

Animal Biotechnology: Public Policy and Public Perception

2006 Agricultural Outlook Forum

Washington, DC
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Pew Initiative on Food and Biotechnology



Pew Initiative ON Food AND Biotechnology



PIFB Products on Transgenic Animals

- “Exploring the Regulatory and Commercialization Issues Related to GE Animals” Conference Proceedings (December 2005)
- “Exploring the Moral and Ethical Aspects of GE and Cloned Animals” Conference Proceedings (September 2005)
- “Biotech Bugs” Conference (September 2004)
- “Issues in the Regulation of Genetically Engineered Plants and Animals” Report (April 2004)
- “Bugs in the System” Report (January 2004)
- Public Sentiment About GM Food (September 2003, November 2005)
- “Future Fish” Report (January 2003)
- “Biotech in the Barnyard” Conference (September 2002)



Public Sentiments about Genetically Modified Food, November 2005

- 1000 Consumers Interviewed, National
- Conducted by The Mellman Group and Public Opinion Strategies
- Interviews Conducted Between October 10-16, 2005
- Margin Of Error +/- 3.1% Overall, Higher MOE for Subgroups
- Complete Poll at <http://pewagbiotech.org/research/2005update/>



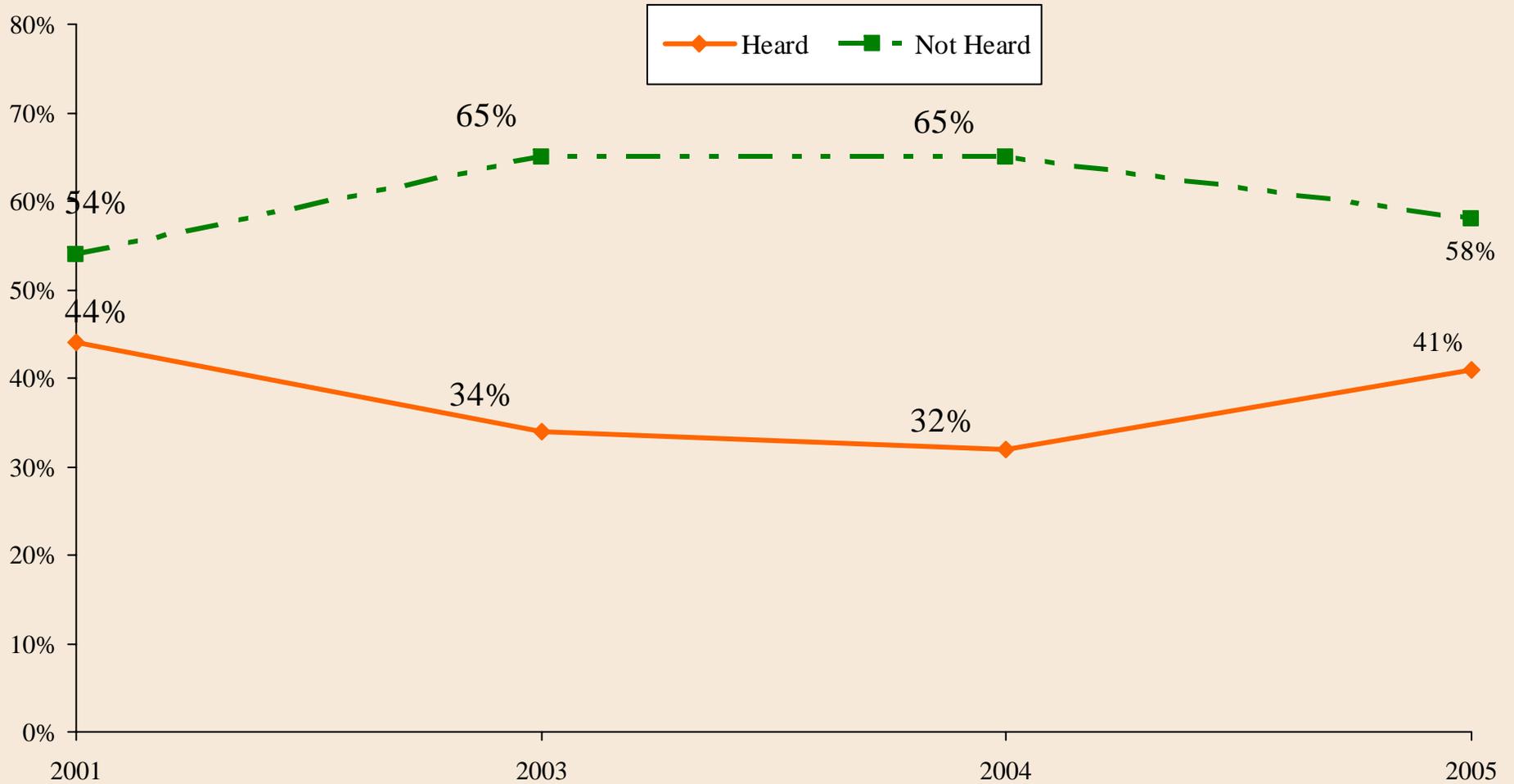
Some Key Observations--General Questions

- The number of people who claim to have heard about GM foods increased slightly in 2005, however, awareness continues to remain low.
- Consumers do not support banning new uses of biotechnology, but are looking to U.S. regulators to make sure new products are safe.
- The ability of the U.S. regulatory system to keep pace with changing technology, whether it's new GM crops or animals or imports will be critical to maintaining consumer confidence.



