

Myth 1: Biotech food is unsafe and untested and has harmed hundreds of consumers.

Reality: Crops and foods improved through biotechnology are at least as safe as those produced through other methods. This has been confirmed by every expert body that has considered the issue. The only time a safety differential has been confirmed it has found the biotech crops and foods safer.

Myth 2: Soy allergies have increased with biotech soybeans.

Reality: Biotech foods are more certain to be safe and free of novel allergens than any others.

Foods derived through biotechnology are, in fact, the only foods that are screened for allergenicity before they are placed on the market. Biotech foods are therefore less likely to be allergenic than any others.

Myth 3: Biotech has nothing to offer developing countries.

Reality: All developing countries already benefit from biotechnology through cheaper commodity imports, lower mycotoxin levels, and higher and cleaner crop yields in domestic planting. Countries that grow biotech crops also benefit from reduced chemical use, higher yields and a more competitive agriculture.

Myth 4: Biotech crops are making food less safe.

Reality: Foods derived from crops improved through biotechnology are as safe or safer than their conventional counterparts. In fact, the technology helps to make food safer for example insect resistant maize helps to reduce mycotoxin contamination.

The U.S. Soybean Export Council (USSEC) is a dynamic partnership of key stakeholders representing U.S. soybean producers, processors, commodity shippers, merchandisers, allied agribusinesses and agricultural organizations.
www.ussec.org

For a more detailed examination of these issues, including references, please see www.ussec.org/dispellingthemyths



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THE REAL FACTS ABOUT AGRICULTURAL BIOTECHNOLOGY AND BIOTECH FOOD



Millions of farmers across the world have found that crops improved through biotechnology are a highly successful farm tool delivering environmental and safety benefits. Foods from biotech crops have been eaten for the past twenty years with no health problems. The environmental benefits through reduced production costs, reduced greenhouse gas emissions, reduced land erosion, and improved yields have benefited society as a whole.

Farmers – large and small, in developing or developed countries – use only those tools that work and are safe. Together they find that biotechnology has:

- **raised farmer incomes**, saved time, reduced costs, and enhanced their competitiveness;
- **reduced yield losses** to weeds and insect pests;
- **replaced environmentally harmful** compounds with more benign and sustainable treatments;
- **enabled greater use of conservation tillage**, reduced soil erosion, and cut the amount of CO2 farming releases into the atmosphere;
- **reduced the risk of mycotoxin contamination** in maize (corn), a serious problem in many developing countries;
- And finally, has been **confirmed as safe as conventional crops** by the world's leading scientific institutions and authorities with not a single verified incident of harm to human or animal health.

This booklet provides fact-based answers to some of the misunderstandings and myths about the technology.

Myth 5: Agricultural biotechnology offers no direct benefits to consumers.

Reality: The next generation of biotech soybeans has already begun to deliver numerous consumer benefits, and these will increase in the coming years through traits such as lower saturated fat, increased isoflavone content and increased omega-3 fatty acids. Scientists in the United Kingdom report that biotech crops are the only sustainable way to add sufficient omega-3 into the food chain without damaging increasingly fragile fish stocks.

Myth 6: Farmers and biotechnology companies are opposed to mandatory labels for “GM” foods because they are trying to hide safety concerns from consumers and deprive them of freedom to choose.

Reality: Consumers who wish to avoid biotech foods already have labels (“Organic”) they can use to avoid biotech if they wish. Biotech foods would not appear on the market unless they had been fully authorized as safe following rigorous scientific and technical assessment.

Myth 7: Since biotech crops were introduced, pesticide use has increased.

Reality: There is a declining demand for farm chemicals at the same time that agricultural outputs have increased. The reduction in chemical use is one of the early and clear benefits to farmers using both insect resistant and herbicide tolerant crops.

Myth 8: Gene flow from biotech crops threatens biodiversity.

Reality: The major biodiversity impact from agriculture results from converting wild lands to agriculture. The higher yields and improved sustainability of biotech improved crops reduce their biodiversity impacts compared to other production methods.

Myth 9: Biotech corn threatens the Monarch butterfly.

