GM Foods: Crisis

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Bryan Benham

GM Crisis

• 2008 – Food Riots
  – Increases food prices: Wheat up 77%, Rice up 141%, etc.
  – Changes in demand, not supply: increased demand from China and India eating more grain and meat due to increased wealth
  – Prices affect least well off the most: $1 a day.

What are the short-term and long-term effects?

• Malnutrition and health crises?
• Further increase socio-economic divides?
• Increase supply to meet demand?
• Reduce resistance to GM crops?
• Move local farming toward industrialization?

GM Futures 1

• 2020 After the introduction of GM crops specialized for growth in local conditions almost all Asian, African and European countries have adopted some form of GM agriculture.
• 2030 Increases in profit give rise to large agribusiness farms at the expense of almost all local farmers
• 2020 After major crop pests develop complete resistance to Bt toxin and roundup, a second generation of GM crop technology is introduced.
• 2040 Resistance again develops, but no new solutions are found.
• 2045 U.S. consumers are unwilling to accept crops treated with chemical pesticides. Crop yields decline 35% over pre-GM averages.

GM Futures 2

• Global warming shifts the range of major crop plants around the world.
• GM rice and sorghum save many farmers in Africa and parts of Asia, but no solution is found for corn or wheat.
• Wheat is now grown in most of Canada and Siberia.
GM Futures

- How likely do you think these events are?
- Do the benefits outweigh the risks?
- If you had $1000 to invest in a company producing GM or to donate to an anti-GM organization, which would you do?

GM Futures 3

- 2020 Oral versions of the cholera vaccine are produced in peanuts
- 2025 Anti-nematode drugs are made in sorghum.
- 2035 Cleanup after the accidental release of an experimental anti-cancer vaccine into wild plants costs 100 billion dollars and requires killing all of the plants in a 50 mi² in Georgia.

Endangered Species

- 2070 Wooly mammoths and saber-tooth tigers have been re-created from whole genome sequences extracted from bones.
- They join tigers, lions, polar bears, rhinos, and gorillas as animals found only in zoos.