additional Secretary of MoEF&CC** and co-chaired by a representative from the Department of Biotechnology (DBT). Presently, **it has 24 members** and meets every month to review the applications in the areas

indicated above.

## Other Regulatory Agencies for GMO

- As per powers conferred by Sections **“Regulation of Genome Engineering Technologies in India”, 8 and 25 of Environment (Protection) Act, 1986**. These rules are essentially covering entire spectrum of activities involving GMOs.
- **Six Competent Authorities** and their composition have been notified under these Rules that includes:
  - rDNA Advisory Committee (RDAC)
  - Institutional Biosafety Committee (IBSC)
  - Review Committee on Genetic Manipulation (RCGM)
  - Genetic Engineering Appraisal Committee (GEAC)
  - State Biotechnology Coordination committee (SBCC)
  - District Level Committee (DLC)
- While the **RDAC is advisory in function**, the **IBSC, RCGM, and GEAC are responsible for regulating function**. **SBCC and DLC are for monitoring purposes**.

## Conclusion

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Since patent protection is most often the core incentive for researchers in the fields of science and technology that ensures innovation and introduction of new technologies which are **important for solving the domestic problems** of the country and more so to compete in the age of Globalised economy; but developing countries like India need more affordable, frugal innovations and that too from the Indian research institutes and councils so that the knowledge could be distributed without barriers within India which will ultimately benefit the poor.