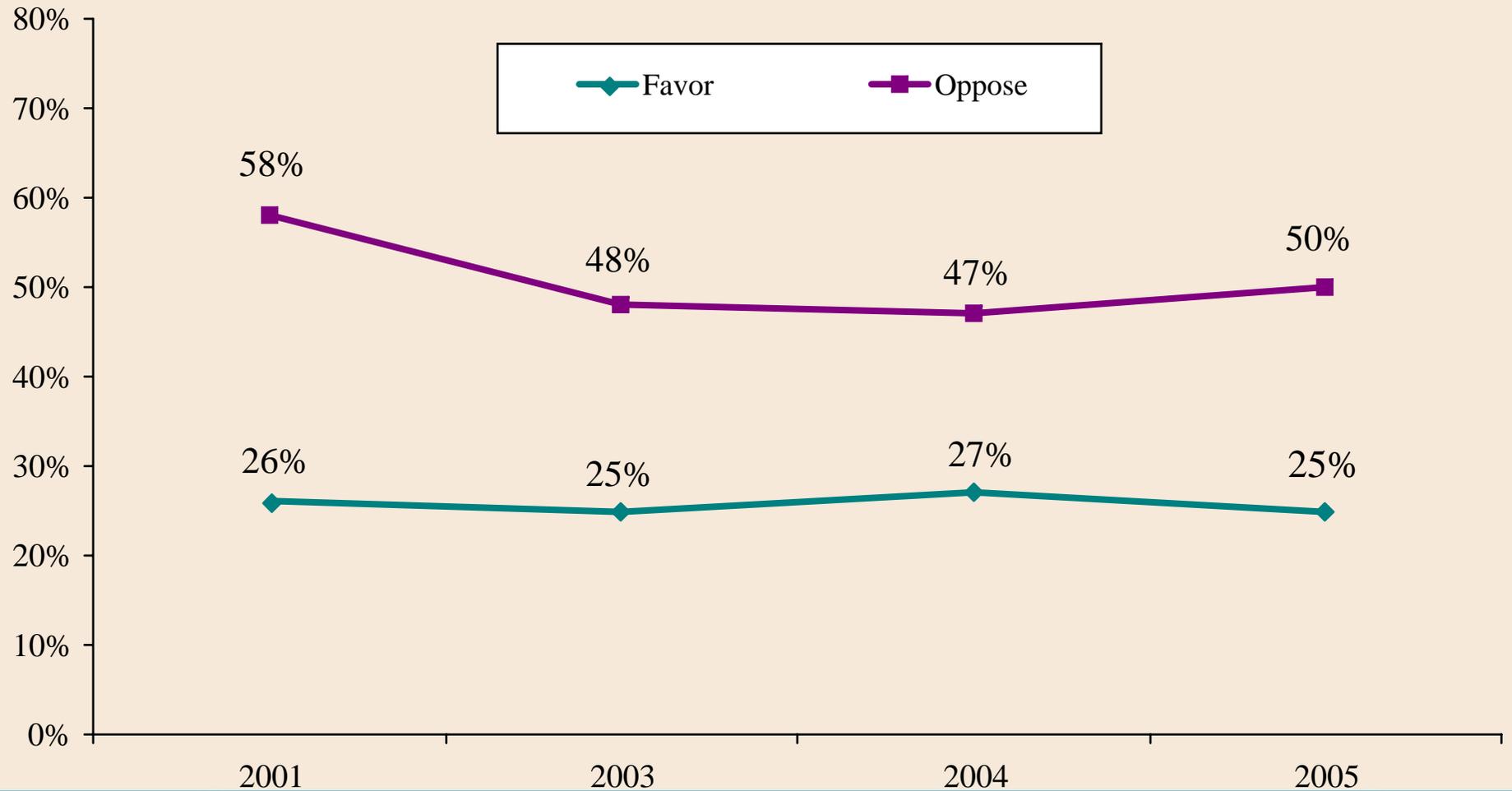
In 2005, There Is An Uptick In The Number Of People Who Have Heard About Genetically Modified Foods

How much have you seen, read or heard recently about genetically modified food that is sold in grocery stores?



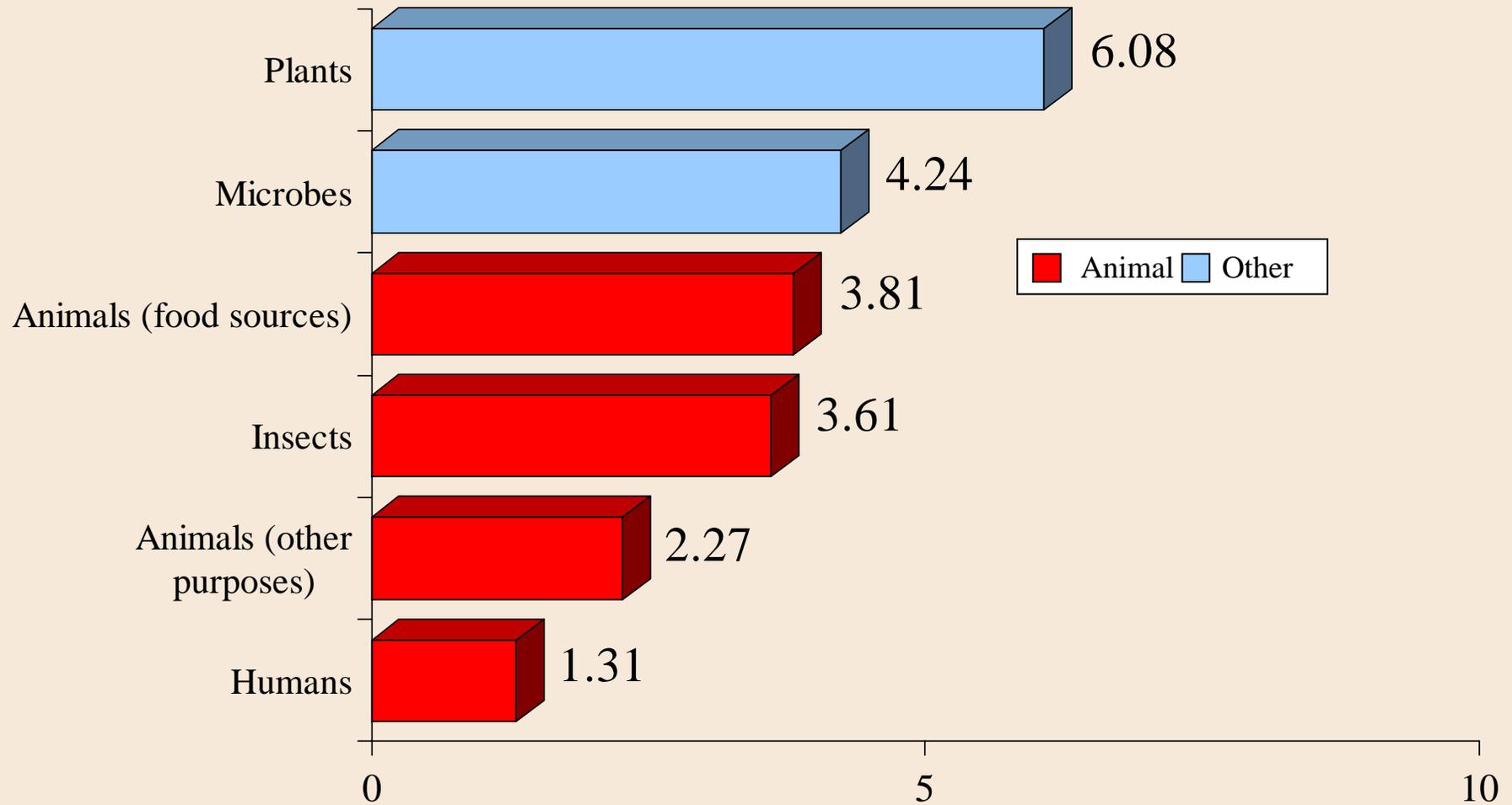
While Overall Opposition To Introducing GM Foods To The Food Supply Has Declined Since 2001, There Has Been Little Movement Over The Last Two Years

