
2023

CATTLE PRODUCER'S PERCEPTIONS OF SUSTAINABILITY INITIATIVES

REPORT



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The purpose of this survey was to gather baseline data on participant demographic information and insights toward 1) beef producer awareness and perceptions of sustainability practices, and 2) beef producer perceived benefits, perceived barriers, and willingness to adopting sustainability practices (environmental, social, and economic) in their current operations. This information will provide a well-rounded understanding of viewpoints toward these topics to be used to inform key message positioning statements.

Background

Sustainable practices or “best management practices” have been shown to be the most effective, environmentally sustainable, and long-term economically efficient way to manage an operation (Feather & Amacher, 1994; Gillespie et al., 2007; Paudel et al., 2007).

Information-based communication campaigns tend to assume behavior change will occur if sufficient information is provided; however, education alone has little to no effect on creating long-lasting behavior changes (McKenzie-Mohr et al., 2011). Our approach is to encourage producers to adopt sustainable practices through social marketing strategies, a comprehensive strategy that can be used to guide persuasive communication efforts toward behavior change (Warner, 2014; McKenzie-Mohr et al., 2011).

Substantial evidence exists where social marketing techniques have encouraged key publics to adopt behaviors in areas such as recycling, water and energy conservation, childhood obesity, public health, and water reduction (Andreasen, 2006; Kotler & Lee, 2008; Lee & Kotler, 2020; McKenzie-Mohr, 2011; Warner, 2014). This technique focuses on evaluating audience needs and developing strategic communication (Warner, 2014) as messages that target audience members' values, prior beliefs, perceived key benefits, and motivations have been shown to be more persuasive and effective (Petty & Cacioppo, 1986; Azjen, 1985).

The main priority for message development is to first understand the audience perceptions and needs (Hine et al., 2014). Using research-based audience needs assessments, communicators can determine the unique set of audience perceptions surrounding a desired behavior, what may prevent them from participating in a behavior, and what might encourage them to participate in the behavior (McKenzie-Mohr et al., 2011).

Survey data were collected from 94 participants at the 2023 National Cattlemen's Annual Convention in New Orleans, Louisiana and through an advertisement in the Beef Checkoff's Beef Bulletin email list-serve. The respondents were given a \$6 coupon for their participation in the interception survey.

After agreeing to participate in the study, the respondents were asked a series of questions relating to the following items:

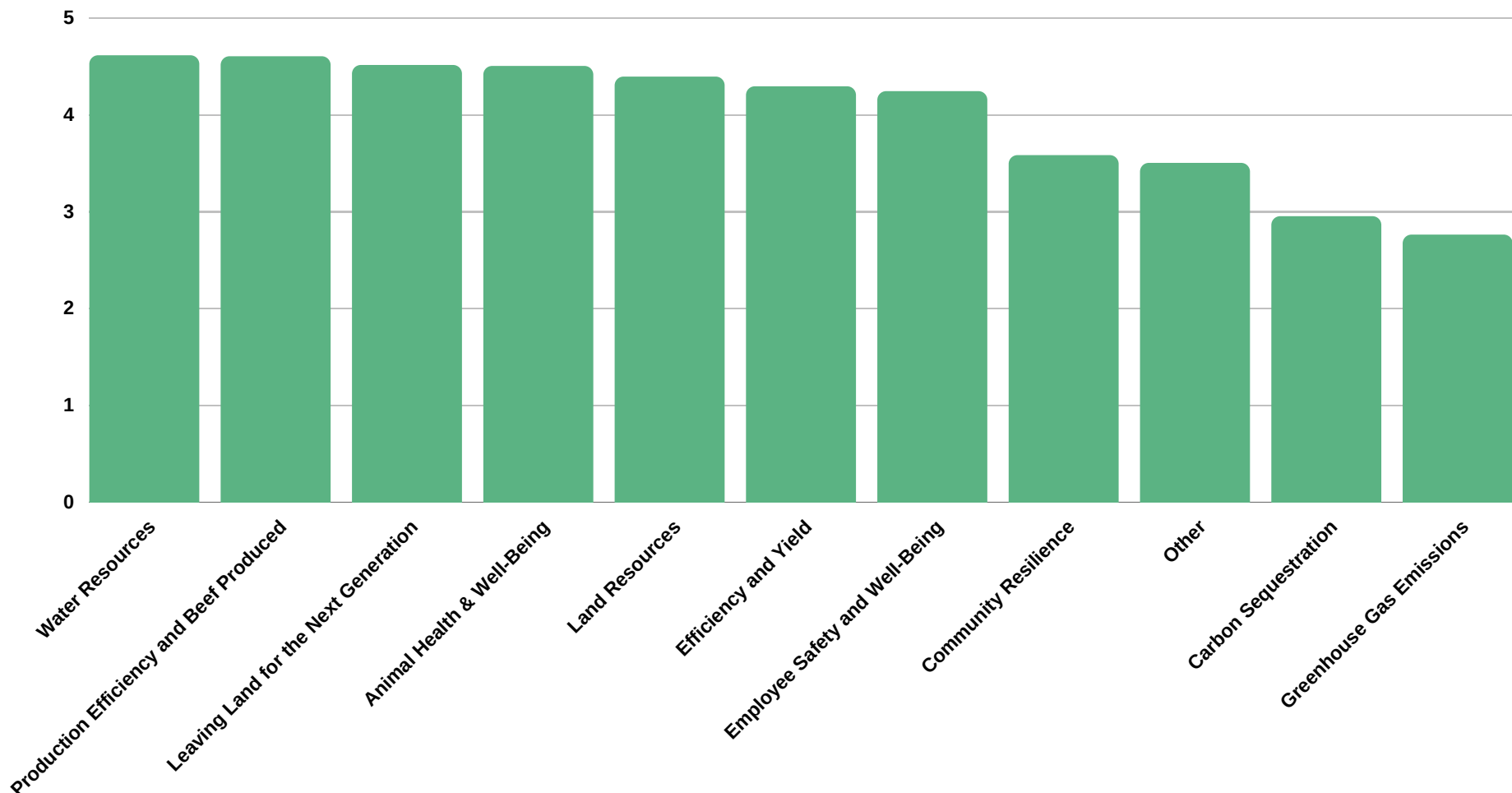
- Perceived highest priority issues in terms of sustainability
- Perceived sustainable outcomes for beef production practices
- Willingness to adopt sustainable practices
- Benefits and barriers toward adopting sustainable practices
- Perceptions of the implications of greenhouse gas emissions
- Personal, subjective, and moral beliefs and motivations toward adopting sustainable practices
- Demographic information

