

# Global Stakeholders' Views on Biotechnology

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# Challenges of Introducing Biotechnology into Society

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- **New food technologies are initially resisted (hybrid corn, pasteurization, microwaves)**
- **Cultures and values differ widely across the world in terms of needs and risk tolerance**
- **Most people have limited knowledge about or interest in either science and agriculture.**
- **Politics and economics are driving US and EU conflict -- WTO case may make things worse!**
- **Conflicts between environmental groups and biotechnology companies also hurt the poor.**
- **Biotechnology raises complex ethical and social issues (more with humans and animals than plants or microbes).**



# Stakeholder Perspectives

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# Project Overview

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- **Need to work early and often with key stakeholder groups in the value chain.**
- **Opinion leaders serve as gatekeepers for biotechnology to enter the food system**
- **Project goal = Understand views of key stakeholder groups (US/EU Food Industry, and Global Government officials)**
- **High-level advisory committee assisted with sample and questionnaire design**
- **Funding provided by American Farm Bureau Foundation for Agriculture, NCFB and NCSU**



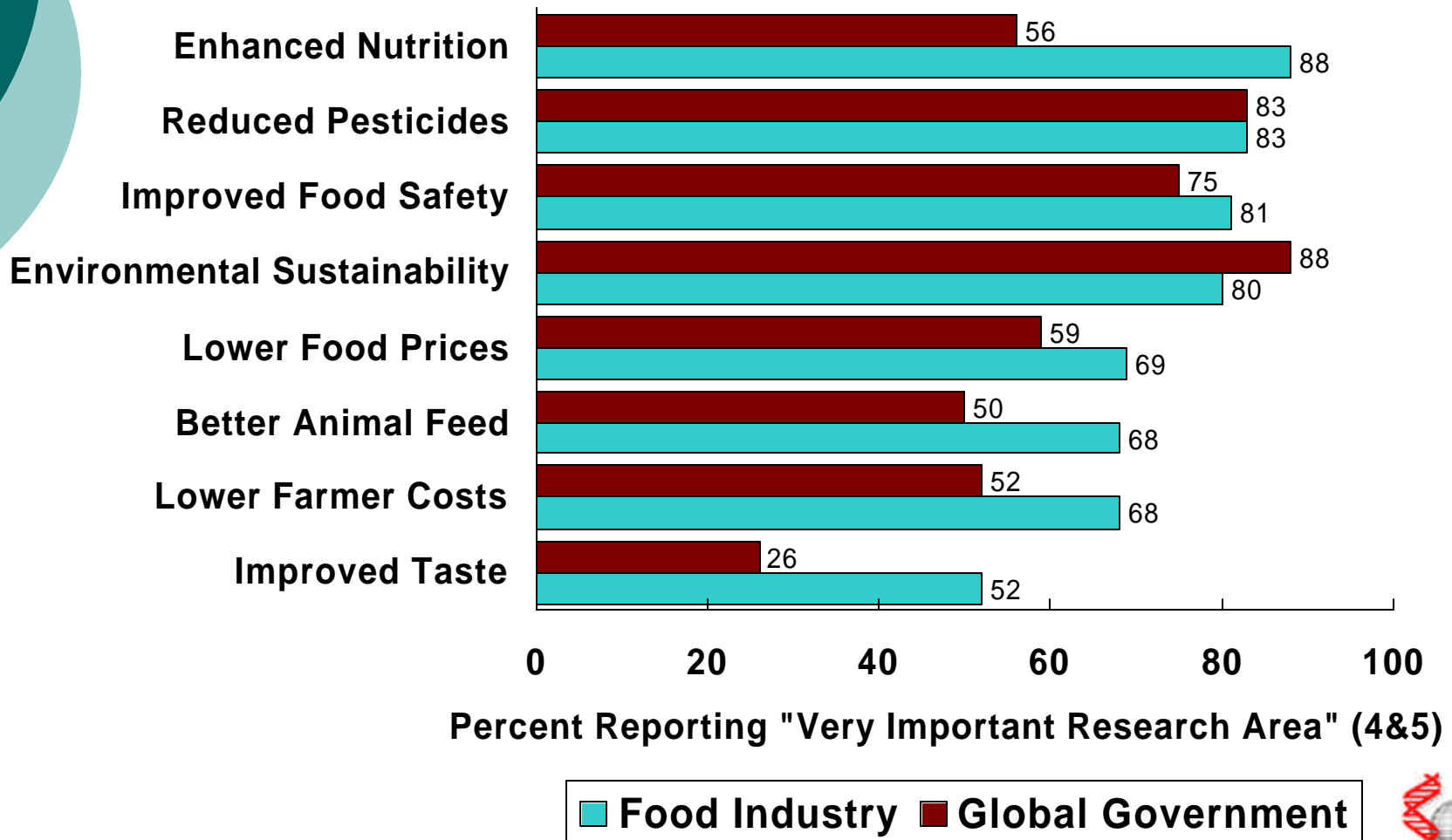
# Research Methods

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- Telephone survey of food industry leaders
  - Food producers (N=88)
  - Manufacturers (N=67)
  - Food retailers (N=86)
- Mail survey of global government leaders
  - Delegates to Codex (N=40)
  - Delegates to Biosafety Protocol (N=98)
  - Ministers at U.S. Embassies (N=44)
- Analysis examines similarities and differences among these groups
- Data were collected in 2000-2001.



