

Genetically Modified Organisms

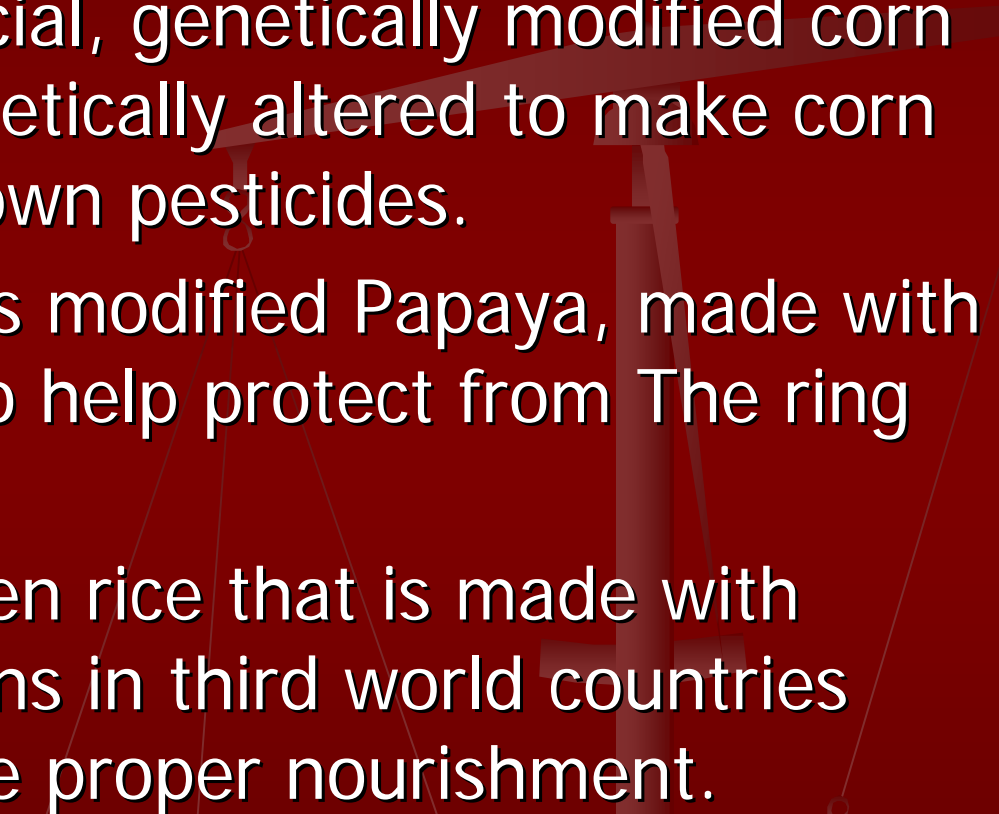


The Debate

Genetically Modified Organisms

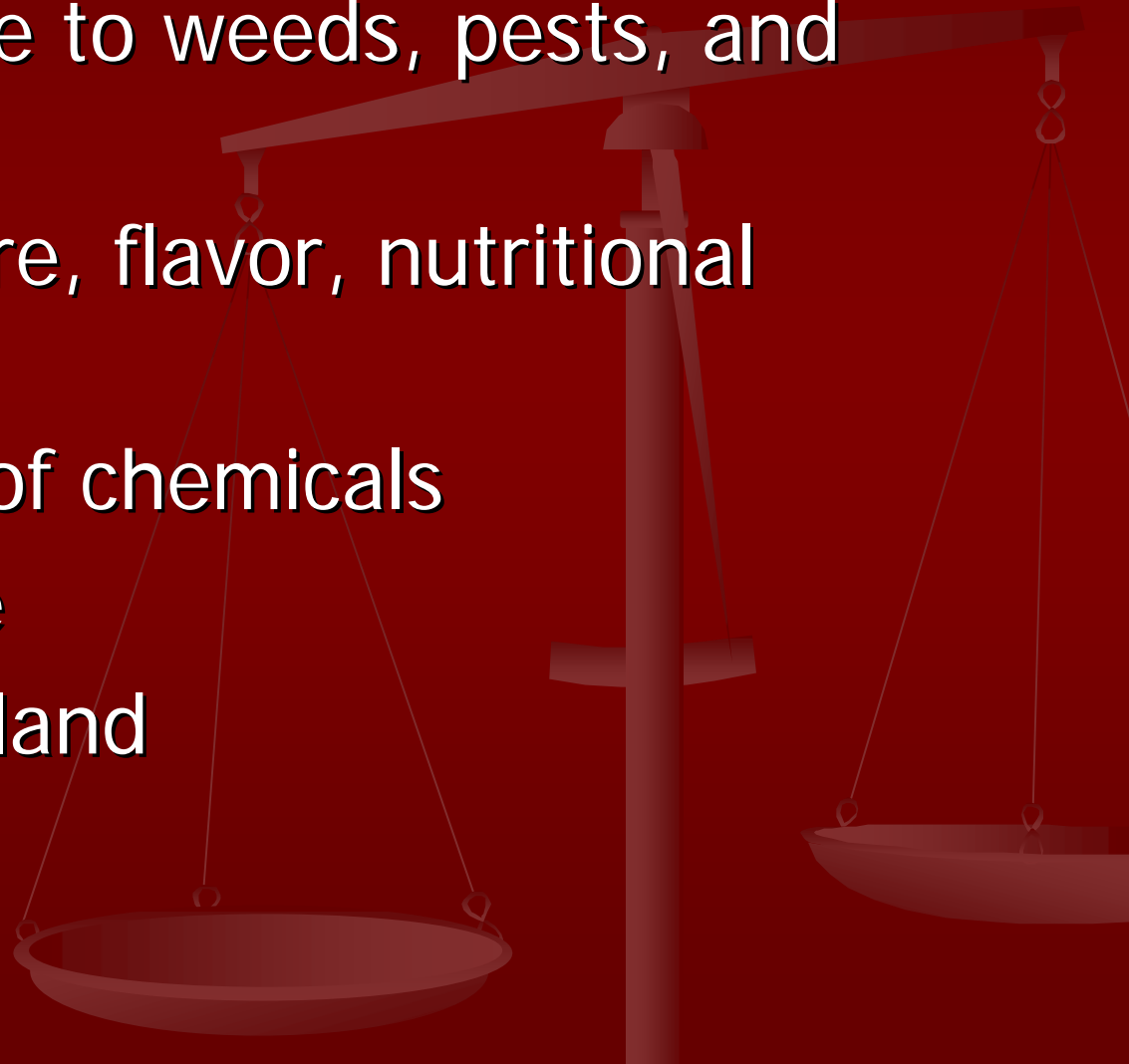
- A genetically modified organism (GMO) is an organism whose genetic [material] has been altered using techniques in genetics generally known as recombinant DNA technology.
- Recombinant DNA technology is the ability to combine DNA molecules from different sources into the one molecule in a test tube. Thus, the abilities or the phenotype of the organism, or the proteins it produces, can be modified through the modification of its genes.

Some examples of GMO's are...

- From the PBS special, genetically modified corn (BT corn) was genetically altered to make corn that produces its own pesticides.
 - Another product is modified Papaya, made with its own vaccines to help protect from The ring spot virus.
 - There is also Golden rice that is made with vitamins for humans in third world countries who do not receive proper nourishment.
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GMO Pros

- Better resistance to weeds, pests, and disease
- Improved texture, flavor, nutritional values
- Decreased use of chemicals
- Longer shelf life
- Efficient use of land