Data were analyzed using descriptive statistics using SPSS. The descriptive data is presented in the pages below. Following the results, conclusions and recommendations are provided.

PRIORITIES

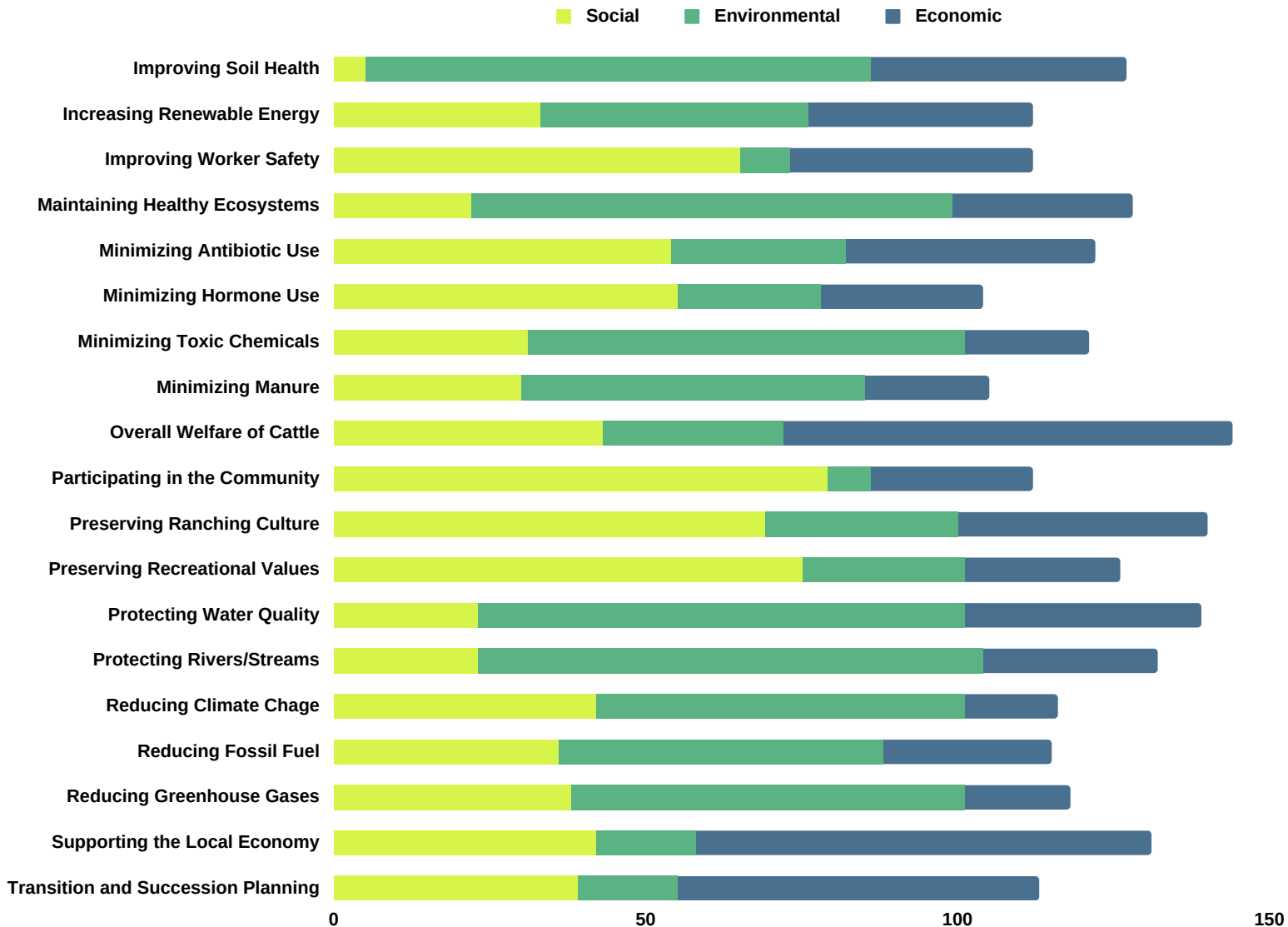
Sustainability Priorities for Decision Makers