Favor/Oppose the Introduction of GMF to food supply



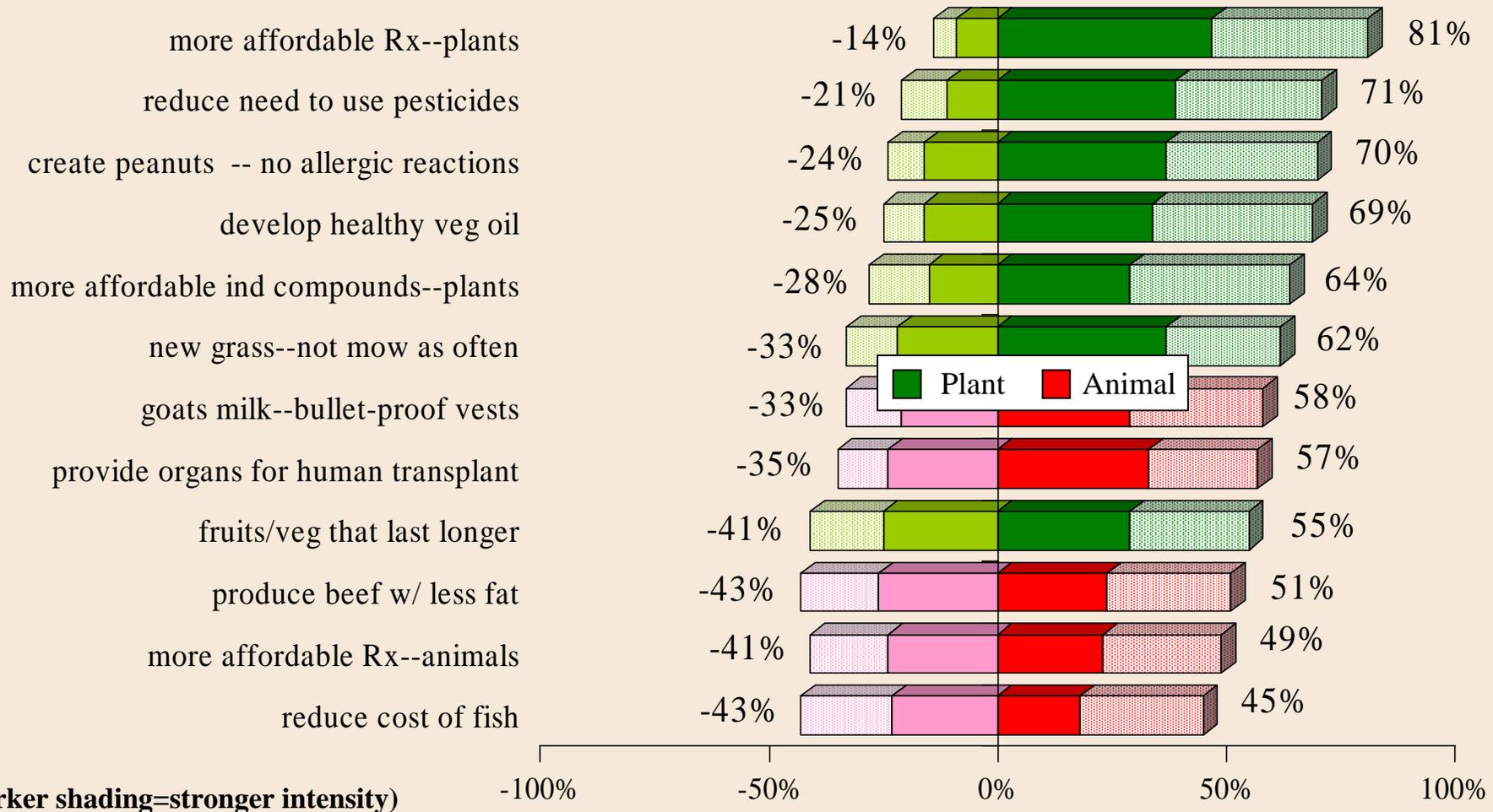
Americans Are Most Comfortable With The Genetic Modification Of Plants

Ranked by mean (out of 10)



