INTERNATIONAL
FOOD INFORMATION
COUNCIL FOUNDATION

Facts about Food Biotechnology

FACT: It is safe to consume foods produced through biotechnology.
Numerous studies conducted over the past three decades have supported the safety of foods produced through biotechnology, and consumers have been eating biotech foods safely since 1996, with no evidence of harm demonstrated anywhere in the world. Consuming foods produced through biotechnology is safe for children, as well as women who are pregnant or nursing. In addition, a broad range of scientists, regulators, health professionals, and health organizations agree that it is safe to consume foods produced through biotechnology. Some examples include, the World Health Organization (WHO), Food and Agriculture Organization of the United Nations (FAO), American Medical Association (AMA), U.S. Food and Drug Administration (FDA), U.S. Environmental Protection Agency (EPA), and the U.S. Department of Agriculture (USDA).

FACT: Agricultural technologies, including biotechnology, are currently providing benefits to consumers, farmers, and the environment worldwide.
Hardier, disease-free crops keep prices stable for consumers and ensure a reliable supply of nutritious, wholesome foods. In developing nations, where a failed crop means the farmer cannot buy food and other essentials for his or her family, biotechnology has helped improve crop quality and consistency. In addition, herbicide-tolerant crops allow for better weed management, which gives farmers choice and flexibility. It also allows them to reduce soil tillage, protecting soil quality, reducing water pollution, and reducing agriculture's carbon footprint for generations to come. Thanks in part to biotechnology, farmers are able to use less insecticide.

FACT: The regulation of foods produced through biotechnology is coordinated by the FDA, EPA, and USDA to ensure the safety of the U.S. food supply.
In 1993, FDA determined that currently available food and animal feed derived from biotechnology are safe. These foods are held to the same rigorous safety standards as all other foods. Furthermore, FDA, EPA, and USDA coordinate regulation, including early food safety assessment, field trials, labeling, and more.

FACT: Biotechnology has prevented entire food crops from being destroyed by pests or disease.
When there was simply no other solution to the plant diseases destroying them, biotechnology was used to develop plums and Hawaiian papaya protected from viruses that threaten these crops. Scientists are now working to leverage biotechnology against extreme climate conditions such as drought, which is of increasing concern with climate change.

FACT: Consumers are informed through labeling requirements for all foods, including those produced through biotechnology.
The FDA requires labeling based on the nutrition and safety of the food, rather than how it was produced. Special labeling of foods is required if: a major food allergen is introduced; the nutritional content of the food has changed; or there are any other substantial changes to the food's composition.

FACT: Foods produced through plant biotechnology are widely grown and consumed both in the U.S. and worldwide.
In 2012, 17.3 million farmers in 28 countries grew biotech crops on 420.8 million acres. Notably, more than 15 million of those farmers were small, resource-poor farmers in developing countries. U.S. farmers planted 171.7 million acres of biotechnology varieties of soybeans, maize (corn), cotton, sugar beet, canola, squash, papaya, and alfalfa. Both whole foods and ingredients derived from biotech crops became available in the U.S. in the 1990's. It is estimated that 70% of U.S. grocery shelves are stocked with foods that contain ingredients from crops grown with biotechnology, such as soybeans, corn, and canola. Whole foods are also available, including sweet corn genetically engineered to be protected from insects, and papaya protected from papaya ringspot virus.

FACT: The use of biotechnology itself does not cause food allergies or increase the potential for a food to cause an allergic reaction or a new food allergy.
During FDA's extensive review of a new biotech food product, the presence of any of the major food allergens (milk, eggs, wheat, fish, shellfish, tree nuts, soy, or peanuts) would trig-

ger extensive testing. If the product were ever permitted in the food supply, it would require special allergen labeling to alert allergic consumers.

FACT: Foods from biotechnology are just as nutritious as conventional foods, and some are higher in certain nutrients.
Independent, peer-reviewed research, as well as regulatory review, has confirmed that current foods developed using biotechnology provide the same nutritional value as conventional foods, except where nutritional improvements have been made, such as cooking oils that deliver more healthful fats.

FACT: Animal biotechnology, such as genetic engineering and cloning, is a safe way to produce fish, meat, milk, or eggs.
Animal biotechnology includes a number of advanced breeding practices, as well as products such as the protein hormone given to dairy cows, recombinant bovine somatotropin (rbST). The safety of milk and other dairy products from cows given rbST has been established and reinforced through decades of research. Meat and milk from animal clones have been determined by the FDA to be as safe as and identical to meat and milk derived from other animals. Food from genetically engineered animals is not currently available to consumers, but federal regulators have a process in place to evaluate their safety on a case by case basis. Examples include salmon enhanced to more quickly grow to maturity (currently in the final stages of FDA review) and pigs whose meat contains a higher proportion of omega-3 fats.

FACT: With so much discussion of antibiotics in animal agriculture, it is important to note that there is no association between foods produced through biotechnology and resistance to antibiotics.
FDA-approved antibiotics are available to farmers through livestock veterinarians to help prevent and treat disease in farm animals. Antibiotic use on the farm is closely regulated to ensure safety for the animals and for people consuming meat, milk, and eggs. In addition, a waiting period is enforced to ensure that food animals are clear of any antibiotics before entering the food supply.

FACT: Biotech, conventional, and organic crops can coexist.
The potential for pollen to travel and transfer traits from one plant to the next is the same with biotech, conventional, or organic agriculture. Multiple field trials have been performed by researchers in industry, government, and academia to determine acceptable distances between biotech and other crops in order to preserve the unique attributes of different crops and agricultural techniques. Neighboring farmers also talk to one another and plan so as to minimize cross-pollination.

FACT: Biotechnology does not increase the prevalence of "super weeds."
Insects and weeds can become tolerant to any pest control technique, whether used in biotechnology, conventional, or organic agriculture. Many systems are in place—including crop and plant variety rotation, and integrated pest management—to discourage bugs and weeds from developing resistance, and to address such problems as they arise.

FACT: Biotechnology increases the amount of food that can be produced on the same amount of land.
It is estimated that the world population will reach 9 billion people by the year 2050, which would increase food needs by 70%. Biotechnology will need to be a part of the solution, as it encourages sustainable farm practices to protect precious nonrenewable resources. In addition, herbicide-tolerant and insect- and disease-protected crops are allowed to thrive through better weed and insect control, allowing farmers to harvest a greater quantity of healthy, damage-free crops. Also in development are crops that can grow even in regions where water is scarce, or where soil and water contain high levels of salt.

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See www.foodinsight.org/foodbioguide.aspx for referenced articles and direct links.