The respondents were asked to describe which issues they thought decision makers should place the greatest priority on in terms of sustainability. We found the respondents perceived water resources (M = 4.61, SD = 1.74) and production efficiency (M = 4.51, SD = 0.72) as the most important; whereas, the least important priorities were carbon sequestration (M = 2.95, SD = 1.08) and greenhouse gas emissions (M = 2.76, SD = 1.15).



Perceptions of economic, social, and environmental outcomes

Respondents were given a list of outcomes for sustainable agricultural practices. They were then asked if they thought the following outcomes have an economic, social, and/or environmental impact. Respondents could select more than one type of outcome of the sustainable practice.



PERCEPTIONS OF SUSTAINABLE OUTCOMES

ADOPTION OF PRACTICES

Incorporation of Sustainable Agricultural Practices

The respondents were asked to describe their level of adoption of sustainable agricultural practices on their operation. We found the respondents most highly associated themselves with supporting the local economy (n = 75, 79.8%), maintaining the overall welfare of cattle (n = 73, 77.7%), and preserving ranching culture (n = 73, 77.7%). It was also found that reducing greenhouse gases (n = 39, 41.5%), reducing fossil fuel use (n = 32, 34%), and minimizing manure (n = 32, 34%) were among the least adopted practices among the respondents.

MOST ADOPTED SUSTAINABLE AGRICULTURAL PRACTICES:

- 1 SUPPORTING THE LOCAL ECONOMY
- 2 MAINTAINING OVERALL WELFARE OF CATTLE
- 3 PRESERVING RANCHING CULTURE
- 4 PARTICIPATING IN COMMUNITY
- 5 PROTECTING WATER QUALITY

LEAST ADOPTED SUSTAINABLE AGRICULTURAL PRACTICES:

- 1 REDUCING GREENHOUSE GASES
- 2 REDUCING FOSSIL FUEL USE
- 3 MINIMIZING MANURE
- 4 REDUCING CLIMATE CHANGE
- 5 INCREASING RENEWABLE ENERGY

BARRIERS & BENEFITS

PERCEIVED BENEFITS:

- 1 PROTECTING WATER QUALITY
- 2 PROTECTING WELFARE OF CATTLE
- 3 MAINTAINING HEALTHY ECOSYSTEMS
- 4 PRESERVING SCARCE RESOURCES
- 5 PROVIDING GENERATIONAL SUCCESSION

Respondents were asked to describe their perceived benefits of adopting sustainability practices. We found participants perceived protecting water quality ($M = 4.37$, $SD = 0.77$), protecting the welfare of cattle ($M = 4.34$, $SD = 0.87$), and maintaining healthy ecosystems ($M = 4.29$, $SD = 0.75$) as the most important; whereas, the least important benefits were mitigating climate change ($M = 3.29$, $SD = 1.11$) and reducing greenhouse gas emissions ($M = 3.33$, $SD = 1.13$). It is important to note that although they were the least important benefits, the respondents still believed they were slightly beneficial.

Respondents were then asked to describe their perceived barriers to adopting sustainability practices. We found respondents perceived financial concerns and risk ($M = 4.1$, $SD = 0.78$), lack of knowledge/education on how to adopt sustainability practices ($M = 3.64$, $SD = 1.01$), and changes to equipment and technology ($M = 3.63$, $SD = 0.96$) as the greatest barriers to adopting sustainability practices. On the other hand, we found that participants viewed peer pressure to avoid adoption ($M = 2.96$, $SD = 1.08$) as a lesser barrier to the adoption of sustainable practices.

