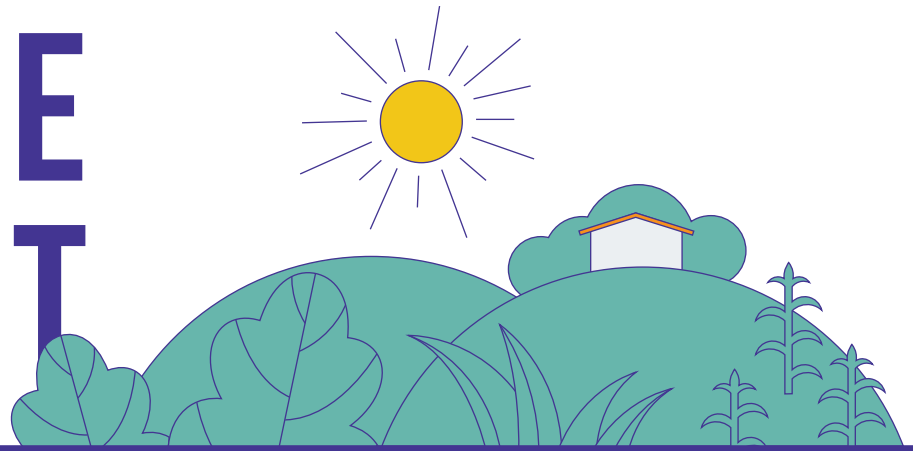**FEED YOUR MIND**

GMOs AND THE ENVIRONMENT

Genetically engineered crops and foods made from genetically engineered crops, or GMOs, have been available to consumers since the 1990s. Since their introduction, researchers have tracked their impacts on the environment. Overall, studies have shown GMO crops can have positive environmental impacts.
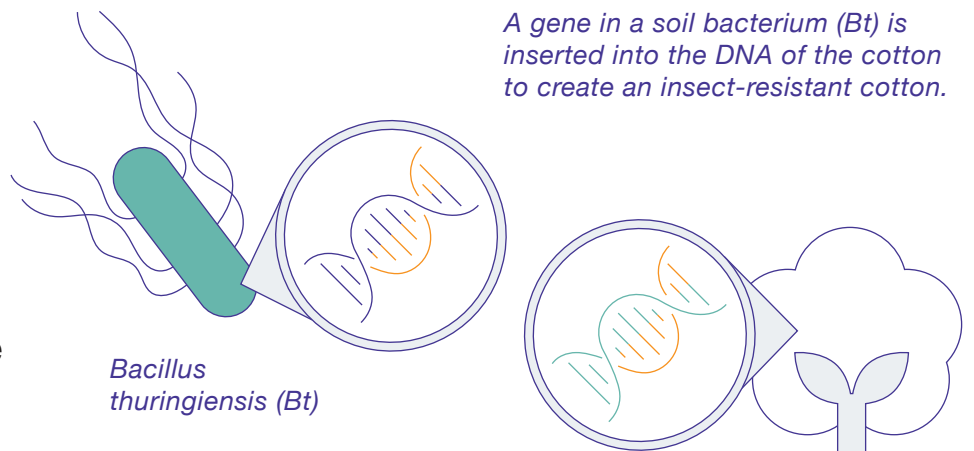
Insect-resistant crops are developed to withstand, deter, or repel pest insects and prevent them from feeding on the plant. A Bt crop is resistant to insect pests.
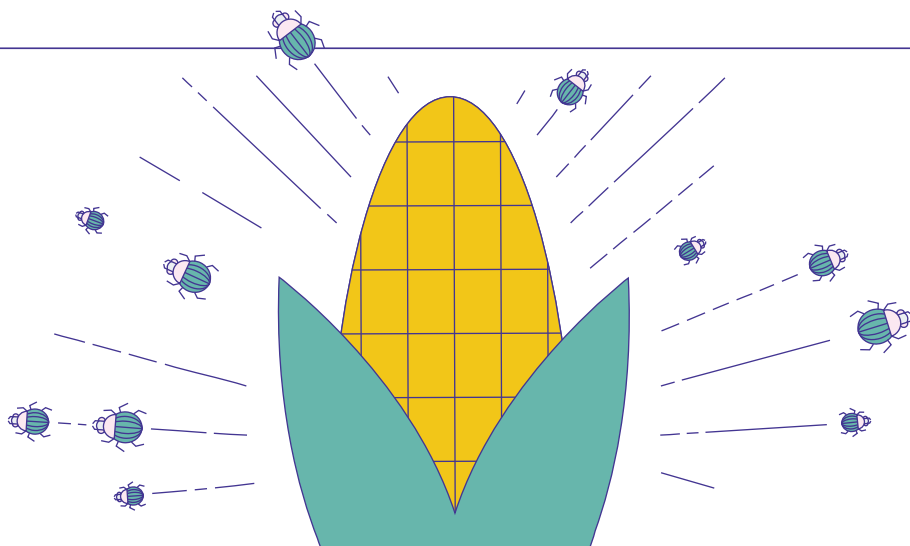
When farmers grow Bt crop varieties they can apply less insecticide while still preventing insect damage to their crops. This in turn allows for a higher diversity of beneficial insects. For example, insecticide application among U.S. corn and cotton farmers decreased by over 80 percent from 1996 to 2017.
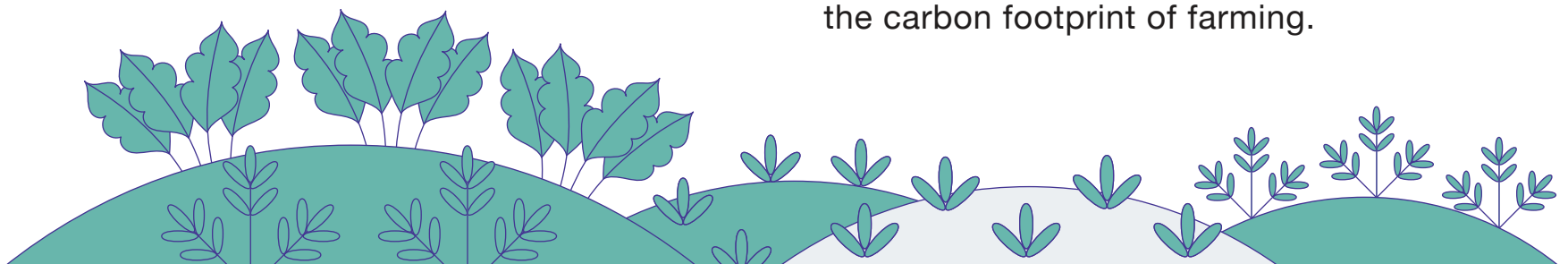
Bacillus thuringiensis (Bt) crops are crops that are genetically modified to produce proteins that are toxic to certain insect pests but not to humans, pets, livestock, or other animals.

Growing Bt cotton allows farmers to reduce application of insecticides that may contaminate groundwater and the environment.

A gene in a soil bacterium (Bt) is inserted into the DNA of the cotton to create an insect-resistant cotton.

Bacillus thuringiensis (Bt)

Herbicide-tolerant (HT) crops are genetically modified crops that have been developed to survive the application of certain herbicides to help farmers more easily control weeds in their fields.

Practicing conservation tillage is easier for farmers who grow HT crops. Conservation tillage, or no-till farming, can reduce soil erosion from wind and water, help soil hold more water, and maintain soil nutrients. It can also reduce the carbon footprint of farming.

Learn more about GMOs and their impacts at **www.fda.gov/feedyourmind**.

FDA

Sources:

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