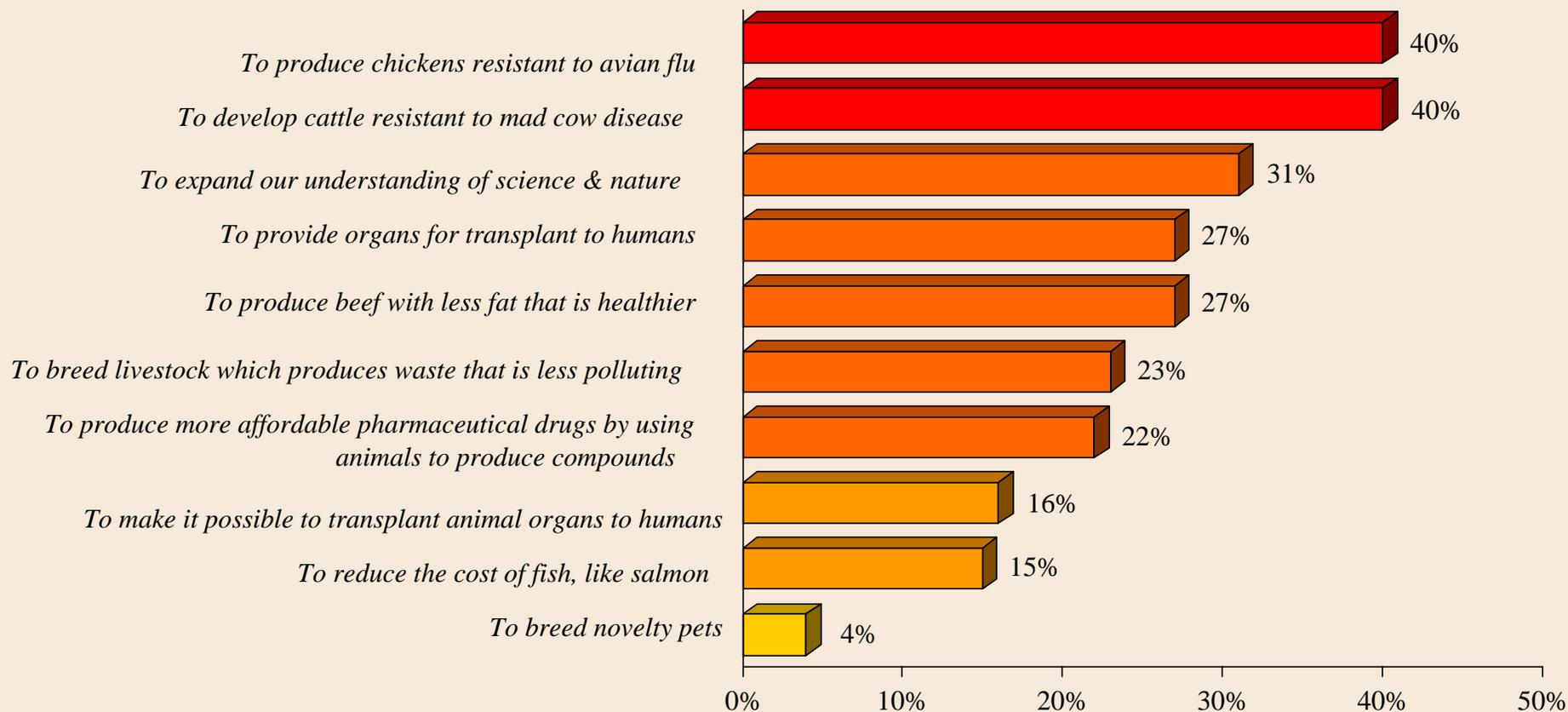
Americans Are Much More Likely To Support The Genetic Modification Of Plants Than Animals

← Bad reason to GM Good reason to GM →



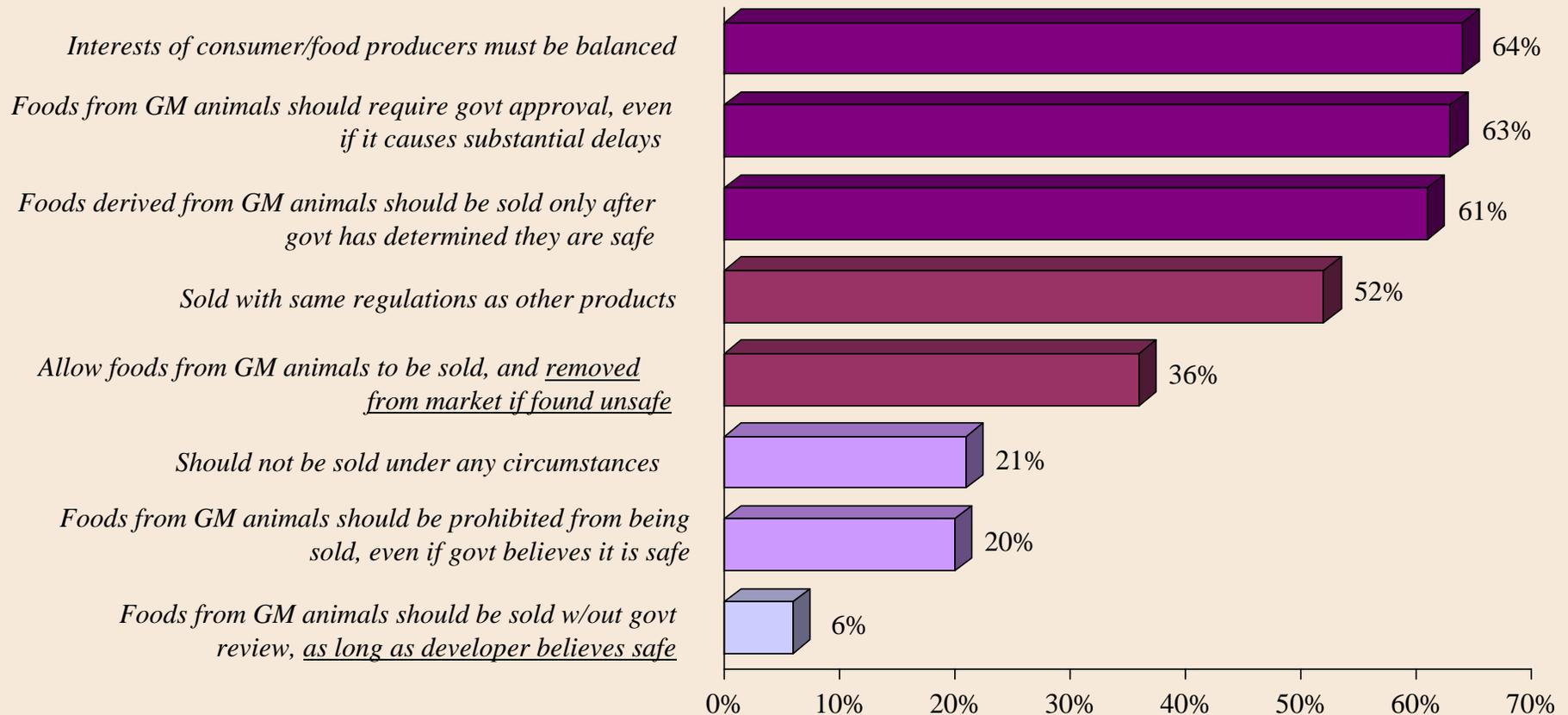
Developing Heartier Livestock Are The Most Widely Supported Reasons To Genetically Modify Animals