PERCEIVED BARRIERS:

- 1 FINANCIAL CONCERNS AND RISK
- 2 LACK OF KNOWLEDGE/EDUCATION
- 3 CHANGES TO EQUIPMENT & TECHNOLOGY
- 4 PERCEPTIONS OF INEFFICACY
- 5 INADEQUATE INCENTIVES

Personal Subjective Norms

The respondents were asked to describe their level of agreement toward the following statements based on their likelihood to adopting sustainable practices (1 = Strongly disagree, 5 = Strongly agree). We found that respondents somewhat agreed with the statements (M = 3.55, SD = 1.02).



Moral Norms

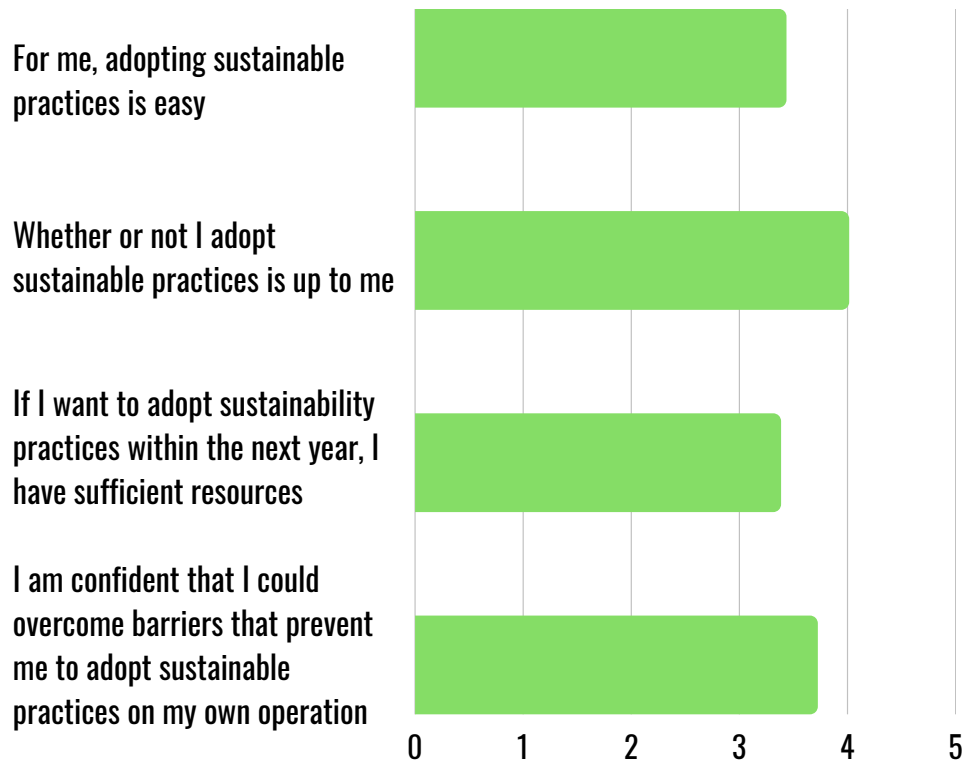
The respondents were asked to describe their level of agreement toward the following statements based on their likelihood to adopting sustainable practices (1 = Strongly disagree, 5 = Strongly agree). We found that respondents somewhat agreed with the statements (M = 3.77, SD = 1.02).

Adopting sustainable practices...



