Industrial Agriculture and its Alternatives in the US and Russia: The Case of Genetically Engineered Crops

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Teaching Food and Agriculture

- Relevant: we all eat, many times a day...

- Related to other teaching areas: food as a lens to teach health, environment, social movements

- Rewarding: audiences are interested and engaged
Industrial Agriculture I.

- Focus on increasing efficiency and yields
- Scientific methods
- High input (fertilizer, pesticides, technology...)
- Intensive mono-cultures
- Distance between farmer and consumer
- Consolidation of ownership and corporate agribusiness

\[ \rightarrow \text{Genetically engineered crops are a reflection of these aims and characteristics} \]
Industrial Agriculture II.

The role of the state in promoting IA:

- Subsidies
- Credit
- Knowledge/information
- Export promotion
- Crop Insurance
Industrial Agriculture III.

US and Russia/Soviet Union:

- Remarkably similar goals
- Different methods

→ Soviet Union never quite as successful as the US; while the US was, arguably, too successful...
Alternatives

1. Organic production: multiple goals – incl. sustainable practices, preservation of family farm, healthy food

2. Direct Marketing: farmers’ markets, CSA schemes and other local food initiatives, on-farm value adding

3. Subsistence farming: “datcha” economies in Russia, urban gardening initiatives in the US
Genetically Engineered Crops

1. What are GE crops? Plants, whose DNA has been modified through genetic engineering techniques that insert or delete genes.

1. What are the main benefits that proponents emphasize?
   - Increasing yields, while reducing pesticides; new food ingredients, new flavors, colors, consistency and nutritional value.

3. What are the main risks that opponents emphasize?
   - Cross-pollination, super-pests and super-weeds, property rights held by large corporations, unknown effect on environment and health.
GM in the US

- Regulated under the 1986 in the Coordinated Framework for Regulation of Biotechnology; USDA is lead agency.
- High level of government support since the 80s; first products on the market in 1986
- New strains approved all the time: 75 products to date
- Hugely successful in the US
  - Soy: 93% is GE soy
  - Corn: 86% is GE corn
  - Cotton: 93% is GE cotton
GM in Russia

• Russian Government has approved 16 strains of GM crops since 1996 (Federal Law On State Regulation in the Sphere of Genetic Engineering, No.86/149, adopted in June 1996)

• Russia is interested in different commodities: corn is also important, but potatoes and sugar beets are high on the list.

• Just as in the US: fears exists, but no labeling requirement exists
Should they be labeled?

No:
- They are not different than any other crops
- There is no scientific evidence that they are harmful

Yes:
- Consumers want them to be labeled
- They are produced differently than conventional crops
- They interact with their environment
Labeling of GM Food

Do you believe that foods should be labeled to indicate that they have been genetically engineered or contain ingredients that have been genetically engineered?

Total 93.1%

Age
- <35 94.1%
- 35 - 64 93.6%
- 65+ 89.7%

Income
- < $25k 92.5%
- $25k - $49.9k 96.1%
- $50k - $99.9k 91.5%
- $100k+ 92.0%

Education
- High School or Less 95.1%
- Some College 95.2%
- College+ 91.1%
Concluding remarks

Questions about the relationship between GE and “alternatively produced food”

- Would consumers be more willing to buy organic, if GE food were labeled?
- Would farmers rely on different farming methods, if GE crops were not as heavily subsidized?
Resources:


• [Right To Know: Label GMO Foods](http://www.labelgmos.org)

• [Biotechnology Industry Association](http://www.bio.org/)

• USDA/AMS ([www.ams.usda.go](http://www.ams.usda.go))
Thank you.

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