

BIOTECH CROPS: Your Questions Answered



What are biotech/GM crops?



A biotech or genetically modified (GM) crop is a plant that has a novel combination of genetic material obtained through the use of modern biotechnology.

For example, a GM crop can contain a gene(s) that has been artificially inserted instead of the plant acquiring it through pollination.

The resulting plant is said to be “genetically modified” although in reality all crops have been “genetically modified” from their original wild state by domestication, selection, and controlled breeding over long periods of time.

The modifications are done to give the plant new or improved characteristics that are advantageous for agriculture or nutrition.



What are the benefits of biotech/GM crops?

Biotech crops are being adopted globally because of the enormous benefits to the environment, health of humans and animals, and contributions to the improvement of socio-economic conditions of farmers and the general public.

Biotech crops contributed to food security, sustainability, and climate change solutions by:

- increasing crop productivity
- conserving biodiversity
- providing a safer environment
- reducing CO2 emissions
- helping alleviate poverty through uplifting the economic situation of farmers, their families and communities.



Where are biotech/GM crops grown?

In 2024, there were 32 biotech crop planting countries, 19 of which were growing 50,000 hectares or more, 27 developing countries, and 5 industrial countries. They were:

USA, Brazil, Argentina, Canada, India, Paraguay, China, South Africa, Pakistan, Bolivia, Uruguay, Philippines, Australia, Myanmar, Sudan, Mexico, Spain, Colombia, Vietnam, Honduras, Chile, Malawi, Portugal, Indonesia, Bangladesh, Nigeria, Eswatini, Ethiopia, Costa Rica, Kenya, Ghana, and Burkina Faso.



Who plants biotech/GM crops?

Since 1996, biotech crops have provided food, feed, and shelter to the world's 8.2 billion population. Around 17 million farmers globally plant biotech crops, with majority being small, resource-poor farmers in developing countries.

Biotech crops help farmers earn reasonable incomes and have better livelihoods from higher yields. In 2020, biotech crops helped uplift the lives of 17 million farmers and their families, totaling more than 65 million people.



Sources:

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- ISAAA. 2019. Global Status of Commercialized Biotech/GM Crops in 2019. ISAAA Brief No. 55. ISAAA: Ithaca, NY.