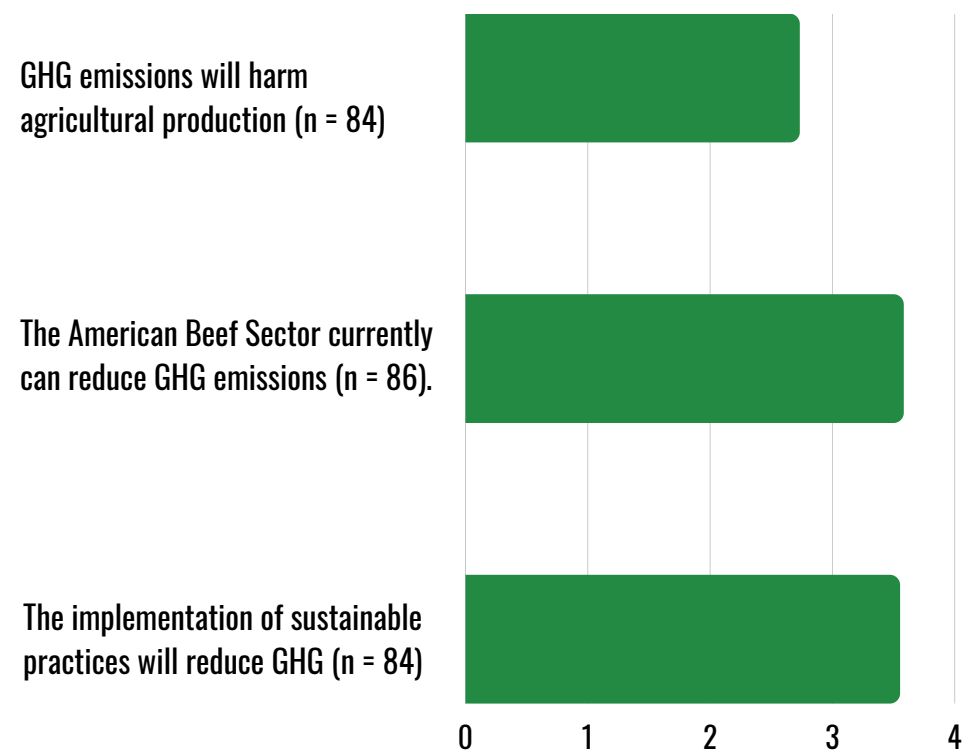
PERCEIVED BEHAVIORAL CONTROL

Respondents were asked to describe their level of agreement toward the following statements based on their likelihood to adopting sustainable practices (1 = Strongly disagree, 5 = Strongly agree). We found that respondents somewhat agreed with the statements (M = 3.64, SD = 0.97).



PERCEPTIONS OF GHG EMISSIONS

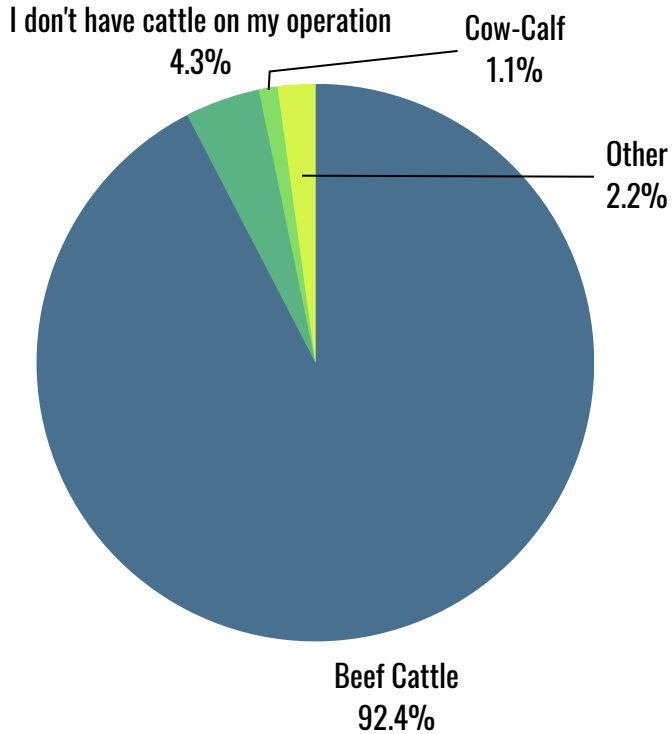
Respondents were asked a series of questions about their perceptions of the impact of GHG emissions on the American Beef Sector. Of the 94 total respondents, an interesting finding is that between 84 and 86 respondents answered these questions.



DEMOGRAPHICS: OCCUPATION & INCOME

Occupation

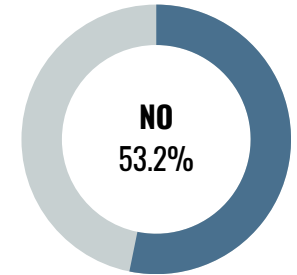
Most of respondents have actively been involved in making cattle production decisions in the past five years (n = 82, 87.2%), and the majority of respondents have beef cattle on their operation (n = 85, 92.4%).



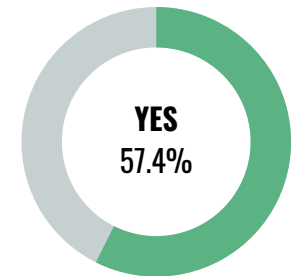
Income

Respondents were asked the following questions regarding income:

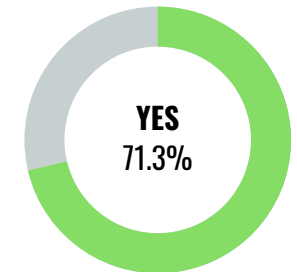
Is this cattle operation your primary occupation?



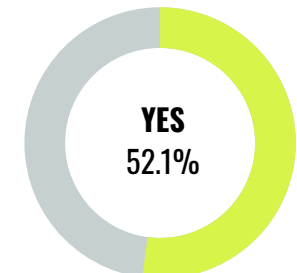
Is the majority of your income from a farm, ranch, or directly from agriculture?



Do you have off-farm income?



Does your spouse have off-farm income?



DEMOGRAPHICS: OPERATION CHARACTERISTICS

Cattle Type and Operation Decisions

Overall, the majority of respondents are involved in the cow-calf sector of the beef industry (n = 76, 80.9%) while 92.4% (n = 85) of respondents reported to have beef cattle on their operation. The majority, 81.9% (n = 77) of respondents plan to pass their operation down to a member of their family and 52.1% (n = 49) of respondents were raised on their operation.