Reality: Extensive scientific study has concluded that insect resistant crops have had no measurable direct effect on the Monarch. Indeed, reductions in pesticide spraying reduce one of the major risks to beneficial insects.

Myth 10: The herbicides used on biotech crops damage the environment.

Reality: Biotech herbicide-tolerant crops not only reduce herbicide application, they promote greater adoption of no-till farming which minimizes soil erosion and the release of climate-changing carbon into the atmosphere. Research suggests that “no tillage” methods of crop production reduce modern agriculture’s impact on global warming by approximately 88%.

Myth 11: Biotech crops are inherently risky to the environment.

Reality: Biotech crops benefit the environment through reduced tillage, reduced fuel use and reduced inputs. Independent analysts report that in 2012, the combined biotech crop-related carbon dioxide emission savings from reduced fuel use and additional soil carbon sequestration were equal to the removal from the roads of 8.6 million cars, equivalent to 28% of all registered cars in the UK.

Myth 12: Biotech crops are not necessary for no-till agriculture.

Reality: Biotech crops have facilitated a dramatic expansion of conservation tillage since 1996, saving one billion tons of topsoil per year and providing beneficial habitats for birds and mammals, reducing phosphorous and nitrogen run-off, and reduced atmospheric carbon dioxide through escaping soil carbon and tractor fuel used for plowing.

Myth 13: Biotechnology has been a bad deal for farmers.

Reality: Biotech has transformed global agriculture, making commodity crops cheaper and easier to grow while reducing expensive inputs. Farmers across the world have been enthusiastic about agricultural biotechnology – when they have the opportunity to use it on their farms.

Myth 14: Farmers are at the mercy of biotech chemical companies for their seeds and chemicals.

Reality: The large and vigorous industry of traditional seed suppliers – more than 550 in America alone – underlines the fact that non-biotech seeds remain freely available and widely used. Non-biotech seeds remain available for organic growers and those who wish to grow non-biotech crops.

Myth 15: Biotech crops only suit U.S. agriculture.

Reality: Biotech crops are widely grown outside the U.S. One-third of the world’s biotech crop acreage lies in developing countries where the take-up of ag biotech continues to advance twice as fast as in industrial countries. Ninety-four percent of the 18 million farmers growing biotech crops are smallholders in the developing world (see www.isaaa.org).

Myth 16: Biotech crops have been banned in the European Union.

Reality: Demonstrably false. The EU both imports and grows biotech crops. It has legislation in place for import and processing and cultivation of biotech crops and foods. The EU imports more than 30 million tons of biotech soybeans from South America and the U.S. – every year.

Myth 17: Biotechnology has failed to increase yields.

Reality: Biotech crops increase yields by reducing losses to insect damage and weed competition. They also reduce costs per acre/ crop weight, therefore increasing economic yield. Herbicide-tolerant crops allow farmers to better control weeds which would otherwise compete with the crop plants and thereby reduce both the quantity and quality of yields. Insect-resistant plants protect the crop from attack, especially from insects such as corn borer and bollworm which are notoriously difficult to control with sprays.

Myth 18: Biotechnology offers at best only minor benefits.

Reality: The transformation of the economics of soybean, cotton and maize production, with reduced costs, increased farmers’ profits and lower chemical use, represent major gains. In the case of the U.S. grown papaya, biotechnology has saved an entire industry from economic disaster.

Myth 19: Farmers lose because they cannot save biotech seeds.

Reality: The benefits of getting the latest varieties most often outweigh the savings and loss of performance from farm-saved seed. Farmers who use or modern hybrid seeds achieve increased yields when they buy new seed each year.

Myth 20: Organic farming offers a better future than biotechnology.

Reality: Biotech crops are an important element if the food needs of the world’s growing population are to be met reliably and without unacceptable encroachment on bio-diverse habitats. Studies and experience show conclusively that far from being incompatible, biotech and organic crops are, scientifically, potentially highly compatible and complementary. Organic farming has its place and its strengths are concentrated in the low-yield production of food for those consumers willing to pay extra for products they perceive as “natural” even though studies find no consistent safety or health benefits.

