

**SHORT COMMUNICATION**

# India's stand on GM crops

Vibhu Tripathi\*

## Abstract

The appropriate action of the Indian government on GM crop introduction and cultivation by Indian farmers is appreciable. The present article discusses a few of the many aspects in this regard.

**Keywords:** Farmers, India, Trump-Tariff, GM Crops.

**关键词:** 农民、印度、特朗普关税、转基因作物。

The rising trade tension between India and the United States has put forth genetically modified (GM) crops into the spotlight once again, as Washington's newly imposed tariffs on Indian goods have become entwined with the demands for access to India's agricultural market particularly GM soy, corn, and related processed feed products raising alarm over both economic leverage and food sovereignty. Now India's response has been resolute; there will be no compromise on GM food crop imports or commercial cultivation, with Prime Minister Modi and officials emphasizing repeatedly that farmer livelihoods and rural communities are «non-negotiable» even amid growing tariff pressure. For India, the interests of its farmers are a top priority. We will not trade short-term economic concessions for the genetic integrity of our native crops or the autonomy of millions of smallholders. It is pertinent to understand what GM crops are. Plants used in agriculture that have had their DNA changed or modified through genetic engineering techniques are known as genetically modified (GM) crops. In order to give the plant new characteristics, resistance to pests and herbicides, improved nutrition, or the capacity to withstand environmental factors that may restrict growth, this modification entails adding or altering particular genes..

Alumnus, Department of Applied Psychology, Jamia Millia Islamia, New Delhi, India.

**\*Corresponding Author:** Vibhu Tripathi, Alumnus, Department of Applied Psychology, Jamia Millia Islamia, New Delhi, India, E-Mail: [tripathi.vib@gmail.com](mailto:tripathi.vib@gmail.com)

**How to cite this article:** Tripathi, V. (2025). India's stand on GM crops. *The Scientific Temper*, 16(8):4602-4603.

Doi: 10.58414/SCIENTIFICTEMPER.2025.16.8.01

**Source of support:** Nil

**Conflict of interest:** None.



**NARENDRA BHAI MODI**  
**THE PRIME MINISTER OF INDIA**

The genetic modification process may involve inserting a gene from a different species, including bacteria, into the plant's genome, resulting in characteristics that do not occur naturally in the species. The origins of genetically modified (GM) crops can be traced to the 1970s, when researchers created recombinant DNA technology, which allowed genes to be transferred between organisms. The first genetically modified plants, like antibiotic-resistant tobacco, were successfully produced by researchers by the early 1980s, and the first field tests were carried out in the US in 1986. The Flavr Savr tomato, which was created to postpone ripening and increase shelf life, was the consumer breakthrough in 1994. A new era of agriculture was soon to begin with the commercialization of GM crops such as herbicide-tolerant soybeans and Bt cotton in 1995–96. These crops were quickly adopted throughout the world because of their ability to withstand pests, herbicides, and increase yields. Today, GM crops remain both a technological milestone and a subject of intense debate, balancing promises of food security with concerns about ecological and socio-economic impacts. Bt cotton is the only genetically modified (GM) crop approved for commercial cultivation in India. It was introduced in 2002 and contains a gene from the bacterium

*Bacillus thuringiensis* (Bt), which enables the plant to produce a toxin that is harmful to certain pests, particularly the bollworm. While GM food crops such as corn, soybeans, and mustard remain stalled, GM brinjal was shelved under a 2010 moratorium and GM mustard is still entangled in legal and political challenges. India's regulatory system has not yielded to external pressure. Instead of opening its food supply, India has cautiously negotiated limited exceptions, notably exploring the import of processed GM products like soybean meal or DDGS for animal feed, but these proposals remain hotly contested domestically and are far from settled. The overarching public sentiment remains firm; there is widespread general concern that GM imports could potentially unravel agricultural biodiversity, disrupt centuries-old preserved/ traditional farming systems, and undermine seed sovereignty by forcing farmers toward dependency on corporate-controlled technologies. Critics advise that once GM food crops enter the Indian supply chain, whether through cultivation or even limited import, they can spread irreversibly through cross-pollination, contaminating native varieties and reducing genetic diversity. Such biodiversity loss can potentially weaken India's resilience against pests, diseases, and climate stress, ultimately threatening long-term food security. Civil society organisations, farmer unions, and environmental groups have therefore mounted sustained campaigns against any such concessions, framing the issue as not merely an agricultural or scientific debate, but a battle for the democratic right of farmers to control their seeds, crops, and livelihoods. Regulatory bodies like the Genetic Engineering Appraisal Committee (GEAC), aware of these concerns, continue applying stringent, evidence-based scrutiny, rejecting applications that fail to demonstrate clear safety, sustainability, and socio-economic benefits. Rejecting GM

food has thus evolved from a narrow trade position into a broader, deeply symbolic assertion of sovereignty. It is a declaration that India's genetic heritage, rural economy, and ecological health are not bargaining chips in global trade negotiations. India's agricultural biodiversity, food security, and farmer independence are worth defending even at the cost of economic friction. In a world that's racing toward corporate control of seeds, India's unwavering stance stands as a bold safeguard of the dignity of its farmers, which is not negotiable and shall not be compromised.

## References

- Down to Earth. (2025, July 18). *India's GMO resistance: Farmers block US trade deal for GM crops*. <https://www.downtoearth.org.in/agriculture/seed-of-resistance-how-indias-farmers-are-blocking-a-gmo-powered-trade-deal>
- Economic Times. (2025, August 2). *India hardens stance in US trade talks; refuses tariff cuts on farm, dairy & GM foods as Trump escalates tariff war*. <https://economictimes.com/news/economy/foreign-trade/india-hardens-stance-in-us-trade-talks-refuses-tariff-cuts-on-farm-dairy-gm-foods-as-trump-escalates-tariff-war>
- Indian Express. (2025, August 8). *Duty-free access to US cotton, agri items' quota likely on talks table*. <https://indianexpress.com/article/business/duty-free-access-to-us-cotton-agri-items-quota-likely-on-talks-table-10176702/>
- Times of India. (2025, August 7). *Will protect our farmers, ready to pay heavy price for it: PM Modi*. <https://timesofindia.indiatimes.com/india/will-protect-our-farmers-ready-to-pay-heavy-price-for-it-pm-modi/articleshow/123175176.cms>
- Nature India. (2025, June 5). *India must develop a GM crop plan based on science*. <https://www.nature.com/articles/d44151-025-00098-y>.
- U.S. Food and Drug Administration. (2024). *Science and history of GMOs and other food modification processes*. <https://www.fda.gov/food/agricultural-biotechnology/science-and-history-gmos-and-other-food-modification-processes>