# Leaders' Views on Important Areas for Biotechnology Research

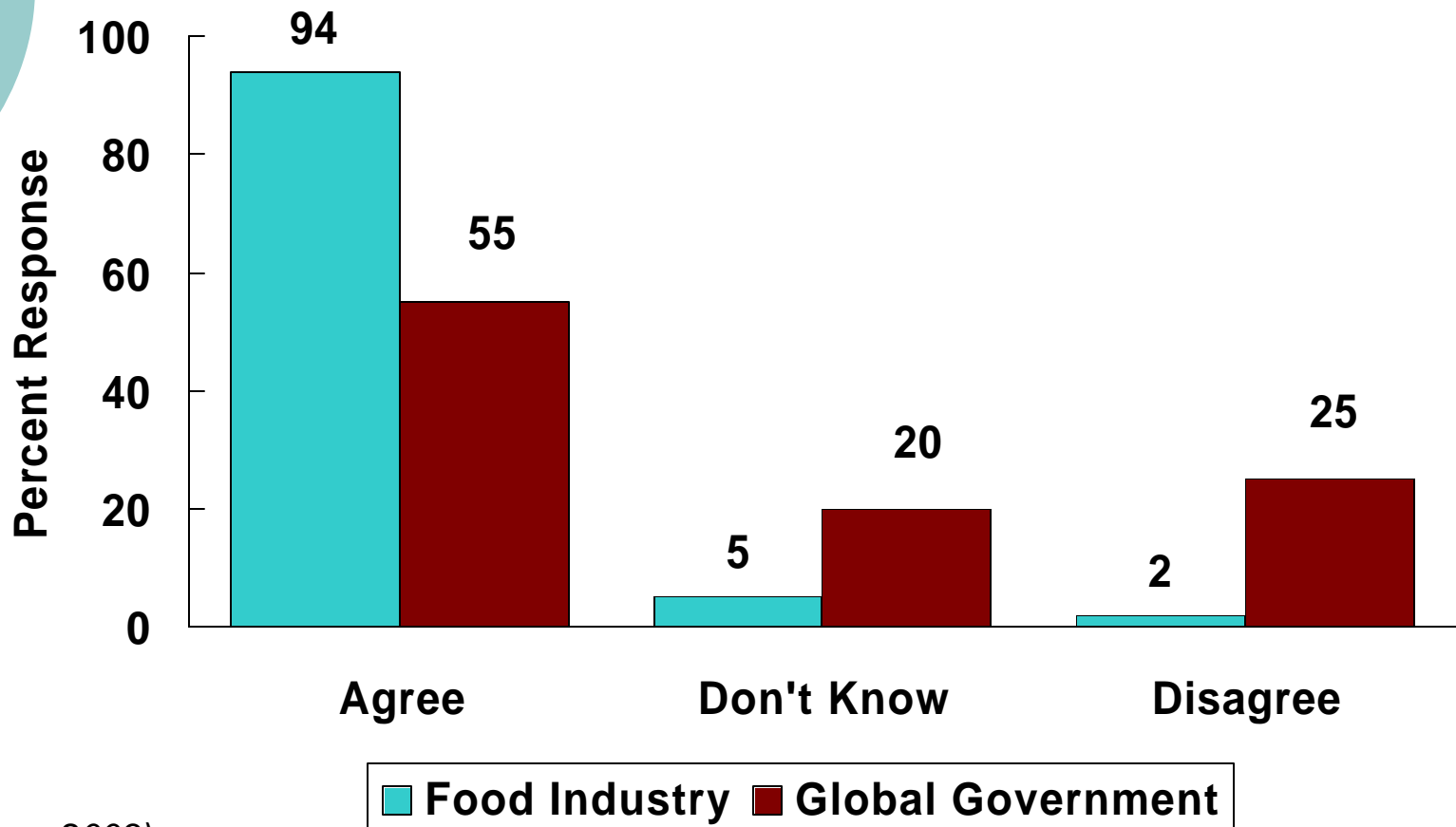


(Hoban, 2003)



**“The benefits of biotechnology to create food crops that do not require chemical pesticides are greater than the risks.”**

