

## **What do you understand by GMF food?**

Genetically modified food (or GM food) is food produced from plants or animals whose DNA has been altered through genetic engineering. These genetically modified organisms are often called GMOs for short.

Genetic engineering is the process of manipulating an organism's genes directly — by, for example, transplanting DNA from other organisms. It's different from the conventional method of selectively breeding plants and animals to get desired traits. Genetically modified foods have been on the US market since 1994, ever since the introduction of 'Flavor Saver' tomatoes that had been engineered to ripen more slowly.

### **Advantages of GMF Foods:-**

#### **1. Food supplies become conventional:**

when crop yields become predictable, then the food supply becomes predictable at the same time. This gives us the ability to reduce the presence of food deserts around the world, providing a greater population with a well-rounded nutritional opportunity that may not have existed in the past.

#### **2. Nutritional values can be improved:**

Genetic modifications do more than add pest resistance or weather resistance to GMF crops. The nutritional content of the crops can be altered as well, providing a denser nutritional profile than what previous generations were able to enjoy. This means people in the future could gain the same nutrition from lower levels of food consumption. The UN Food and Agricultural Organization notes that rice,

genetically modified to produce high levels of Vitamin A, have helped to reduce global vitamin deficiencies.

**3. GMF foods can have a longer shelf life:**

Instead of relying on preservatives to maintain food freshness while it sits on a shelf; genetically modified foods make it possible to extend food life by enhancing the natural qualities of the food itself. According to Environmental Nutrition, certain preservatives are associated with a higher carcinogen, heart disease, and allergy risk.

**4. It creates foods that are more appealing to eat:**

Colors can be changed or improved with genetically modified foods so they become more pleasing to eat. Spoon University reports that deeper colors in foods changes how the brain perceives what is being eaten. Deeper red colors make food seem to be sweeter, even if it is not. Brighter foods are associated with better nutrition and improved flavors.

**5. Lower cost for consumers:**

All of these factors contribute to lower costs for the consumer. They can also ensure that more people have access to quality food.

**6. Herbicides and pesticides are used less often**

Herbicides and pesticides create certain hazards on croplands that can eventually make the soil unusable. Farmers growing genetically modified foods do not need to use these products as often as farmers using traditional growing methods, allowing the soil to recover its nutrient base

over time. Because of the genetic resistance being in the plant itself, the farmer still achieves a predictable yield at the same time.

### **Disadvantages of GMF Foods:-**

#### **1. Allergic reactions:**

Some people believe that GMF foods have more potential to trigger allergic reactions. This is because they may contain genes from an allergen, a food that prompts an allergic reaction. The WHO discourages genetic engineers from using DNA from allergens unless they can prove that the gene itself does not cause the problem.

#### **2. Antibiotic resistance:**

When crops are modified to include antibiotics and other items that kill germs and pests, it decreases the effectiveness of an antibiotic or other medication when it is needed in the traditional sense. Because the foods contain trace quantity of the antibiotic when consumed, any organisms that would be impacted by a prescription antibiotic have built an immunity to it, which can cause an illness to be more difficult to cure.

#### **3. Production of toxins:**

Genetically modified foods may also have higher production of toxins at levels already harmful to humans. Such may result from toxins being produced when there is damage in the “gene of interest” during the insertion process.

#### **4. Reduce nutritional value:**

Some genetically modified foods have been noted to be void of nutritional value.

#### **5. Not safe to eat:**

It is proved by scientific studies that genetically modified foods contain substance that may cause disease and even death to several kinds of species in this world, including us humans. For instance, butterflies and mice cannot survive with these foods.

#### **6. New disease:**

GMF foods can create new diseases, considering that they are modified using viruses and bacteria.