Recent Headlines On Avian Flu May Have Pushed It To The Top Of The List



Consumers Believe Their Interests Should Be Balanced With Those Of Producers

And That Includes Requiring Government Approval To Sell Food Derived From GM Animals



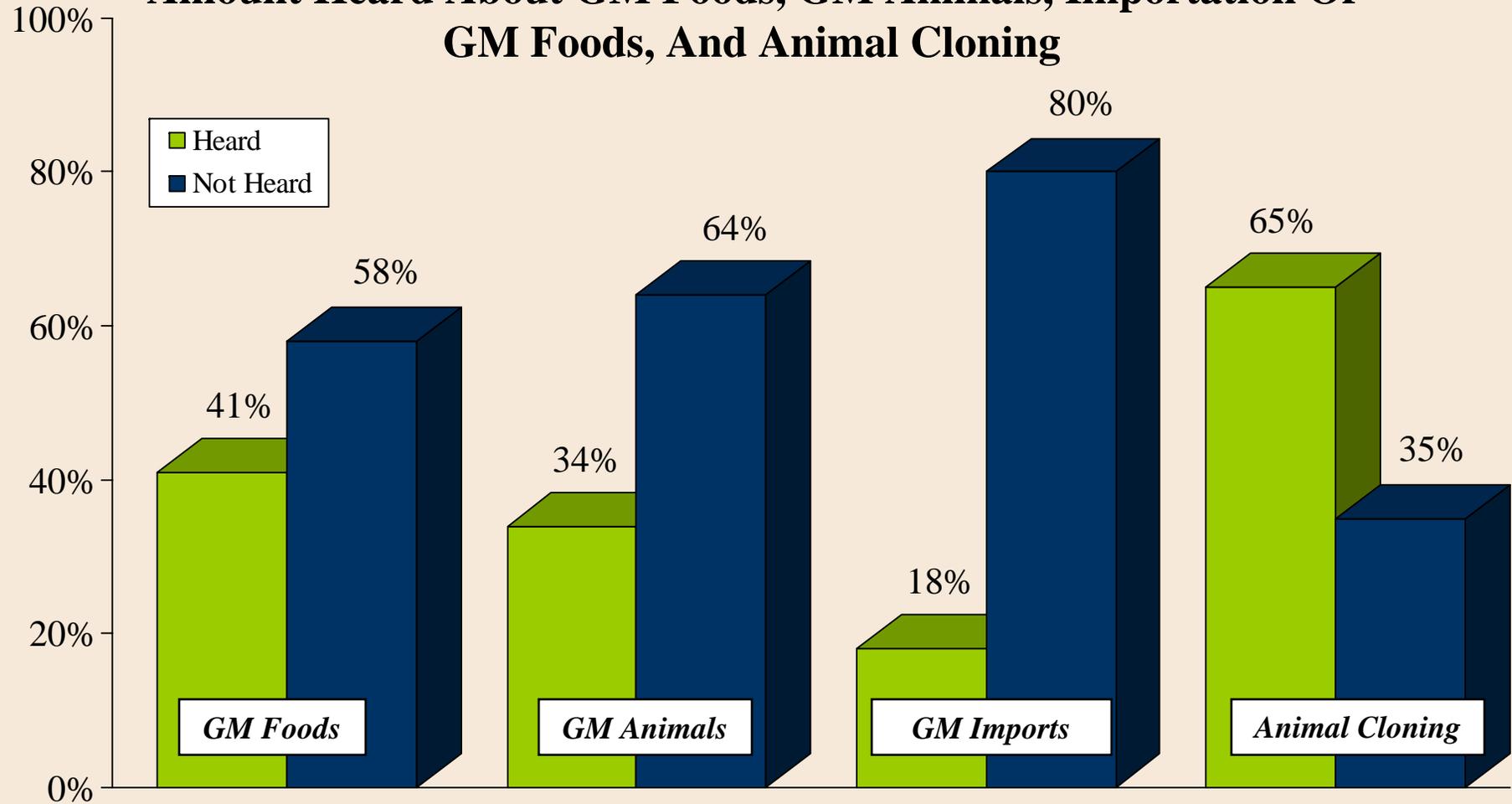
Some Key Observations-Animal Specific Questions

- Awareness Of GM Animals Is Quite Low
- Consumers Are Substantially Less Comfortable With Animal Biotechnology Than Plant Biotechnology, Particularly Cloning
- Unlike Other Types Of Biotechnology, Americans Claim To Have Heard About Cloning – And Are Uncomfortable With It
- Doubts About The Safety Of Animal Cloning Are Widespread
- Consumers Strongly Believe That Ethical And Moral Considerations Should Be Part Of The Regulatory Equation, Though We Don't Know Exactly What Consumers Mean When They Say They Want Ethics and Moral Included in the Regulatory Decision Making Process
- Uses that provide benefits to humans such as protecting against disease are the most highly favored.



