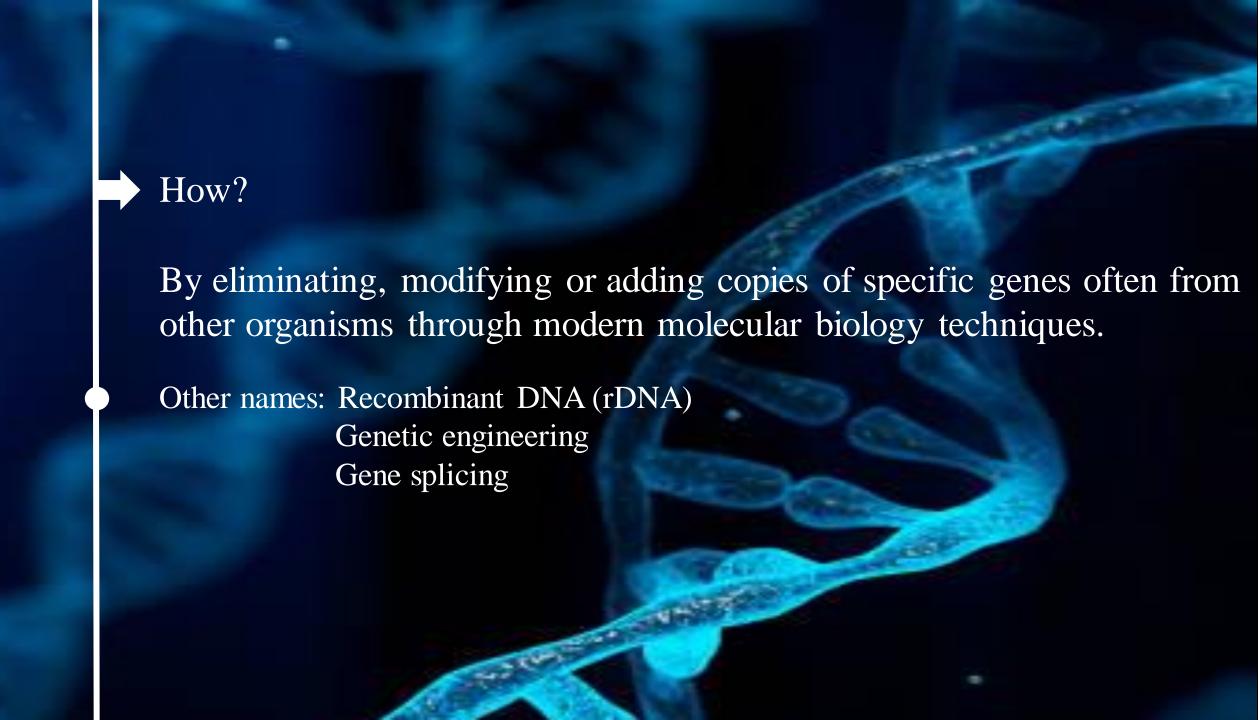
# Genetically Modified Organisms

### **Genetically Modified Organisms**

### What is GMO?

- A genetically modified organism is one whose genetic material has been altered using genetic engineering.
- Genetically modified organisms, or GMOs, are commonly used in foods and medicines. This has led to concern about the dangers they might cause to the environment and to human health







### Food GMO's

- Crops are modified so when farmer kill weeds with herbicides the crops can with stand the exposure to the herbicide – killing the weeds and not the crop
- Although it is not as common, some types of GMOs are modified to increase their nutrient content. Corn and soybeans are two examples of crops that have higher-nutrient GMO versions available.





### **GMOs History**

- First GMO created in 1973
- After years of testing and research, GMOs were introduced to farmers
- In the 1990s, genetically modified foods became available in stores



### Genentech

"Becomes the first to synthesize insulin, later they create a human growth hormone which was used to enable dwarf children to grow to a normal size. Genentech's Humulin is the first consumer product developed through modern bioengineering.





### Calgene's Favr Savr

tomato is approved for commercial production by the US department of agriculture. This was genetically engineered to remain firm for a longer period of time. The FDA declares that genetically engineered foods are not dangerous and do not require special regulation (History of genetic engineering, 2012).



### **Sweet corn**

Advantages:

No longer use of insecticides
The farmer don't need to deal with toxic

Disadvantages:

Insects can become resistant to the poison Endangered butterflies are in bigger threat



**Golden Rice** 



**Tomatoes** 



### **Golden Rice**

### Advantage:

It contains Vitamin-A, so children in developing countries won't become blind

### Disadvantage:

Poor countries become depentent on rich countries which have the technics for engineering

### **Tomatoes**







### Golden Rice



### **Sweet corn**



## Examples of the potential benefits and risks of GM

### Advantages:

GM tomatoes can remain fresh longer GM tomatoes can tolerate a lengthier transport time

### Disadvantage:

Tomatoes are resistant to antibiotics



