Responsible Innovation Cultural Perceptions of Biotechnology in Food Systems

Poster · March 2019

DOI: 10.13140/RG.2.2.36640.53766

1 author:

RaJade M. Berry-James
North Carolina State University
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Dr. RaJade M. Berry-James
School of Public and International Affairs

Responsible Innovation

Cultural Perceptions of Biotechnology in Food Systems

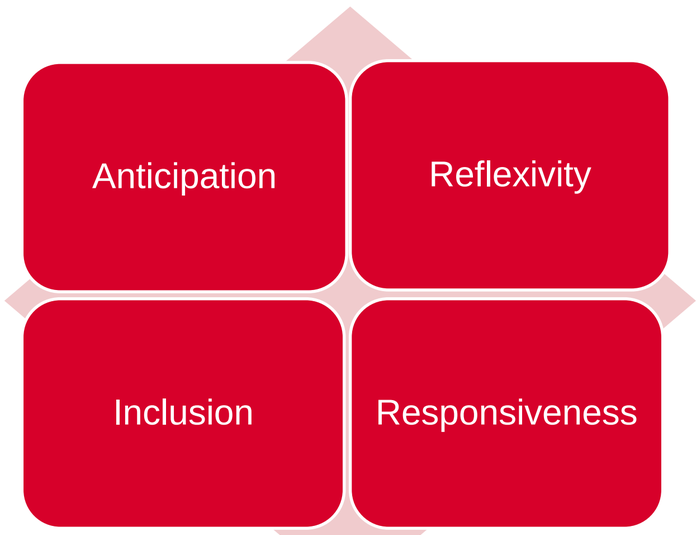
Abstract

Understanding the GMO Food debate in America is complex. The use of food biotechnology to produce herbicide-tolerant and pesticide-resistant crops has sparked broad public discourse and has fueled consumer skepticism regarding food safety. The views on food safety are polarizing - citizens and scientists differ on many issues. Whether science is used to close the gap between these groups has yet to be determined. Research findings and policy making pathways are almost non-existent for underrepresented groups. Among blacks, government distrust and mistrust have historical meaning and real implications. Blacks remain skeptical of government and are also skeptical of genetic engineering, especially when it comes to food safety. Key to responsible innovation is the potential to create pathways into underrepresented communities.

Review of Literature

- Cultural attitudes toward genetic engineering affect persistent food skepticism and may lead to **scientific mistrust** (Ludlow & Smith, 2011; Banati and Szabos, 2006; Goyal & Gurtoo, 2011)
- Consumer awareness and attitudes influence consumer behavior toward GM food supply and may lead to **strong preferences** for non-GM products (Baker and Burnham, 2001; Hallman et al, 2003; Li, et al 2004; Pew Research, 2006)
- Consumer behavior influenced by **consumer belief about GMO food safety** (Evans & Ballen, 2013) and consumer acceptance influenced by **trust** (Han, 2006)
- Cultural cognition of underrepresented groups and their exposure to information influence views on the **risks and benefits** of GM food supply (Kahan, et al, 2008)
- Faith-based leaders may **influence** their congregation's **perceptions** of risks regarding GM foods (Omobowale, Singer, Daar, 2009)