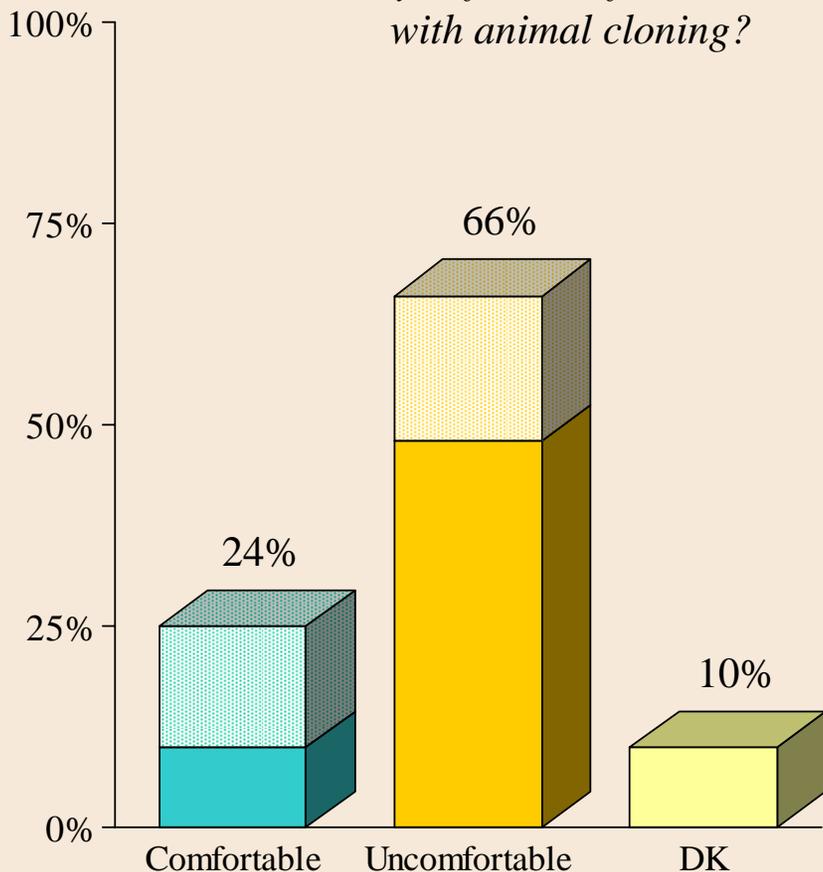
The Public Claims To Have A Higher Level Of Awareness Of "Animal Cloning" Than Of "Genetic Modifications"

Amount Heard About GM Foods, GM Animals, Importation Of GM Foods, And Animal Cloning

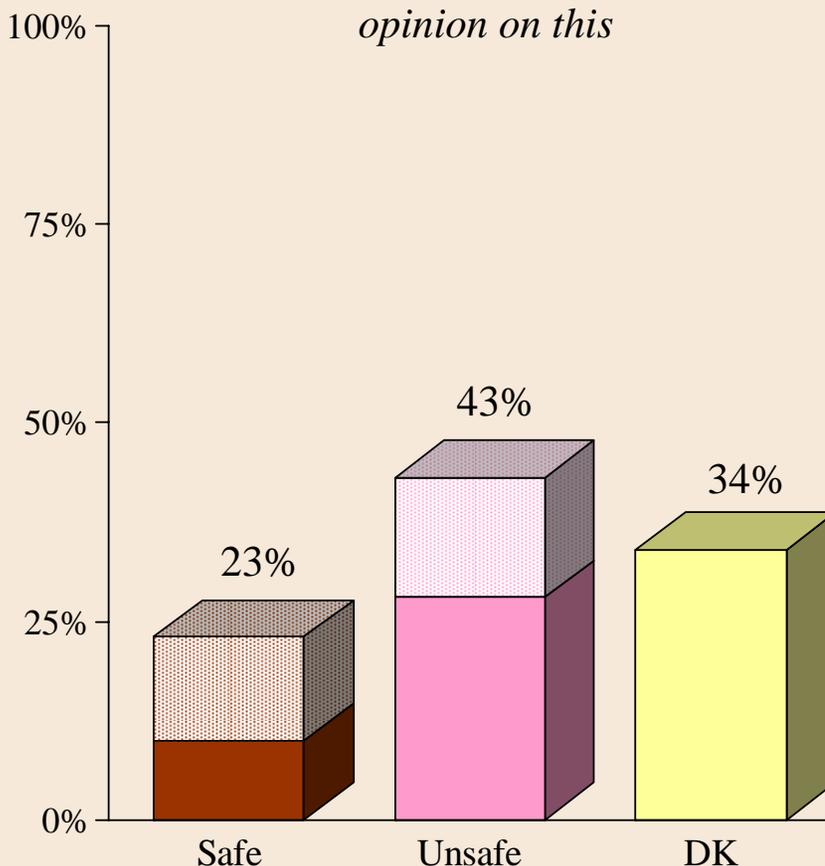


Two Thirds Of Americans Are Uncomfortable With Animal Cloning, And Fewer Than A Quarter Believe It Is Safe

As you may know, animal cloning is a technique used by animal breeders to make genetically identical copies of an adult animal. Do you feel comfortable or uncomfortable with animal cloning?

