

Citrus Greening Solutions: Extension's Role in Florida, California, & Texas

Taylor K. Ruth, Peyton N. Beattie, Dr. Alexa J. Lamm, & Dr. Joy N. Rumble

Introduction

- Citrus greening may destroy the citrus industries in Florida, California, & Texas (Ferris, 2015; UF/IFAS Citrus Extension, 2016)
- Consumers may not recognize role of GE trees in saving the citrus industry (Satran, 2015)
- Extension may need to facilitate difficult conversations in the future regarding solutions to citrus greening

Purpose

- To explore the importance of the citrus industry to residents of Florida, California, and Texas
- Priority 1 of the National Research Agenda (Roberts, Harders, & Brashears, 2016)

Conceptual Framework

- Cognitive dissonance is when a person is presented with information that does not align with his or her current beliefs (Festinger, 1957)
- Present information that reduces inconsistency of consumers actions and thoughts (Everly, 1967)
- An increase in direct involvement through extension programs can help shape attitudes (Whaples & Ryden, 1975)
- Focus on desirable qualities of the product to reduce cognitive discomfort (Oshikawa, 1969)

Methods

- 1,541 respondents, 55.9% response rate
- Quota sampling used to ensure equal responses from Florida, California, and Texas
- Seven questions asked about frequency of purchasing citrus and importance of the industry to the respondents' community
- Data analyzed in SPSS

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Results

- Majority of respondents (91.0%) purchased citrus in the last year
- 83.3% of respondents purchase citrus at least once a month or more
- Importance of the citrus industry is described in the table below

| Statement | Strongly Disagree/ Disagree | Neither Agree nor Disagree | Agree/ Strongly Agree |
|---|-----------------------------|----------------------------|-----------------------|
| My community's history is strongly tied to the citrus industry | 46.8% | 19.7% | 33.5% |
| The citrus industry contributes to the character of my community | 45.5% | 26.5% | 27.9% |
| The citrus industry has helped put my community on the map | 49.8% | 23.0% | 27.3% |
| My community's economic development depends on the citrus industry | 56.7% | 24.2% | 19.1% |
| I am very attached to the citrus industry | 56.5% | 26.9% | 16.7% |

Discussion & Implications

- Cognitive dissonance is apparent
- Respondents regularly purchase citrus but do not believe it is important to their community
- Need extension professionals to facilitate potentially difficult discussions about citrus production and citrus greening to diminish cognitive dissonance
- Invite consumers to tour different citrus groves and interact with growers (Whaples & Ryden, 1975)
- Compare the responses of non-citrus producing counties to citrus producing counties
- Explore consumers' knowledge of the disease compared to their level of concern