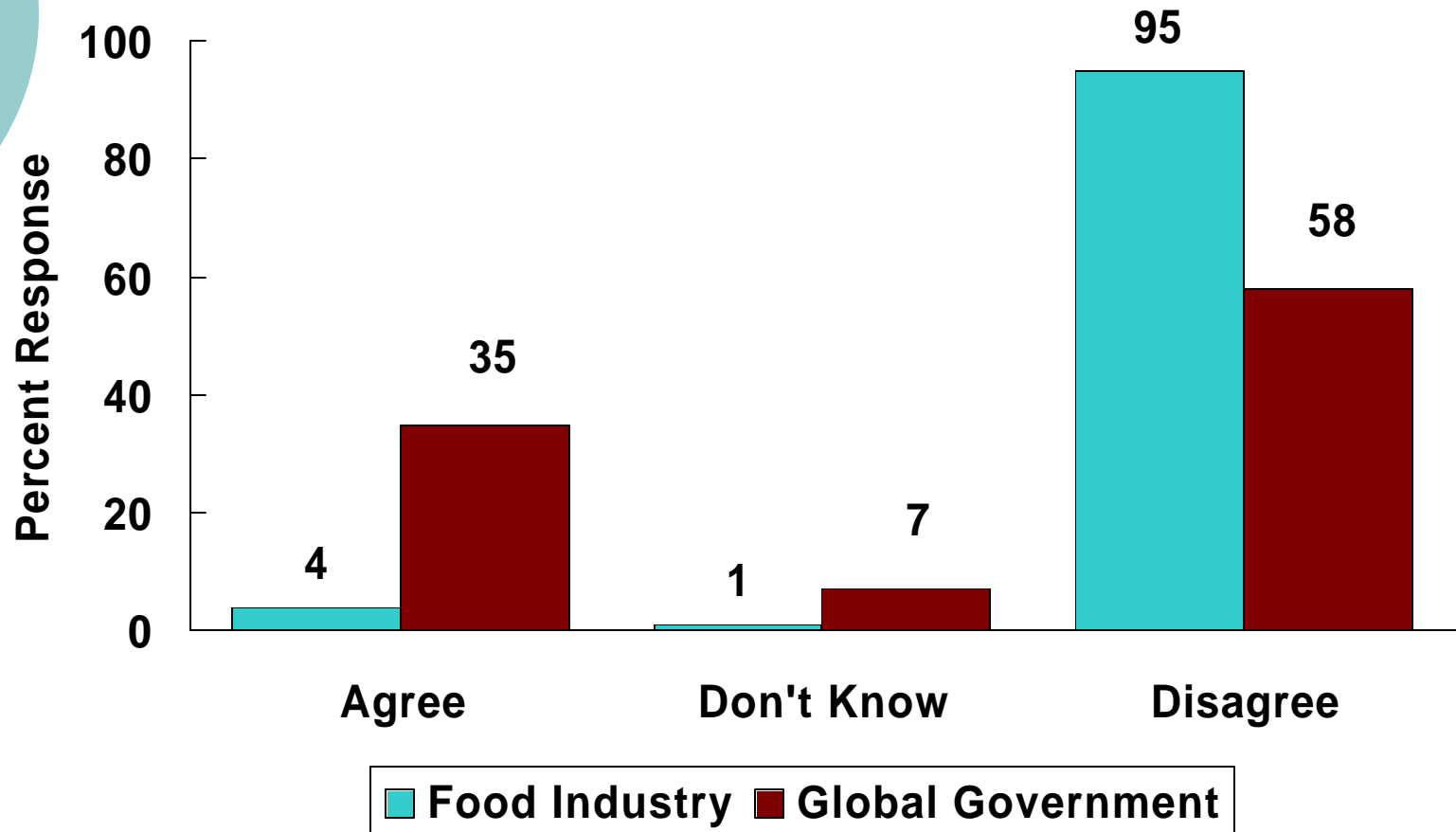
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*(Hoban, 2003)*