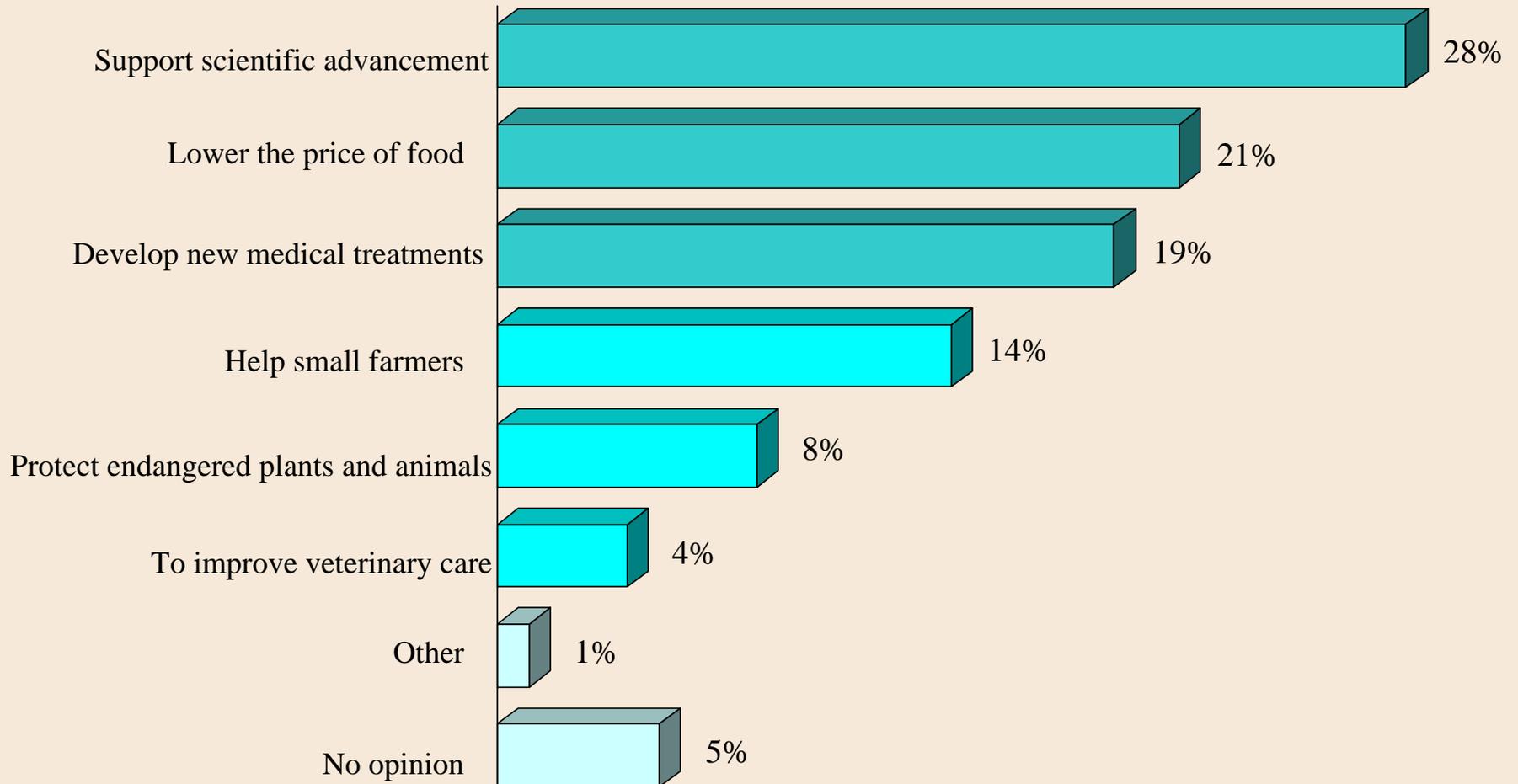


Do you think foods produced from animal clones are basically safe, basically unsafe, or don't you have an opinion on this



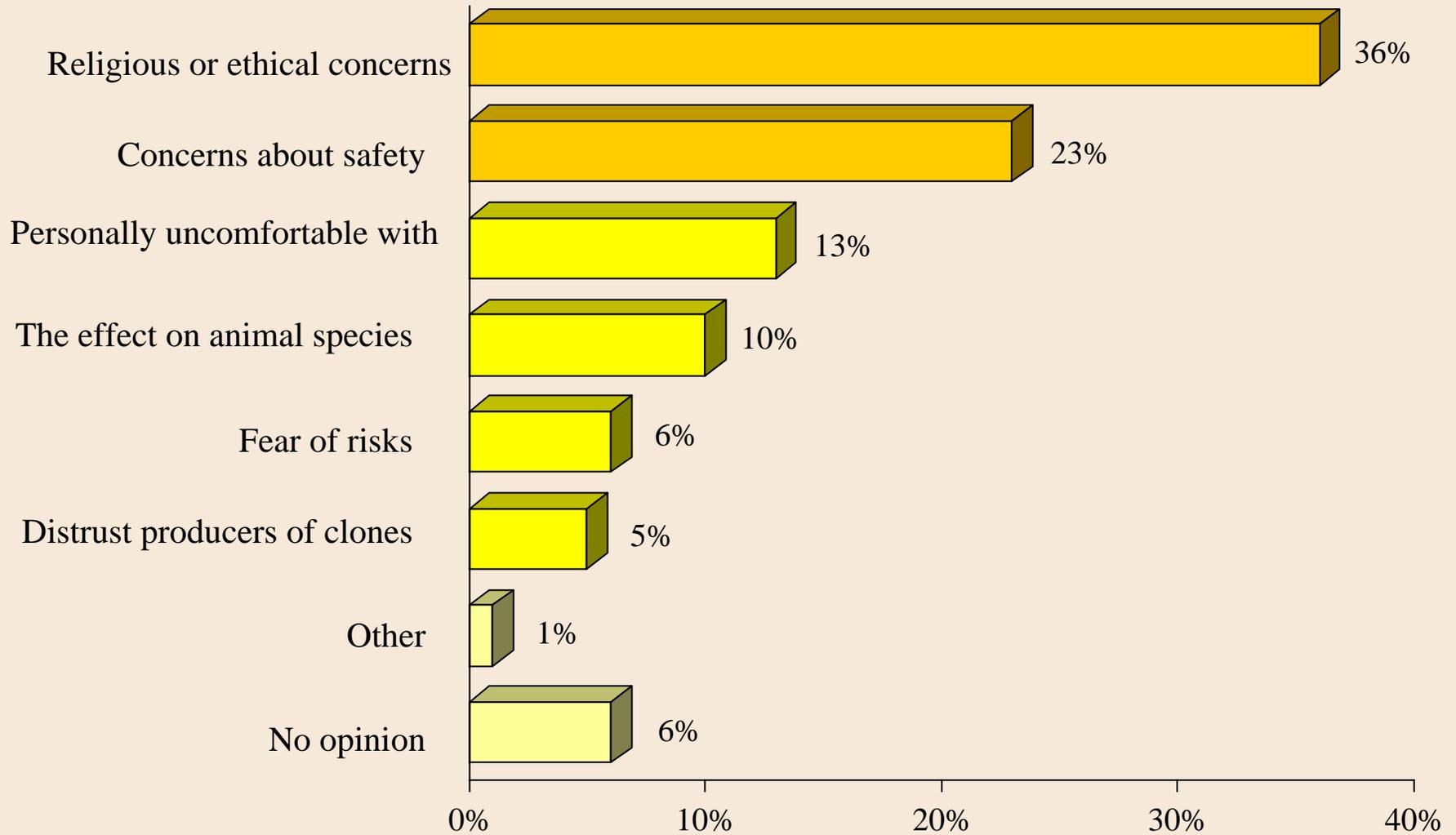
Those Who Favor Animal Cloning Cite Their Support For Scientific Advancement, And Lowering The Price Of Food