Targeting H₂O Conservation Extension Programming to Residents Governed by HOAs

For more information visit:
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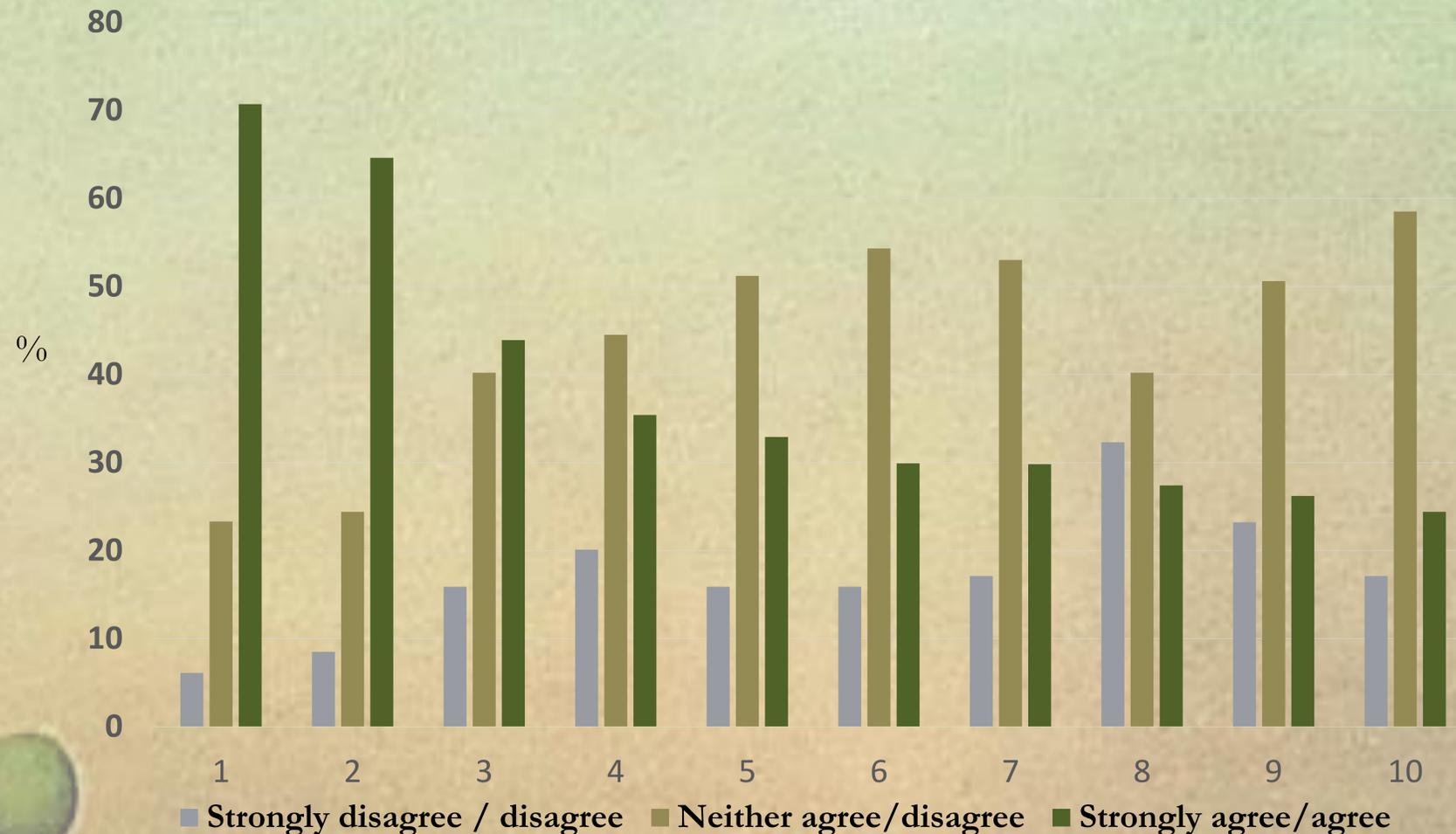
PURPOSE

Examine Florida residents living in HOAs and their perceptions of turfgrass to inform extension programming focused on driving HOA policy that will reduce water use.

WHO WE SURVEYED

- 982 adult Florida residents
- 53% participation rate
- 164 lived in an HOA

RESPONDENTS' PERCEPTIONS OF TURFGRASS



1. Appreciate home with well-maintained lawns
2. Healthy lawn is important for maintaining proper economic values
3. Prefer native plants over turfgrass
4. Too many resources used in managing lawns
5. Turfgrass requires too much water
6. Turfgrass is best landscape option
7. Turfgrass lawns have positive effect on environment
8. Turfgrass lawns are unnatural
9. Too many have turfgrass lawns
10. Overall negative impact on the water quality

THEORETICAL FRAMEWORK

- Community-Based social marketing
- Achieve behavioral changes by removing structural barriers

DISCUSSION...

- A majority appreciate homes with maintained lawns, displaying perceived importance of lawns and partly explains turfgrass acreage in Florida
- Limited turfgrass awareness exists as majority being undecided about too many people having turfgrass lawns and over 30% reported believe in turfgrass lawns are unnatural
- Aesthetics are a point of focus (by HOAs), as a majority strongly agreed or agreed to these statements

RECOMMENDATIONS...