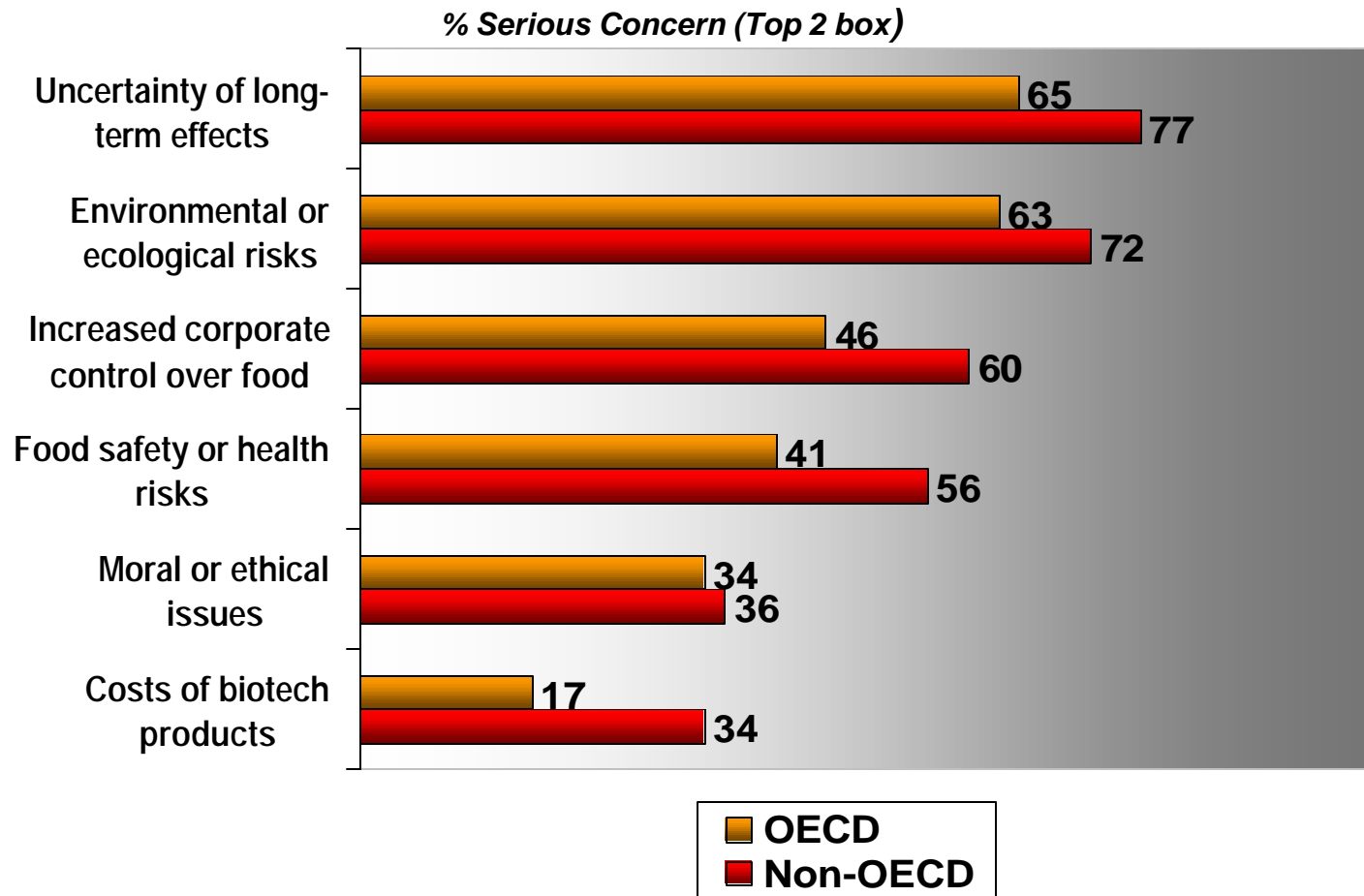
# “Until we know more, biotechnology should not be used because of potential risks.”



(Hoban, 2003)



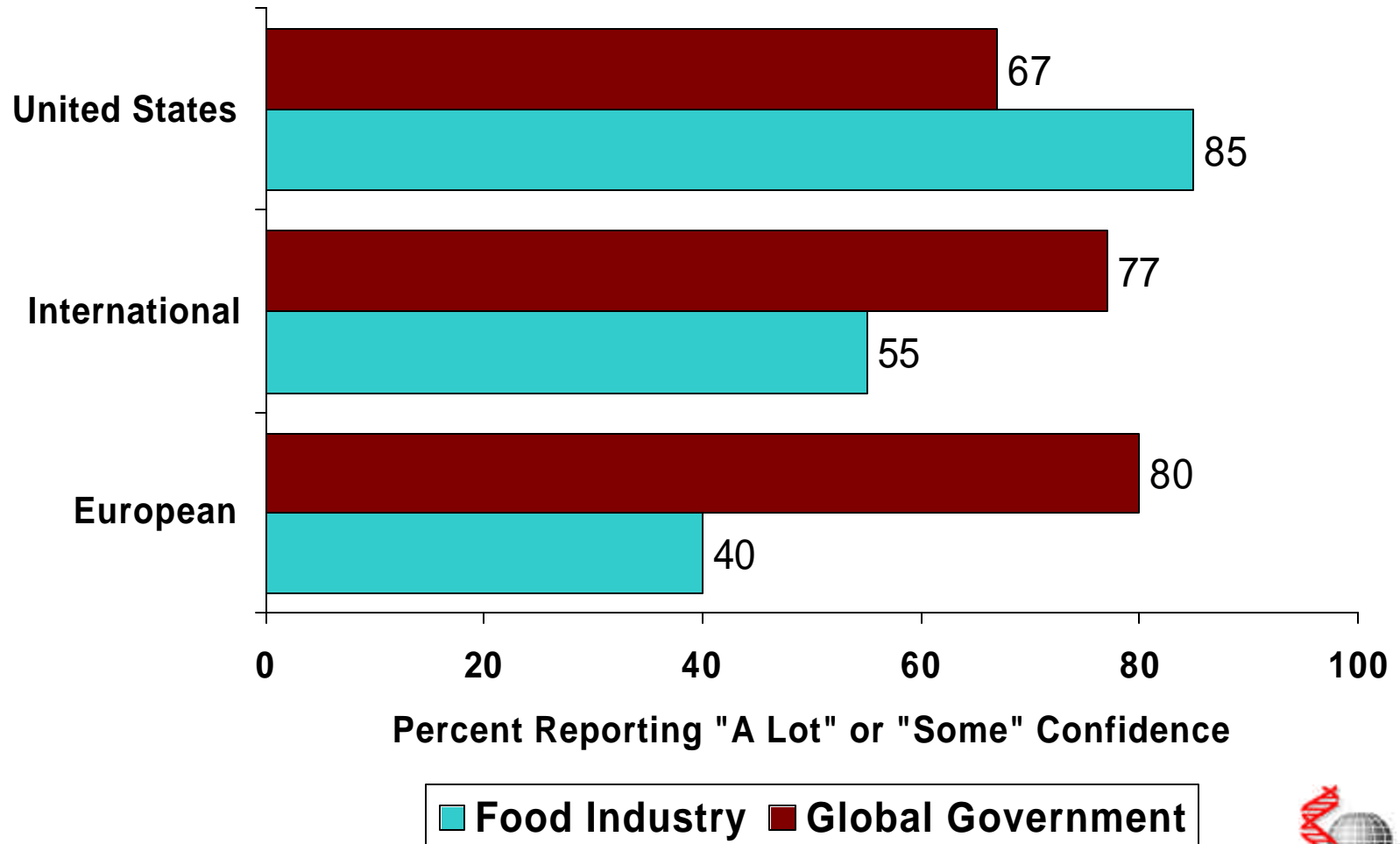
# Government Representatives' Concerns about Biotechnology



