UNITED SOYBEAN BOARD

BIOTECHNOLOGY & HUMAN HEALTH

Around the globe, biotech offers a world of promise. When farmers use biotechnology to grow more food with less water and land, consumers benefit with plentiful access to safe, healthy foods. But, it's natural to have questions about technology. Here are a few answers.

IS BIOTECHNOLOGY NEW TO OUR FOOD SUPPLY?

Humans have been using biotechnology – whether they called it that or not – for more than 10,000 years. In its earliest stages, biotechnology was recognized by humans in the form of microscopic organisms in bacteria and fungi that could be used in making food. **That's how humans first developed cheese, bread, wine and beer.**

Humans first developed cheese, bread, wine and beer through biotechnology.

Most foods we eat today come from plants or animals bred for better taste or increased productivity. Traditional crossbreeding produces changes in the genetic makeup of the resulting plant or animal, sometimes over centuries. Modern agricultural biotechnology, however, is different and substantially improved because it is much more precise.

IS IT SAFE?

In the 12-plus years that biotech crops have been commercially grown, there has not been a single documented case of an ecosystem disrupted or a person made ill by these foods.

The safety assessment of foods derived through biotechnology has actually been much more stringent than for conventionally derived products. In the U.S., new foods produced through conventional breeding or introduced into the marketplace from other parts of the world are not required to undergo exhaustive safety assessments. They are assumed to be safe because they are similar to other varieties or because they have been safely consumed elsewhere in the world. On the other hand, **biotech food products derived are exhaustively assessed for safety before their introduction into the food marketplace.**

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The National Academy of Sciences published a landmark paper in 1987, which concluded that agricultural biotechnology does not create any unique hazards to food production. From 1991 to 2000, three joint United Nations (UN) Food and Agriculture Organization (FAO)/World Health Organization (WHO) consultations concluded that biotechnology has had a long history of use in food production and processing. Moreover, the UN FAO/WHO noted that **biotechnology has the potential to rapidly improve the quantity and quality of food and does not result in food that is less safe than food produced using conventional practices.** In 2008, the European Commission concluded that no demonstration of any negative health effect of biotech food products has ever been reported, and the use of more precise technology and its greater regulatory scrutiny very likely makes biotech foods even safer than conventional ones.

National and international experts agree that biotechnology is safe.

WHAT DO BIOTECH FOODS OFFER THAT CONVENTIONAL FOODS DO NOT?

The first generation of biotech foods focused on helping farmers grow pest or weed-resistant crops. While this can seem a long way away from the grocery store, it means that **farmers are able to grow food for U.S. and international consumers with significantly less pesticides.**

The next generation of biotech foods is building in direct benefits to consumer nutrition. This includes reducing harmful fats and increasing heart-healthy omega-3 fatty acids in the soybean oils used to bake and fry many foods. For more information, see our **Heart Health** page.

Biotechnology is also leading to a high-isoflavone soybean, which could help deliver soy's many benefits (from heart and bone health to some types of cancer prevention to reducing symptoms of menopause) without people having to dramatically increase the amount of soyfoods they eat. A low-phytate soybean may help people with iron deficiency anemia, especially women and children, absorb the nutrients they need.

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