- Extension programming → community-based social marketing for promoting other aesthetically pleasing and low water requiring landscapes can be promoted
- Future research → causes and types of motivation that could be lead to knowledge gain and ultimately behavior change related to lawn management.

Communicating about Genetic Modification: Desired Information and Trusted Sources

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Introduction

- Genetic modification (GM) increases farming efficiency (LaJeunesse, 2015)
- Consumers believe GM food is unsafe (Pew Research Center, 2015)
- Consumers with less science knowledge are less likely to consume GM products (Pew Research Center, 2015)

Purpose

Advise agricultural communicators by identifying what the public wants to learn about GM and the sources the public trusts

Objectives

- Identify topics of interest related to GM science
- Identify the sources consumers' trust regarding GM science

Theoretical Framework

- Diffusion of innovations (Rogers, 2003)
- Persuasion stages of innovation-decision process (Rogers, 2003)
- Measured individual's desired knowledge of GM and preferred sources of information

Results

Consumers' Desired GM Information

| Statement | n | % |
|---|-----|------|
| Safety of food | 784 | 74.6 |
| Quality of food | 695 | 66.1 |
| Impact on the environment | 600 | 57.1 |
| Impact on US farmers | 542 | 51.6 |
| Ban on food by some countries | 534 | 50.8 |
| Related regulations | 510 | 48.6 |
| Impact on biodiversity | 433 | 41.2 |
| Economic impact | 428 | 40.7 |
| Impact on farmers in developing countries | 368 | 35.0 |
| Not interested | 75 | 7.1 |

Consumers' Desired GM Sources

| Statement | n | % |
|-------------------------------------|-----|------|
| Universities researching GM science | 629 | 59.8 |
| Companies using GM science | 366 | 34.8 |
| Organizations in support | 363 | 34.5 |
| Organizations in opposition | 328 | 31.2 |
| News media | 234 | 22.3 |
| Government organizations | 218 | 20.8 |
| Friends or family | 144 | 13.7 |
| Colleagues | 62 | 5.9 |
| Other | 54 | 5.2 |

Methods

- Descriptive online survey
- 1,051 respondents, 60% response rate
- Two questions asked what topics related to GM products would consumers like to learn more about and which sources they would prefer to receive information from regarding GM products
- Permitted to mark all that apply
- Analyzed using SPSS

Conclusion

- Safety and quality of food produced can be personally managed by consumer
- Communicators can evaluate consumer audience to better tailor GM science information
- Reduce consumer uncertainty by using messages backed by universities researching safety and quality of GM food
- Targeted communication efforts can create awareness of the efficiency related to the use of GM science in farming

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Seeing through GM Information: Exploring Perceived Transparency differences in Information Channel and Source

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Supervisor

@mosttransparentsource

 500 Florida Residents

 Data weighted based on
2010 Florida Census

 Purpose

To explore differences in perceived transparency of information about GM food among different information channels and sources

Perceived Transparency

Channels

Sources



Why look at perceived transparency? @transparencybackground

- Trust and public acceptance of GM technology has continued to be a relevant debate (Godfray et al., 2010)
- Lack of communication about GM food has created safety concerns and distrust (McCullum-Gomez & Palmer, 2010)
- Transparent communication can be a way to reconnect people with the origins of their food (Hoogland et al., 2005)



Results @transparencyresults

- GM food information is perceived to be transparent regardless of the source or media channel
- Sources: Most transparent: Supervisor; Least transparent: Food manufacturers
- Channels: Most transparent: Twitter; Least transparent: Cooking Shows



Conclusions and Recommendations @transparencyconclusionsrecommedations

- GM food information was perceived as transparent regardless of source or channel
- Respondents should also trust the GM food information
- Future research should explore trust in communication about GM food in addition to transparency



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Florida Consumers' Latitudes of Acceptance toward GM Food Messages

