

ELA Grade 7 Unit 2 - Open Response - Print

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According to “Building Your Plate: Comparing the Newest Symbols of Healthy Eating” and “Food Serving Sizes Get a Reality Check,” what is the benefit to having more information about our food?

- A) It can help us understand the role of government in food consumption.
- B) It can help us decide when is the best time to eat.
- C) It can help guide us toward making healthier choices about what we eat.
- D) It can help steer us toward buying better quality food.

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To GMO* or Not to GMO?

by George Erdosh and Marcia Amidon Lusted

What Is Genetic Alteration?

Biotechnology, the science that deals with genetic alteration, is a relatively new discipline that alters a plant on the molecular level. DNA is one of the basic elements in the cells of every living organism, whether they're from a mushroom or a dinosaur or a human being.

Scientists can clip a gene from the DNA of one plant and splice it into the DNA of another plant—that's genetic alteration.

Here's an example. The strawberry plant is very sensitive to frost. If the temperature drops below freezing, that's the end of your strawberry crop for this year. But parsley is resistant to frost. It has built-in antifreeze chemicals that protect it from even heavy frost. If the biotechnologist can splice that gene responsible for producing antifreeze chemicals from parsley into the strawberry plant, the farmer may be able to start planting strawberries three or four weeks earlier in the spring. We'll have an earlier crop and longer harvest season.

Changing Plants Isn't New

Ever since humans started growing plants some 10,000 years ago, farmers have improved plants a great deal. The original apples were the size of crabapples, bitter and flavorless; green peppers were cherry-sized and so hot that you were in agony should you bite into one. Without altering some of our plants, we couldn't have survived and supported today's huge world population.

The difference between then and now is the length of time that is necessary to develop new crop strains. Back then, farmers always selected and saved the best of their crops to plant as the next year's seeds. This strategy of repeated selection for specific food qualities allowed food plants to slowly improve until we got large, juicy, tasty apples and sweet green peppers.

Today's genetic alteration makes some of the same kinds of changes, but the results come in a few years.

How Safe Is It?

There is no easy answer to the question of how safe GMO foods are, or what their long-term effects might be. Many people wonder about what unintended consequences GMO foods might have on the human body. Critics ask whether a rise in allergies is linked to GMO foods. Genetically modified crops can also contaminate other crops, including those intentionally grown without GMOs.

Currently, consumers in Europe are less tolerant than Americans of GMO ingredients in their foods. Many will not buy foods with any GMOs in them, and some companies have adapted by offering a different version of their foods in Europe than they do in the United States. For example, General Mills now sells breakfast cereals in a non-GMO form in Europe, while the breakfast cereals sold in the U.S. still contain cornstarch, sugar, and vitamin E in genetically modified forms.

* GMO: genetically modified organism; a plant, animal, or microorganism whose genes have been changed by scientists to produce a desired result

Read the passage “To GMO or Not to GMO?” Do you think that farmers should be allowed to sell genetically modified foods to the public? Write a short argument explaining why or why not. Be sure to:

- include a claim that explains your position
- acknowledge alternate or opposing claims
- use logical reasoning and evidence from the text to support your claim
- provide a concluding statement that follows from and supports your argument