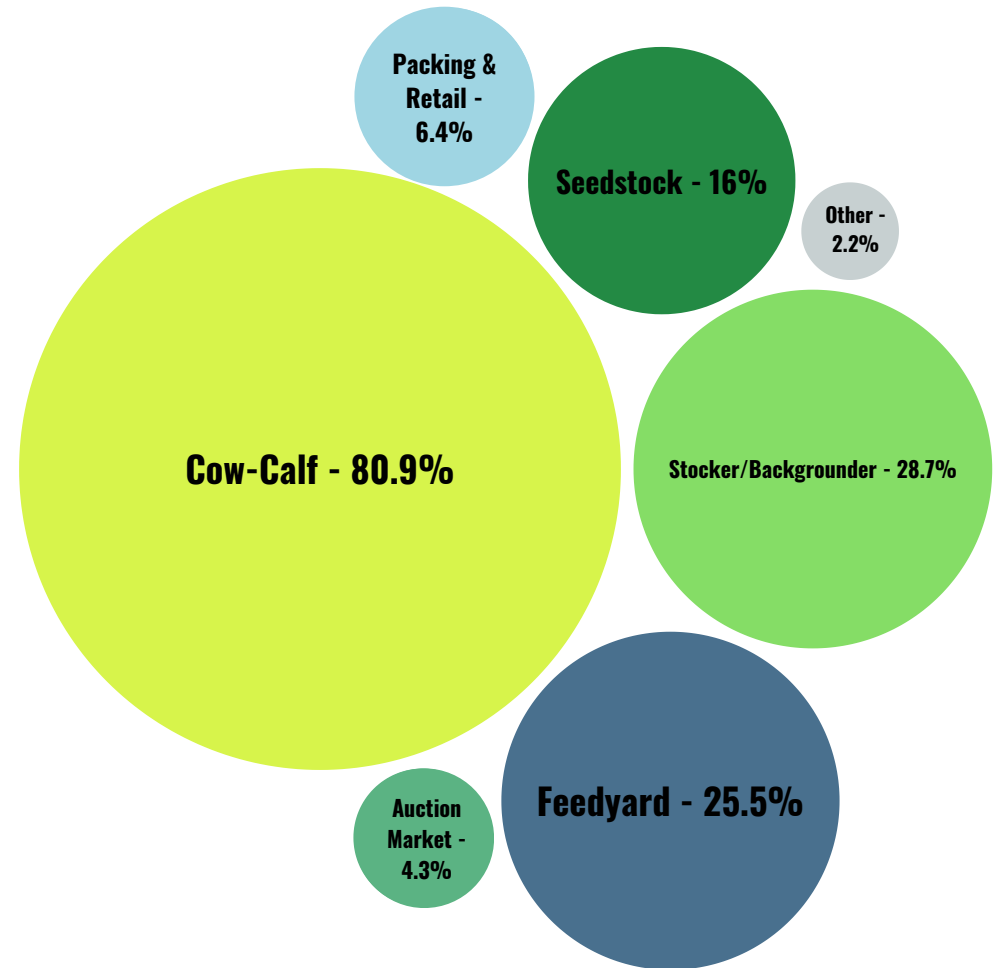


OVER HALF OF THE
RESPONDENTS WERE
RAISED ON THEIR
OPERATION

52.1%

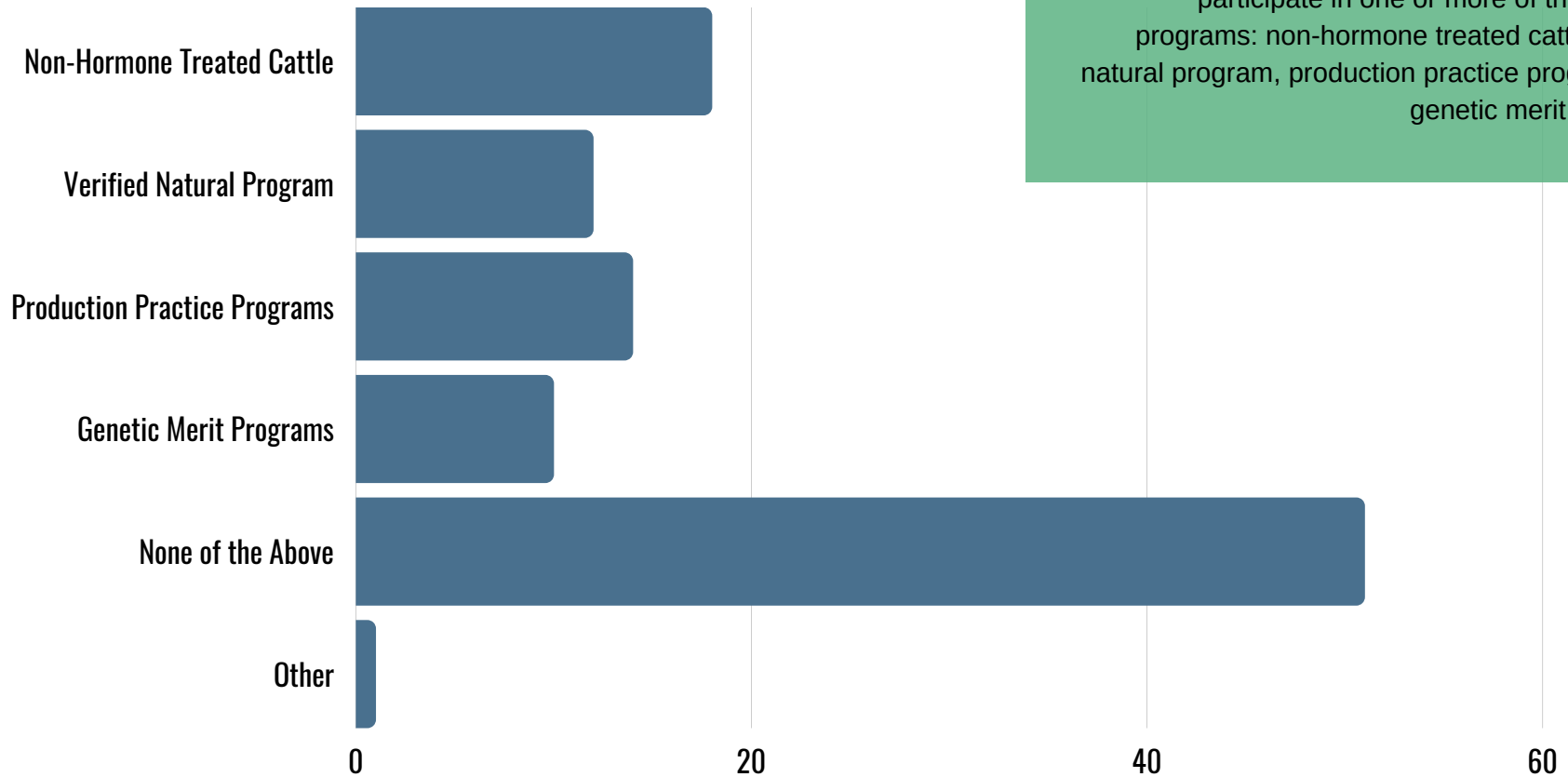
81.9%

OF RESPONDENTS PLAN TO
PASS THEIR OPERATION
DOWN TO A MEMBER OF
THEIR FAMILY



Certified Programs

Most respondents (n = 51, 54.3%) did not participate in one or more of the following programs: non-hormone treated cattle, verified natural program, production practice programs, nor genetic merit programs.

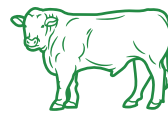


Other Enterprises

Respondents were asked what other enterprises they have on their cattle operations.



Row Crops
(n = 34, 36.2%)



None of the Above
(n = 34, 36.2%)



Hunting/Recreational/
Agritourism
(n = 24, 25.5%)



Other
(n = 7, 7.6%)