Taylor K. Ruth, Anna J. Warner, & Dr. Joy N. Rumble

Introduction

- Genetically modified (GM) is a contentious issue & consumers are reluctant to consume the products (Fernandez-Cornejo, Wechsler, Livingston, Mitchell, 2014)
- Little evidence of risk related to human consumption of GM products (NAS, 2016)
- Need to understand best way to communicate with the public about this issue
- Purpose: explore the types of messages Florida consumers would most likely accept or reject regarding GM food

Theoretical Framework

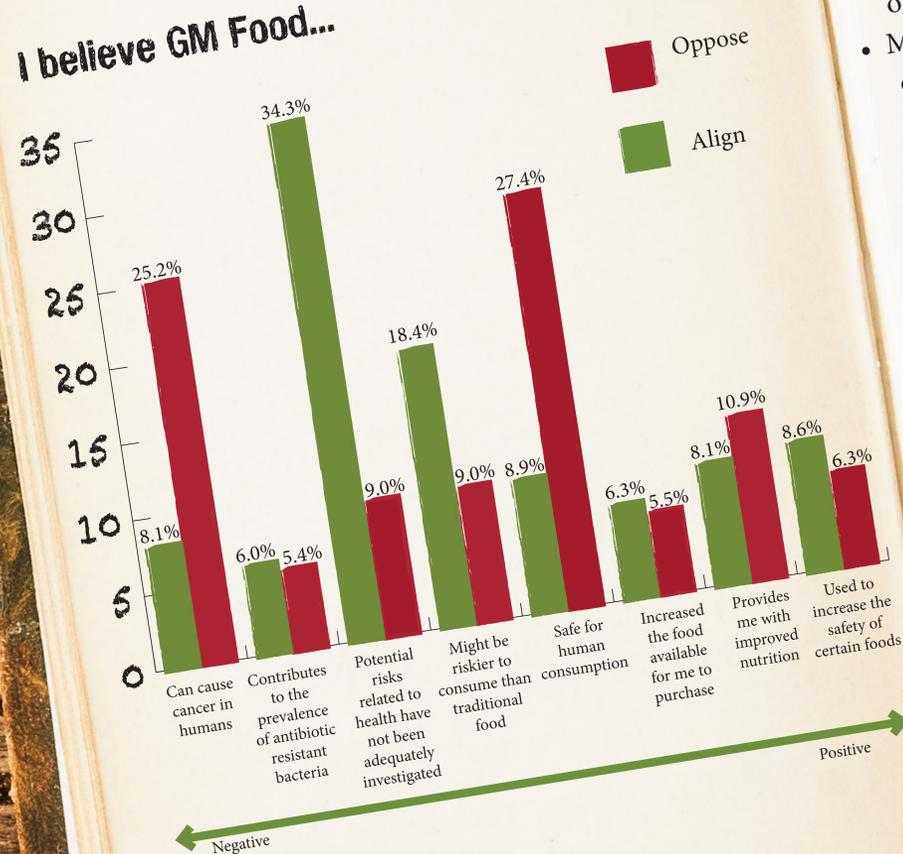
- Social Judgment Theory (Hovland, Harvey, & Sherif, 1957)
 - Individuals compare incoming messages against existing views
 - More likely to accept messages more closely related to current opinions
- Latitudes of Acceptance (LoA) and Rejection (LoR) and Messages (Perloff, 2014)
 - Assimilate stronger messages within LoA
 - Contrast messages in LoR

Methods

- Online survey
- Non-probability sample weighted with census data
- 43% participation rate (497/1,154)
- Respondents asked what statements most aligned and most opposed their views of GM food
- Statements adapted from Mahgoub's (2016) description of consumer concerns & thoughts related to GM food
- SPSS used to descriptively analyze data

Results

I believe GM Food...



Conclusions

- Latitude of acceptance regarding GM food surrounded negatively framed messages
- Consumers identified with messages of the potential risk of GM related foods
- Messages related to GM food will need to address consumers' concerns related to health research to avoid outright rejection of the communication

Recommendations

- Researchers should determine specific latitudes of acceptance, rejection, and noncommittal for sub-groups of the population
- Practitioners should categorize target audiences based on LoA to craft effective consumer messages

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