% most important benefit about animal cloning



Religion And Ethics Tops The List Of Concerns Among Those Who Are Uncomfortable With Cloning

% most important concern about animal cloning



Potential Stumbling Blocks

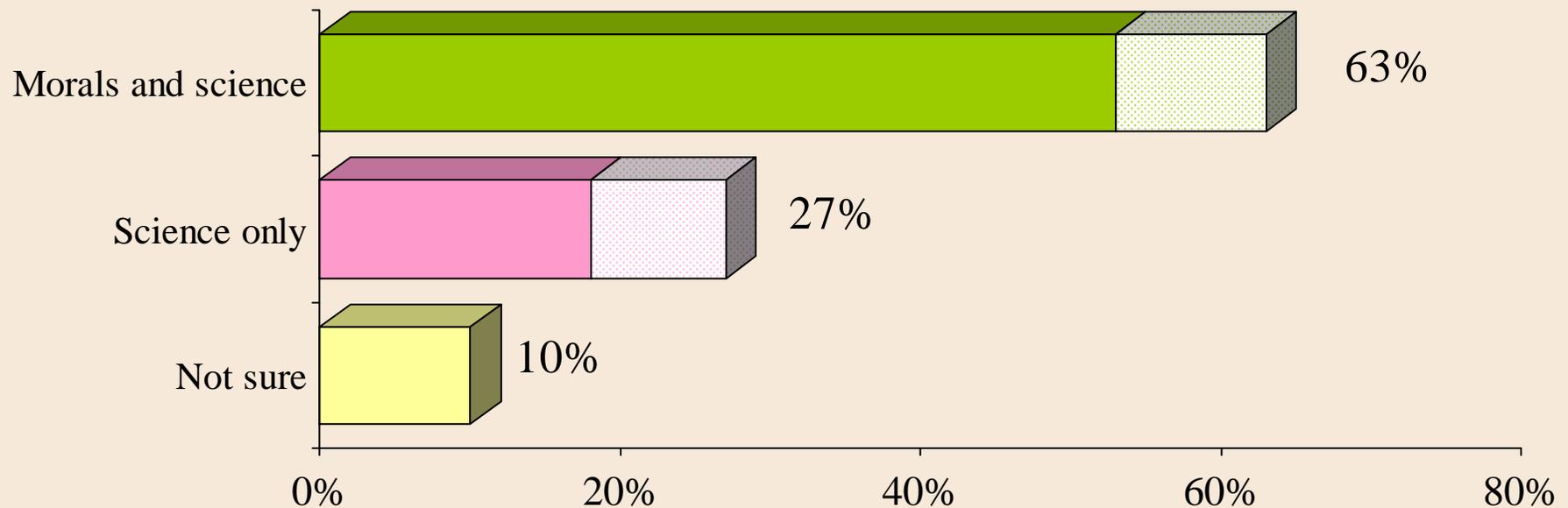
- “Playing God”
- Slippery Slope
- Pace of Change
- Animal Suffering
- *Industrial Farming Practices*
- *International Trade*
- *Biodiversity*
- *“Ownership”*



Americans Strongly Favor Incorporating Moral And Ethical Considerations When Regulating Cloning

Which of the following statements comes closer to point of view

- Government regulators should include ethical and moral considerations, in addition to scientific evaluation of risks and benefits, when making regulatory decisions about cloning and genetically modifying animals.
- Though ethical and moral considerations are important, government regulators should consider only scientific evaluation of risks and benefits when making regulatory decisions about cloning and genetically modifying animals.



Where's The Appropriate Forum For Science and Ethics to Dialogue?

FDA?

CODEX?



Land Grants?

OIE?

IACUCs?

FAO?

President's Council on Bioethics?



Development and Regulation Around the World

- International organizations
 - WHO and Codex
- Development in other countries
 - Canada
 - New Zealand
 - China
 - Argentina
 - Australia
 - Cuba
 - Japan
 - ??



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