Genetic engineering is a way to speed up and control the plant breeding process by altering or inserting specific genes into a living organism. The DNA does not need to come from a closely related species. Scientists have used genetic engineering to create plants with positive traits such as increased productivity, increased nutritional value, resistance to disease, and resistance to herbicides.

**EXAMPLES:**
Almost all corn, soybeans, cotton, sugar beets, and canola plants grown in the United States are genetically modified organisms (GMOs).

- **Insect-resistant corn**
  - Includes a gene from soil bacteria that is toxic to some insects

- **Herbicide-tolerant sugar beets**
  - Genetically modified to tolerate a universal herbicide spray used to kill weeds

- **Virus-resistant papaya**
  - Includes a gene fragment from the ringspot virus, making it resistant to that disease

- **More nutritious rice**
  - Golden rice is genetically modified to include beta-carotene, which your body converts to Vitamin A