

Genetically modified foods: their benefits and drawbacks

[Food & Diet, Genetically Modified Food](#)



Dear Senator Cornyn, As a United States Senator representing the state of Texas, you know that representing the best interests of your constituents is a full time job. Perhaps one of the most important items in the lives of Texans is how and where their supply of food is produced. While normal agricultural techniques do provide many of the food in the market today, genetically modified foods, or GM foods are quickly becoming an integral part of America's food system. This letter is being submitted to offer you a brief summary of what genetically modified foods are, their benefits, and their drawbacks.

It is our hope that you will use this information to make informed decisions concerning this controversial subject. Specifically speaking, genetic modification is a special set of technologies that alter genetic makeup of organisms such as animals, plants, or bacteria. It is a form of biotechnology in which specific gene sequences are inserted into a specific plant or animal so that the trait exhibited by the gene is manifested in the plant or animal. By allowing specific genes to be re-combined, the value of the recipient organism can be greatly increased.

The potential risks attributed to such a genetically engineered crop can also be increased. Based on the available information, there are quite a number of tangible benefits to genetically modified plants. Crops can be genetically engineered to be more resistant to pests, either plant or animal. By making such plants as corn, soybeans or even alfalfa more resistant, the resultant crop yields are larger, and the need for environmentally dangerous pesticides or herbicides are decreased greatly.

Other crops, such as rice, have been genetically modified to include iron and Vitamin A to increase their health benefits. There are some risks involved with using genetically modified crops. One of the most far reaching is the possibility of the genetically modified foods harming other organisms. A recent study of Cornell University indicated that a gene for a bacterial toxin inserted into corn was poisonous to monarch butterfly larvae. It is a prime example of the far reaching affects of such alteration in the food system.

Another risk inherent in this type of modification is uncontrolled cross-pollination. Once a modified gene is placed within a plant, it is extremely difficult to prevent it spreading to the rest of the crop. There is a strong possibility of a once desirable modification becoming an undesirable trait in another plant. Finally, the modified plants that have an increased resistance to pests and weeds can in time promote the evolution of more resilient weeds and pests through cross breeding or selective evolution.

At the time, no medical harm to humans has been traced to ingesting genetically modified foods. It should be remembered, that is not the same as proving that genetically modified organisms pose no potential dangers. It is our hope that this letter will provide you with a very brief overview of the many benefits and potential drawbacks of genetically modified foods. Please feel free to contact us or other industry experts if you require further or more detailed information.