(Hoban, 2003)



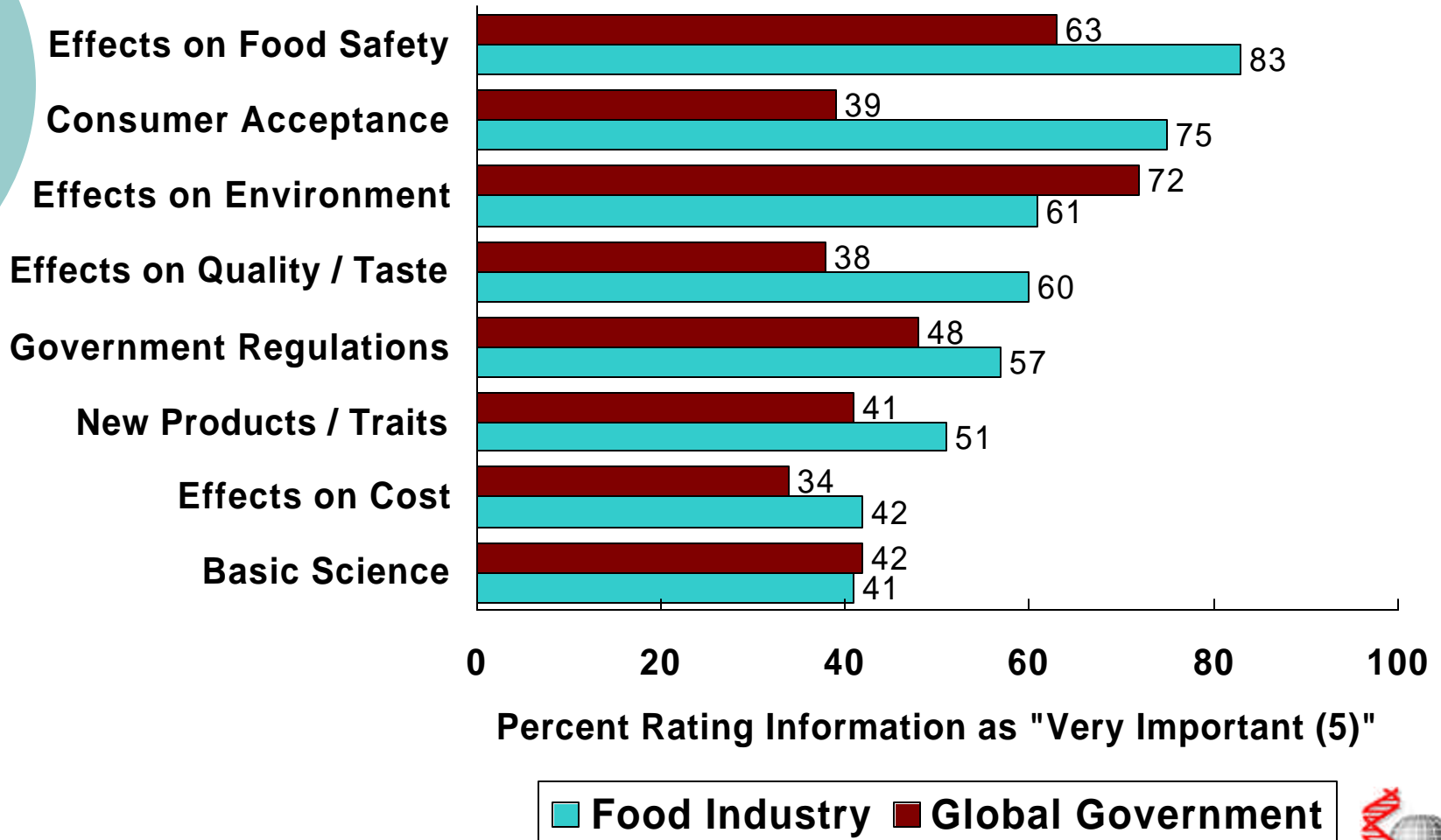
# Leaders' Confidence Levels in Different Government Bodies to Effectively Regulate Biotechnology



