



Confined field trials of GM maize to begin at Punjab university

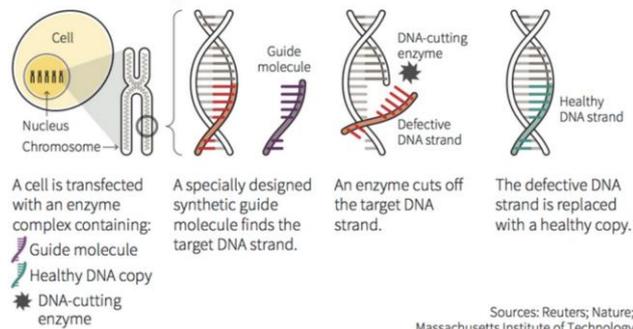
Why in news: Field trials of two genetically modified (GM) maize varieties are set to begin this kharif season at Punjab Agricultural University. The trials were approved by the Genetic Engineering Appraisal Committee (GEAC) after getting consent from the Punjab government.

- The GEAC recommended Bayer Crop Science Ltd.'s proposal for confined field trials of herbicide-tolerant and insect-resistant transgenic maize. The trials aim to study weed-control efficacy using glyphosate-K salt and the efficacy of insect-protected maize against lepidopteran pests.

DNA editing

A DNA editing technique, called CRISPR/Cas9, works like a biological version of a word-processing programme's "find and replace" function.

HOW THE TECHNIQUE WORKS



- Punjab Agricultural University Vice-Chancellor clarified that the trials are for research purposes only, and any commercial decision lies with the Central government. The Coalition for a GM-Free India urged the Punjab government to withdraw its no-objection certificate for the trials.
- The coalition highlighted a large body of scientific literature documenting glyphosate's harmful effects on human health and the environment.

Do you know?

- HT-Bt cotton, engineered to survive glyphosate spraying, never received official clearance in India as trials by Mahyco-Monsanto were suspended over a decade ago and no approval followed.
- Despite the lack of approval, HT-Bt seeds leaked into farms across Gujarat, Maharashtra, Telangana, Andhra Pradesh, and Punjab, with illegal cultivation covering 15–25% of cotton acreage.
- The spread of illicit HT-Bt cotton highlights a disconnect between regulation and reality, as the government blocks commercialisation citing ecological and health concerns while seeds spread unchecked and untested.
- Since 2015, government intervention in private seed contracts has been a major challenge, with the Cotton Seed Price Control Order (SPCO) slashing Bt cotton seed royalties, discouraging research and development.
- In 2016, regulations mandated GM trait licensors to transfer technology within 30 days and capped trait fees at 10% of MSP for five years, with further annual cuts, tightening even more by 2020 and deterring global biotech players.
- India was once poised to lead the gene revolution and become a major seed exporter to Asia and Africa, but policy inertia (2003–2021) and activist opposition denied farmers potential gains.
- Cotton exports declined after 2011-12, and by 2024-25, India became a net importer of raw cotton, with imports valued at \$0.4 billion.

[Current Affairs Course is now Live.](#) Course will start in October 2025 1st week.

Modules will include class notes, monthly compilation, quarter compilation and annual compilation. This will help in regular revision r/t in the fag-end of preparation.

I will provide my annual compilation, like last year, on Telegram in May 1st week.

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[Last year I had promised 20 questions in Prelims from my notes & 28+ Questions could be answered from the same.](#)

30 questions is my aim for 2026 prelims. To meet that, I have analyzed why I missed 5-6 C.A. questions in 2025 and I have increased my coverage accordingly.

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