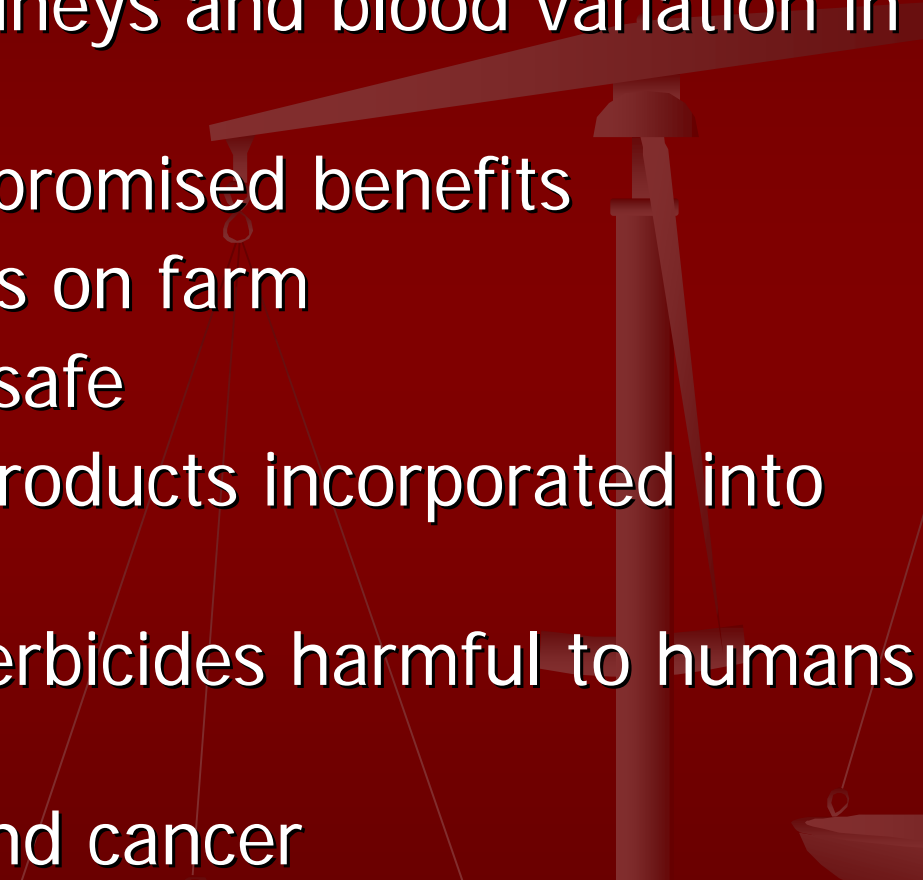


More GMO Pros

- More food produced → Cheaper food
- Feed the world
- Ex. Golden Rice



GMO Cons

- Caused smaller kidneys and blood variation in rats
 - Failed to produce promised benefits
 - Escalated problems on farm
 - GMOs not proven safe
 - Dangerous gene products incorporated into crops
 - Broad spectrum herbicides harmful to humans and animals
 - Transgenic DNA and cancer
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Anti GMO Organizations

- Greenpeace- Independent, campaigning organization that uses non-violent, creative confrontation to expose global environmental problems, and force solutions for future.
- ELF- or Earth Liberation Front whose mission statement is "to use direct action in the form of economic sabotage to stop the exploitation and destruction of the natural environment."
- Friends of the Earth- an influential, international network of grassroots groups, fronting high-profile efforts to create a more healthy, just Earth.

Accomplishments

- FOE- Conducted lab tests that confirmed our suspicion that genetically engineered corn not approved for human consumption was in products on supermarket shelves across the nation.
- ELF- In the past 6 years has committed more than 600 criminal acts that have resulted in more than \$43 million in damages.
 - St. Paul's Earth Liberation Front has taken credit for the setting of incendiary devices at a construction site on the University of Minnesota's St. Paul campus. The target of the fire was the university's new Microbial and Plant Genomics Research Center currently under construction.

The Future

- Potential Vaccines
 - Bananas
- Shifting European Views
 - New GMO crops banned; current ones usable
- Dual Market Growth
 - Both GMO and non-GMO markets are showing growth despite fears