(Hoban, 2003)



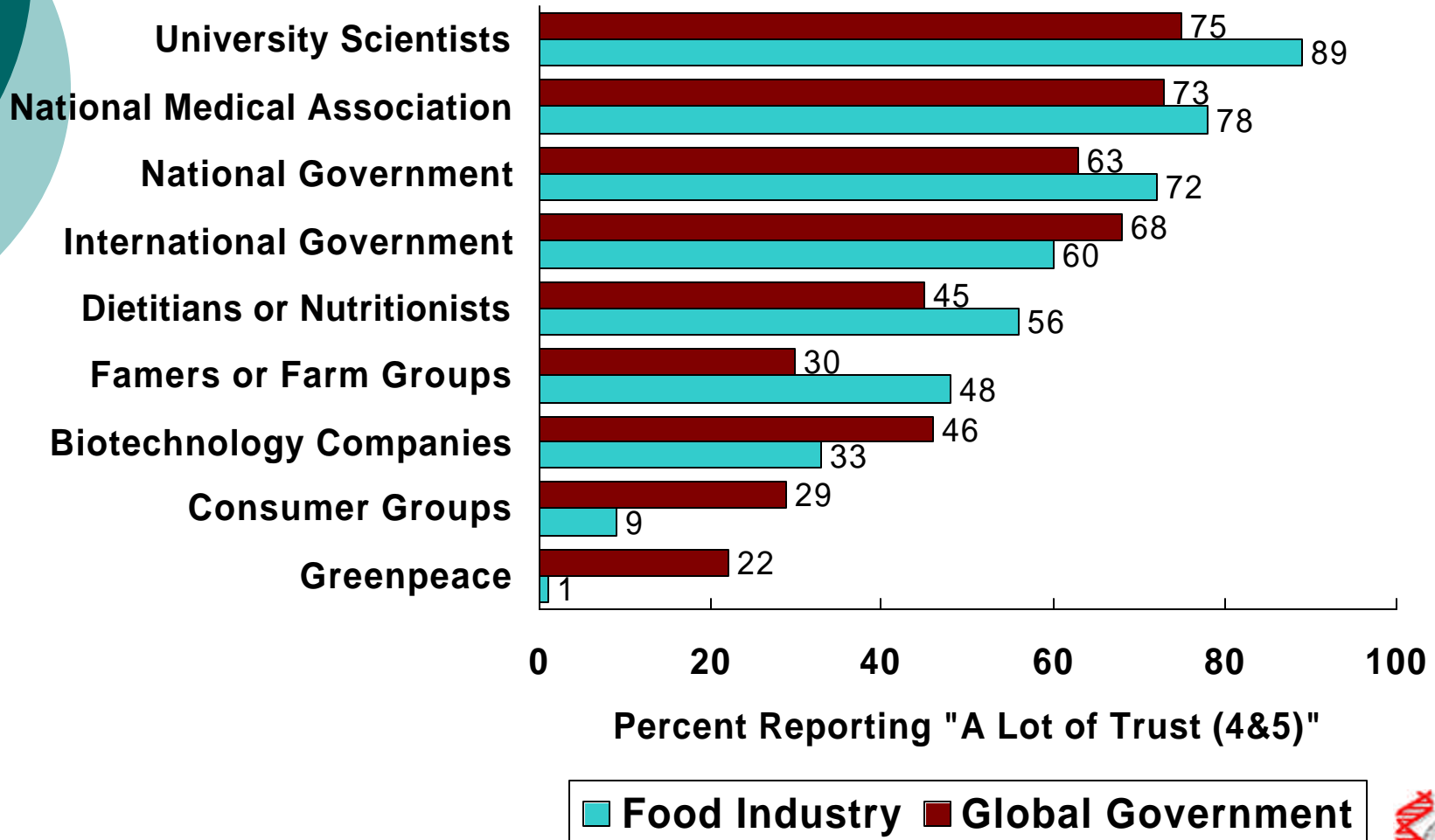
# Leaders' Ratings of Importance for Additional Biotechnology Information



(Hoban, 2003)