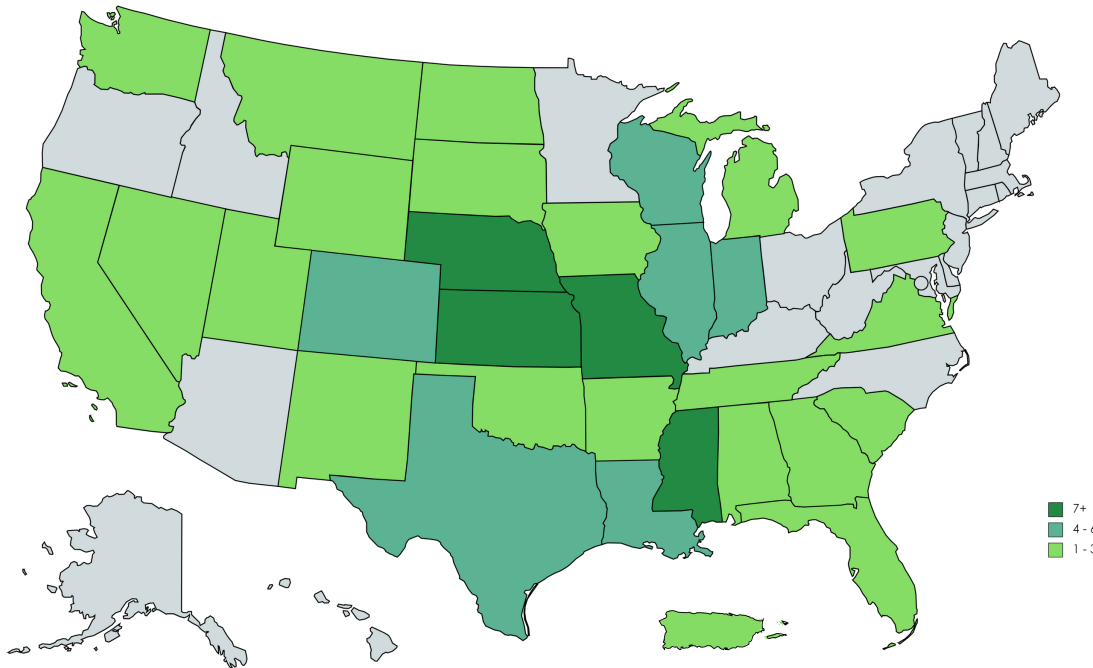


Energy
(n = 2, 2.1%)

DEMOGRAPHICS: LOCATION & CHARACTERISTICS

Location of Operations

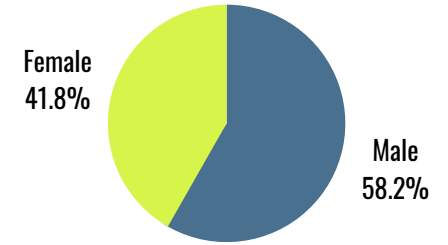
Respondents were then asked to report what state(s) their operation is located. States with the most respondents were Mississippi (n = 7, 7.4%), Nebraska (n = 7, 7.4%), Missouri (n = 8, 8.5%), and Kansas (n = 8, 8.5%).



Age and Gender

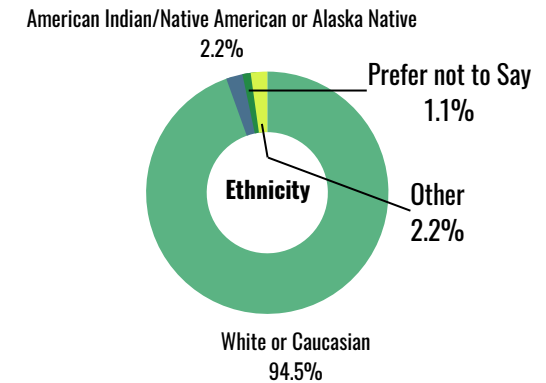
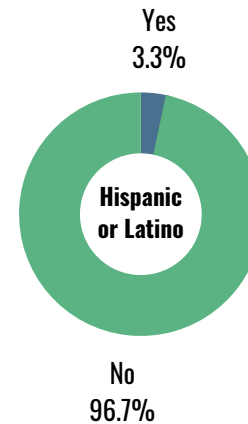
Respondents were asked to identify their gender. There were more males (n = 53, 58.2%) than females (n = 38, 41.8%). The average age of respondents was 45 years old with a range of 18 - 81.

**AVERAGE AGE OF
RESPONDENTS:
45
YEARS OLD**



Race/Ethnicity

The majority of respondents recorded that they were not of Spanish, Hispanic, or Latino origin (n = 88, 96.7%). The majority of respondents considered themselves to be White or Caucasian (n = 86, 94.5%).



CONCLUSION & RECOMMENDATIONS

Research Highlights

- Respondents placed highest priorities on water and land resources, production efficiency, leaving a legacy, and animal health and well-being.
- The respondents were most likely to have adopted social practices such as supporting the local economy, preserving ranching culture, participating in the community, and maintaining the welfare of cattle. They are also likely to have adopted practices supporting the environment, such as protecting water quality.
- When asked about their perceived benefits of adopting sustainable practices, producers focused on protecting and preserving scarce resources and water, maintaining healthy ecosystems, protecting the welfare of their cattle, and providing generational succession.
- Producers perceived behaviors toward sustainable adoption includes financial concerns and risks, inadequate incentives, lack of knowledge and education, and changes to equipment and technology.
- Producers slightly agreed that people who were important to them and other cattle producers like them would adopt sustainable practices.
- Producers slightly agreed it was their moral responsibility to adopt sustainable practices.

Communications Recommendations

- Communication regarding sustainable practice adoption should be audience centered.
- Communication should highlight the top perceived benefits – such as how incorporating more sustainable practices may conserve water or scarce resources, protect the welfare of cattle, and provide generational succession.
- Communication needs to also minimize the barriers and organizations should provide resources on diminishing risks such as reducing financial concerns through incentives and inexpensive changes.
- Communication must also educate producers on how to adopt sustainable practices and show how to minimize or facilitate changes to equipment and technology.

Research Recommendations

- Based on these initial findings, the next steps include developing and designing messages focused on encouraging producers to adopt sustainable practices.
- Research should examine how these perceptions vary by key demographics such as regionality and if their cattle operation was their primary occupation.

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