Views on Genetically Modified Organisms (GMOs)

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What is Genetically Modified Organisms (GMOs)?

- **GMOS:** organisms whose genetic material is changed in a way that cannot be done in nature
  - Modern Biotechnology
  - Gene Technology
  - Genetic Engineering

- These food are produced because some advantages may arise from them
  - Lower price
  - Greater benefits (durability or nutritional value)
  - Crop protections

http://www.who.int/foodsafety/areas_work/food-technology/faq-genetically-modified-food/en/
51 point difference in opinion on the safety of GMOs

- 37% of U.S. Adults
  - Those with college degree are split almost in half, with 49% saying its generally safe
- 88% AAAS (American Association for the Advancement of Science) Scientist
The Fears

- One of the main reasons for opinion of unsafe is they are not confident that scientists understand GMOs fully
  - 67% of U.S. adults feel that scientists have an unclear understanding of the health effects of GMOs

ANTI-GMO

- Transfer of novel genetic material to humans or gastrointestinal microorganism

PRO-GMO

- Without GMOs, there is need for the use of more pesticides, BUT the public is also against pesticides pushing for a more traditional farming.

Scientific Data

  - Multiple long term studies on animal feeding with GM and non-GM food shows that GM and their non-GM counterpart are nutritionally Equivalent

- World Health Organization
  - GM food safety needs to be made on a case-by-case basis
  - Currently, GM food available have passed safety assessments
  - No effects on human health have been show as a result of consumption

- AAAS release statement for safety of GM foods

http://www.agbioworld.org/biotech-info/articles/biotech-art/peer-reviewed-pubs.html
http://www.who.int/foodsafety/areas_work/food-technology/faq-genetically-modified-food/en/
Unscientific Results

- Study claims that GMO corn causes cancer
- After exploding on the internet and going viral, many groups (Nature News, European Food Safety Authority, German’s Federal Institute for Risk Assessment) sought out to review the research

Problems:

- Issues relating to design and methodology of the study lead no conclusion being able to be made
  - Mice used and amount of mice
  - Time span
  - Statistics
- Authors main statements are not verified by experimental evidence

Conclusions

- 88% of AAS scientist believe GMOs are safe while 37% U.S. Adults feel they aren’t
- Most of the Public (68%) feel that scientists don’t have a clear understanding of the health effects
- The people want more traditional farming
- “What people don’t understand is that without pesticides there is not enough food for the masses,” Amy Hepworth (organic farmer at Hepworth Farms) says. “The fact is that GM is a tool that can help us use less pesticide.”
- Problem: There is not a lot of research and much is unknown
- What is out there on the market goes through extensive testing before being approved