

GMO Overview





Current and future* use of GMOs

- Herbicide tolerance - soybean
- Insect resistance - corn
- Altered fatty acid composition - canola
- Virus resistance - plum
- Vitamin enrichment* - rice
- Vaccines* - tobacco
- Faster maturation* - salmon
- Drought resistance* - tomatoes

Genetic Engineering

- It is here to stay
- Unknown risks exaggerated
- Benefits are ignored
- Needs transparency and democratization

Are they safe to eat?

Only Risks:

- Earth Open Source
- Union of Concerned Scientists
- Green Peace

Only Benefits:

- GMO Answers
- Monsanto, Pioneer, etc
- Amer. Assoc. for the Adv. of Science

Both Risks and Benefits:

- National Academies
- American Medical Association
- World Health Organization
- European Commission
- Royal Societies

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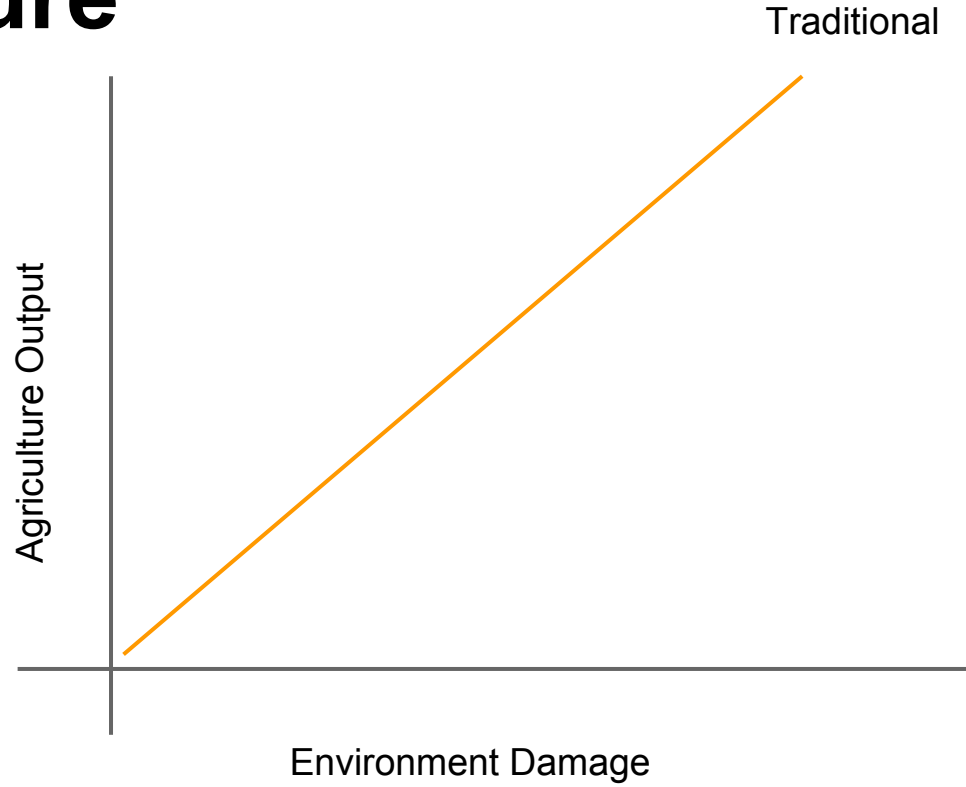
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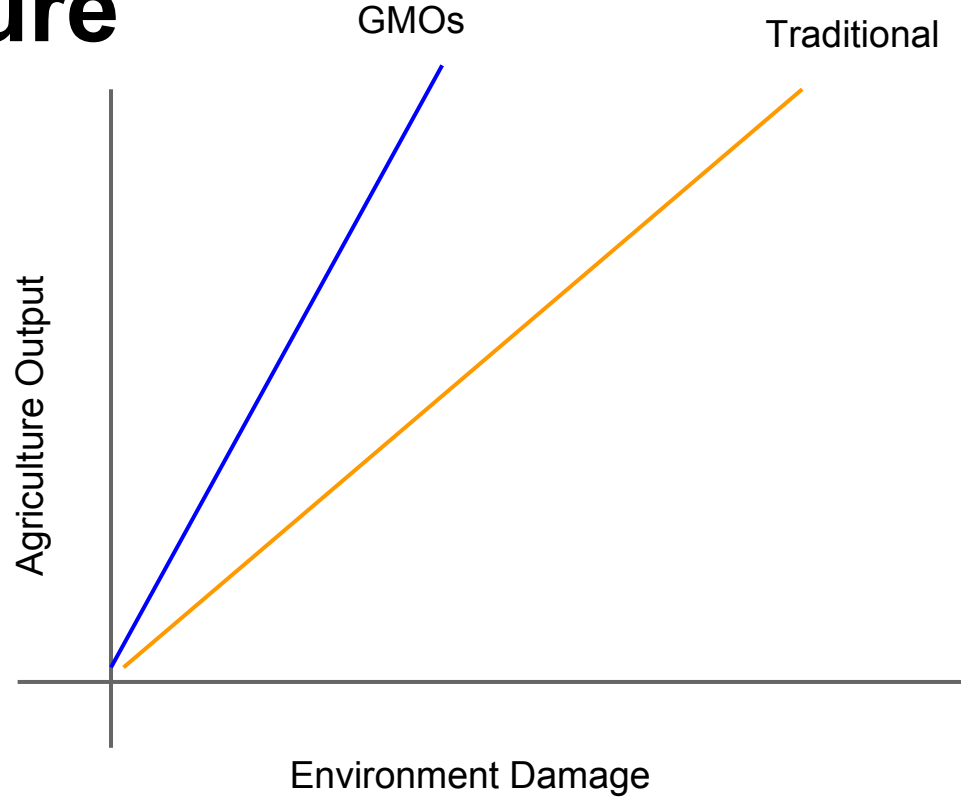
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“Although it’s impossible to prove anything absolutely safe, and all of those groups warn that vigilance on GMOs and health is vital, they all agree that there’s no evidence that it’s dangerous to eat genetically modified foods.”

Agriculture



Agriculture



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- Vitamin enrichment* - rice
- Vaccines* - tobacco
- Faster maturation* - salmon
- Drought resistance* - tomatoes

Unnatural?

- Transgenomics uses existing genes
- One of the genome's last-ditch responses under stress is to reshuffle the deck -- transposable genes

Looking Forward

- Transparency and demoncratization
- Research favors rich northern countries
 - Profit motive
 - Broken patent system
- Potential change: Biological Innovation for an Open Society/Biological Open Source (BIOS)

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