

## ***Gains Foregone by Going GMO Free: Potential Impacts on Consumers, the Environment, and Agricultural Producers***

GMO products are [safe for consumers](#), and provide benefits such as reduced pesticide use and biofortification of crops.

- There have not been any scientifically documented human safety issues associated with food made from commercialized GMO raw materials over the more than 30 years of evaluation.
- GMO cotton adoption in India and Pakistan reduced pesticide poisoning by an estimated nine million instances annually, and GMO Brinjal has reduced toxicity exposure for farmers in Bangladesh.
- [Golden Rice](#) is biofortified with beta-carotene, which is a precursor to vitamin A, and demonstrates the capability of GMOs to address consumer-focused challenges like micronutrient deficiency. Golden Rice was recently approved for commercialization in the Philippines.



GMO crops also offer [environmental benefits](#) to producers and are safe for consumers.

- GMOs use less land, energy, and chemicals, and the carbon footprint of agriculture would certainly increase without GMOs.
- Agriculture is the largest user of habitable land and GMO crops make more efficient use of land by protecting agricultural yields from pests.
- GMO crops can also reduce producer reliance on pesticides and limit the negative externalities associated with pesticide use.
- Estimates show that GMO corn adoption from the 1990s to 2010 caused a 90% decrease in insecticide use.

In the U.S., the majority of [GMO corn](#) and processed soybean meal are used to feed livestock.

- In the absence of Bt crops, levels of mycotoxin contamination in food and feed would increase, resulting in negative health outcomes for humans and livestock and economic losses.
- Negative health outcomes for animals ingesting mycotoxins at high levels include reduced body weight and fertility, immune suppression, increased susceptibility to diseases and parasites, liver and kidney damage, tumors, and death.

The slow and unpredictable pace of [GMO crop regulatory approval](#) and commercialization is limiting investment in research and development.

- Strict regulation of GMO crops in the EU has driven \$250 million in R&D investment out of the EU over the past 30 years.
- Trade barriers targeted at GMOs reduce access to food, limit farm revenues, and increase overall prices that disproportionately affect countries that can least afford to absorb the increased costs. Many of the countries who have not adopted GMOs are among the world's least food secure and most reliant on imports as a source of food.

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### **Experts to Contact for More Information:**

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