

# ARE FOODS MADE USING BIOTECHNOLOGY SAFE TO EAT?

The short answer is yes. Scientists around the world have conducted multiple studies on genetically modified food and found that the food is just as safe – or perhaps even safer – than food grown with more conventional processes. There are many reasons for this.

The first is that while scientists have been modifying plant genes for years, they usually focus on a few specific genes in order to get a particular result. Plants have tens of thousands of genes. The genetically modified product won't be dramatically different from its natural counterpart. It may have a few features that the natural version doesn't have but otherwise will remain identical. Some people worry that genetic modification, which introduces genes from one species into an entirely different species, could create new allergens. In fact, it may turn out that the reverse is true. Depending on the food, scientists might be able to remove or inhibit the proteins that act as allergens for some people. This isn't true for every food -- in some cases the protein may be a vital component of the food in question. But genetic modification may make some hypoallergenic foods possible.

Another concern is that some of the genetic markers scientists use could lead to developing bacteria with a built-in resistance to antibiotics. Scientists use antibiotic gene markers to link genes for the desired trait – for example, a higher crop yield – to resistance to a specific antibody. By exposing a modified plant's cells to antibiotics, a scientist can confirm whether or not the genetic modification was successful. But what if that resistance could be passed on to bacteria? It's possible that bacteria in the soil around a plant with antibiotic resistance could pick up the DNA. That bacteria could, in theory, pass this feature to other types of bacteria harmful to humans. So far, however, scientists have been unable to transfer antibiotic resistance genes from plants to bacteria.

It's possible that the foods that come from biotechnology are not only safe to eat, they're actually safer than their natural counterparts. That's because after aggressive testing and analysis, scientists know far more about the genetic composition of modified foods than we do about foods grown in a more traditional fashion. While the controversy around genetically modified food is far from resolved, it appears that you shouldn't worry if the ear of corn you're about to enjoy got its start in a laboratory.

(by Jonathan Strickland - howstuffworks.com)

**1** Among the words underlined in Are foods made using biotechnology safe to eat? choose those which complete the descriptions below.

- a. .... are genes or DNA sequences having a known location on a chromosome.
- b. .... are segments of DNA which are the basic biological units of heredity.
- c. .... are substances that trigger an allergic reaction if inhaled, swallowed or touched.
- d. .... are types of medications that destroy or slow down the growth of microorganisms.
- e. .... is the hereditary material in humans and almost all other organisms.
- f. .... means 'inherent endurance'.
- g. A ..... is genetically engineered plant or animal which has had foreign genes inserted into its genetic code.
- h. A ..... is not related to the ear that we hear with. It is the top of the corn stalk which holds the seeds.

**2** Match verbs a-h with verbs 1-8 into pairs of synonyms. Tip: copy the pairs in your indexed book.

- |             |                          |                |
|-------------|--------------------------|----------------|
| a. focus    | <input type="checkbox"/> | 1. bother      |
| b. get      | <input type="checkbox"/> | 2. collect     |
| c. inhibit  | <input type="checkbox"/> | 3. concentrate |
| d. pass on  | <input type="checkbox"/> | 4. eliminate   |
| e. pick up  | <input type="checkbox"/> | 5. obtain      |
| f. remove   | <input type="checkbox"/> | 6. prevent     |
| g. turn out | <input type="checkbox"/> | 7. result      |
| h. worry    | <input type="checkbox"/> | 8. transmit    |

**3** Choose the right meaning of these adverbs as they are used in Are foods made using biotechnology safe to eat?

- |                  |                    |                 |
|------------------|--------------------|-----------------|
| a. dramatically: | 1. significantly   | 2. theatrically |
| b. otherwise:    | 1. apart from that | 2. if not       |
| c. so far:       | 1. so distant      | 2. up to now    |
| d. actually:     | 1. even            | 2. presently    |
| e. far more:     | 1. more distant    | 2. much more    |

**4** Match nouns a-e with nouns 1-5 into pairs of synonyms. Tip: copy the pairs in your indexed book.

- |                |                          |                   |
|----------------|--------------------------|-------------------|
| a. concern     | <input type="checkbox"/> | 1. characteristic |
| b. controversy | <input type="checkbox"/> | 2. debate         |
| c. counterpart | <input type="checkbox"/> | 3. equivalent     |
| d. feature     | <input type="checkbox"/> | 4. opposite       |
| e. reverse     | <input type="checkbox"/> | 5. worry          |

**5** Make your point! Which of the concerns mentioned in Are foods made using biotechnology safe to eat? do you share, if any? Why? Have you been comforted by what the passage says?