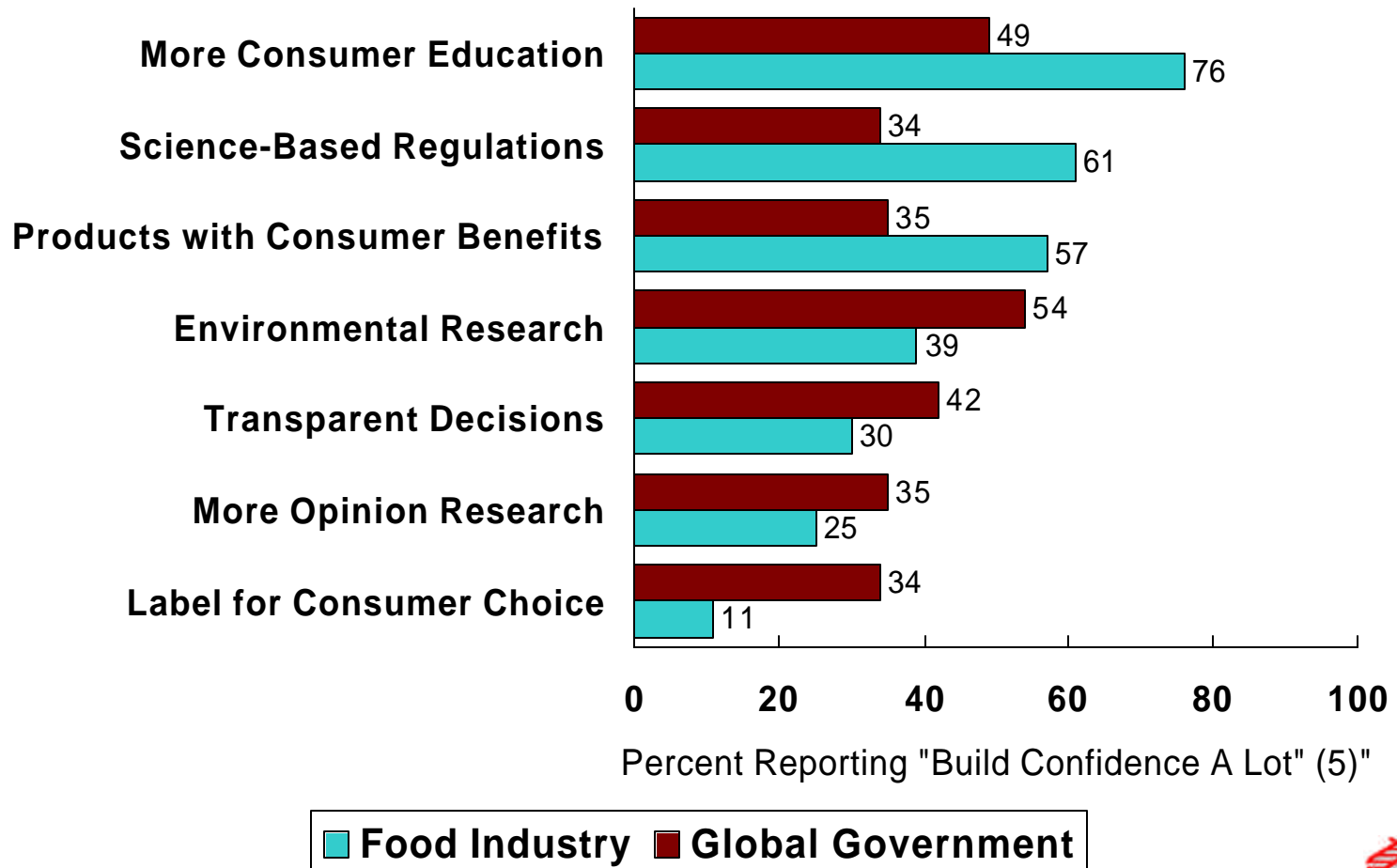
# Leaders' Reported Trust in Sources of Biotechnology Information



(Hoban, 2003)