Framing Responsible Innovation



Stilgoe, J., R. Owen, & P. Macnaghten (2013). DOI: 10.1016/j.respol.2013.05.008

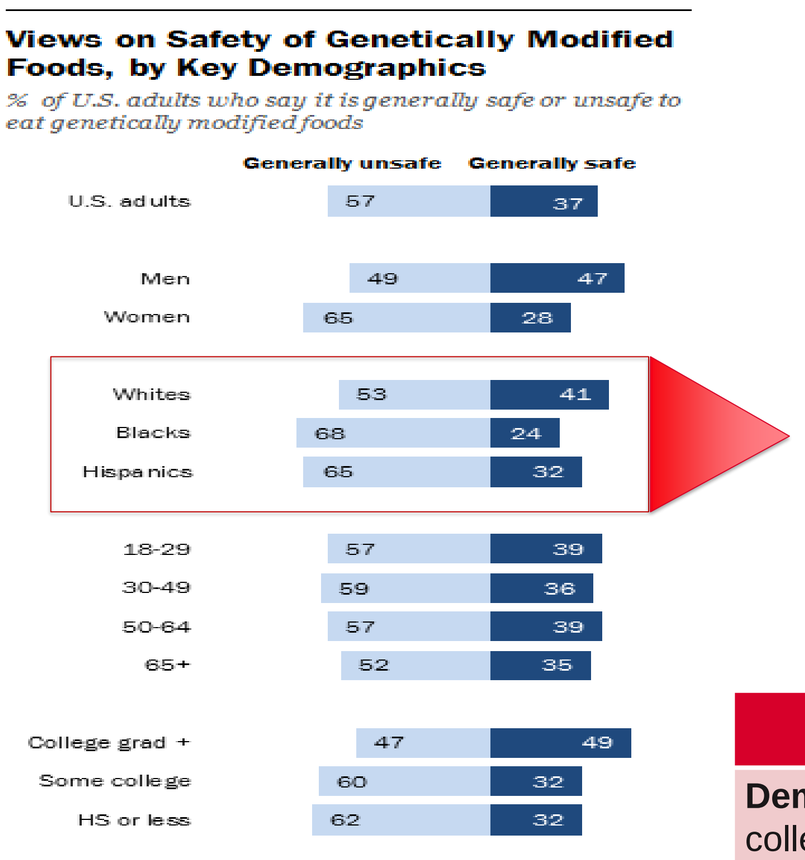
Methods

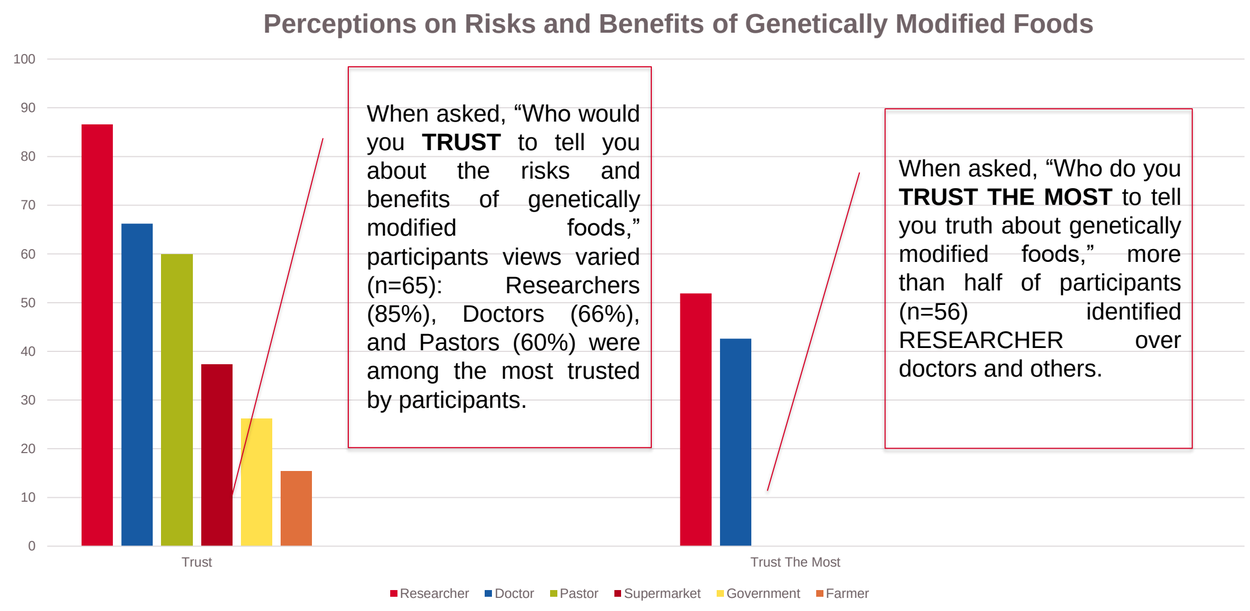
- Using a **non-experimental design**, we conducted focus group interviews in African American churches in Wake County (NC) to understand cultural perceptions of genetically modified foods (2014, Summer).
- Participants were asked questions regarding awareness, food safety, **trust**, choice and social capital.

Research Question

Who has perceived **credibility** regarding the truth about GM foods?

- Who would you trust to tell you about the **risks and benefits** of genetically modified foods?
- Who do you trust the **most** to tell you the truth about GMO food?





The initial study, Cultural Perceptions of Genetically Modified Foods, was funded by the NC State Genetically Engineering & Society (GES) Center. Two doctoral students in the Department of Public Administration, Ms. Sheron King and Dr. Melanie Riester, helped to conduct focus groups in the Summer of 2014. A special acknowlegement is extended to Dr. Jennifer Kuzma for serving as a faculty mentor for this study. For additional information about other dimensions of the study, please contact Dr. RaJade Berry James, rmberryj@ncsu.edu. Thank You!

Discussion

Demographics in this study were collected from seven churches and 65 participants, 69% women and 31% men. Average age was 55 years old. Average time in the church was 21 years. Average income was $79,872. More than 75% of households included 2 or more people.

Trust Brokers: Participants trust independent researchers, doctors and their pastor over government.

Credible Brokers: Participants view independent researchers as the *most credible source* to provide information on the risks and benefits of genetically modified foods.

Conclusion

In underrepresented communities, consumer skepticism persists despite new discoveries in science & technology. Food safety concerns remain even though biotechnology is commonly used in food production. Mistrust in government is pervasive in marginalized communities. Scientists should anticipate that citizen engagement in science and technology may require inclusion strategies beyond science cafes, focus groups, and citizen juries. To be responsive to cultural circumstances, historical realities and social skepticism, scientists may have to *go to church* to create a meaningful dialogue with underrepresented groups.

Citation: Berry-James, R. M. (2019, March). *Responsible Innovation: Cultural perceptions of biotechology in food systems.* Poster session presented at the 1st NC State University Research Symposium, Raleigh, NC.