OMB No. 0910-0497
Appendix V

Expiration Date: 10/31/2020

FEED YOUR MIND

A TIMELINE OF GENETIC MODIFICATION IN AGRICULTURE

For thousands of years, people have worked to improve crops, livestock, and the foods they eat. In the 20th century, scientists found a new way to modify food faster and more precisely—called genetic engineering. This timeline highlights some of the key dates in the development of genetic engineering and the production of GMO (genetically modified organism) foods.

CIRCA 8000 BCE

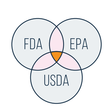
Humans use traditional modification methods like selective breeding and cross-breeding to breed plants and animals with more desirable traits.

1866

Gregor Mendel, an Austrian monk, breeds two different types of peas and identifies the basic process of genetics.

1922

The first hybrid corn is produced and sold commercially.



1940

Plant breeders learn to use radiation or chemicals to change a plant's DNA.

1953

Building on the discoveries of chemist Rosalind Franklin, scientists James Watson and Francis Crick identify the structure of DNA.

1973

Biochemists Herbert Boyer and Stanley Cohen develop genetic engineering (a more precise form of genetic modification) by inserting DNA from one bacteria into another.

1982

FDA approves the first consumer product developed through genetic engineering: a form of insulin to treat diabetes.

1986

The federal government establishes the Coordinated Framework for the Regulation of Biotechnology. This policy defines how FDA, USDA, and EPA work together to regulate the safety of GMOs.

1992

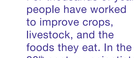
U.S. food policy states that food from GMO plants must meet the same safety requirements as foods derived from traditionally bred plants.

1994

FDA approves the sale of the first GMO produce created through genetic engineering—a GMO tomato—after studies proved it to be as safe as traditionally bred tomatoes.

1990s

The first wave of GMO produce created through genetic engineering becomes available to consumers: squash, soybeans, cotton, corn, papayas, tomatoes, potatoes, and canola.



2003

The World Health Organization (WHO) and the Food and Agriculture Organization (FAO) of the United Nations develop international guidelines and standards for the safety of GMO foods.

2005

GMO alfalfa and sugar beets are available for sale in the U.S.

2015

Genetically modified salmon is the first GMO animal approved for use as food in the U.S.

2017

GMO apples are available for sale in the U.S.