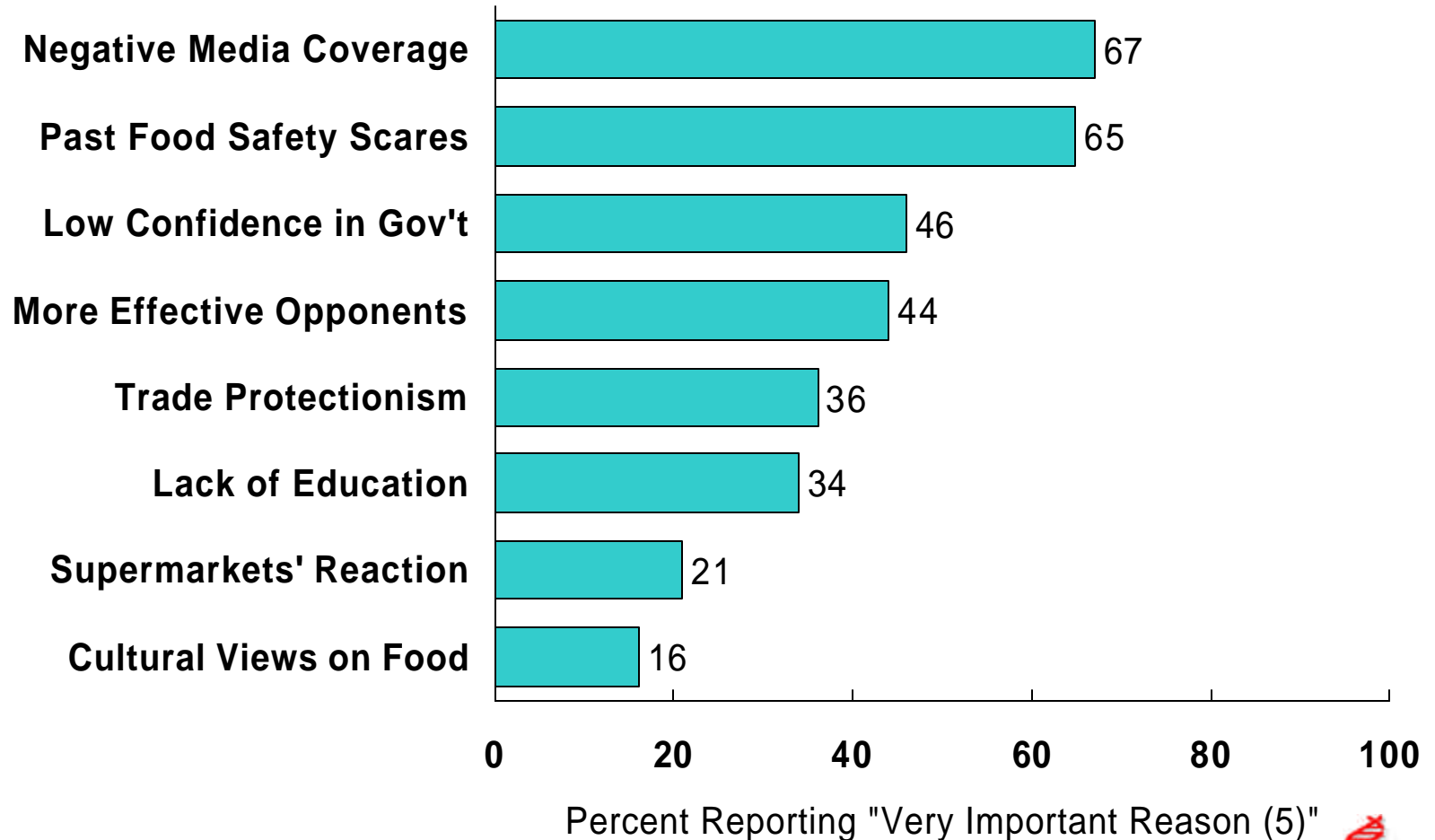
# Leaders' Views on How Effective Approaches will be for Building Consumers' Confidence in Biotechnology



(Hoban, 2003)



# Food Industry Leaders' Views on Why Europe has been More Negative than US



(Hoban, 2003)



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# Conclusions and Recommendations

*(Hoban, 2003)*



# Major Initiatives Needed to Foster Global Cooperation

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- Enhance communication and ensure mutual benefits for all parties in the food value chain.
- Developing countries deserve to make their own decisions without pressure from the EU or the US.
- The developing world needs assistance, information, tools and intellectual property from the developed world to utilize biotechnology (need to share more!!).
- Recognize that groups within a country do not always agree on these issues. They need time to build their own capacity and develop consensus on the future.
- Pay much more attention to the social and cultural impacts associated with biotechnology.



# Steps to Enhance Market Success of Agricultural Biotech

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- **Speed up the development of products with real and obvious consumer benefits.**
- **Provide balanced information through a variety of credible sources.**
- **Improve confidence in government regulatory system (e.g., animal biotech).**
- **Work to develop a cost-effective and efficient identity preservation system.**
- **Address global supply chain challenges (e.g., liability, labeling and traceability).**



# Emerging Issues for Biotechnology and Society

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- Most Americans still believe they are not eating GM food.
- Break the news soon before shifting from “substantial equivalence” to “functional non-equivalence”
- Low acceptance of meat and milk from transgenic or cloned animals (esp. fish)
- Segregation challenges (industrial corn is not smart – try tobacco or hemp)
- Bigger issues involve human genomics (use of genetic information)
- Voluntary, positive eugenics (control of evolution and social stratification)



# Outlook for the WTO Case

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- The WTO case would have worked two years ago, but now it will likely backfire.
- World opinion about the US is already at historical low as a result of the Iraq invasion.
- The public GMO controversy was fading in EU and the negative climate was changing
- The WTO case has raised issues again and given renewed attention to the opponents
- This is not just a war over trade but a socio-cultural conflict (need to win consumers' hearts, minds and stomachs).
- US may win the WTO trade battle, but we'll lose the consumer acceptance war.



# Points for Reflection

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- **“Sound science” is only one criteria for public policy making. For a growing number of people this alone is not persuasive.**
- **People make decisions based more on emotion than logic (especially with food).**
- **Recognize that perception is reality. Education about benefits will not calm deep-seated anxieties.**
- **Benefits must clearly exceed risks; but few benefits will outweigh moral or ethical objections.**
- **Distributive justice is the key ethical issue. Pay more attention to who wins and who loses**
- **Need to understand and appreciate social and cultural impacts – especially with food**



For More Information:

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