

NAVIGATING CLIMATE COMMUNICATION AND AGRICULTURAL TRUST:
EXPLORING CONSUMER PREFERENCES AND SOCIAL MEDIA INFLUENCE

By

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(Under the Direction of Jessica Holt)

ABSTRACT

As the impact of climate change worsens, leading to more natural disasters such as rising sea levels, declining soil quality, resources shortages, and other challenges, consumers are becoming increasingly concerned. In response, new climate-related terms have emerged. However, little is known about which of these terms resonates most effectively with the public. In recent years, social media has enhanced communication within families, social circles, and businesses. However, fear-driven narratives often spread on these platforms, creating a gap between agriculturalists and consumers. Using media dependency theory, researchers examined how time spent on social media, the number of platforms used, and demographic factors influence trust in agriculture.

INDEX WORDS: Climate-smart agriculture, audience segmentation, social media platform, media dependency, trust in agriculture

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DEDICATION

This thesis is dedicated to the farmers, ranchers, agriculturists, researchers, professors, and mentors who have invested and believed in me.

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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	v
LIST OF TABLES	viii
LIST OF FIGURES	ix
CHAPTER	
1 INTRODUCTION	1
Climate Change.....	1
The Paris Climate Agreement.....	4
Climate-Smart Agriculture.....	5
Statement of the Problem.....	8
2 CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW	9
Audience Segmentation	9
Media Dependency Theory.....	10
Purpose and Research Objectives	11
Design Overview	12
Definition of Terms.....	13
Limitations	14
Assumptions.....	15
3 COMMUNICATING CLIMATE: MESSAGE TESTING CONSUMER’S PREFERRED CLIMATE TERMINOLOGY.....	16

Abstract	17
Introduction.....	18
Conceptual Framework and Literature Review	19
Purpose and Objectives.....	20
Methodology	20
Results.....	26
Conclusions and Discussion	33
4 FARM TO FEED: UNDERSTANDING SOCIAL MEDIA’S IMPACT ON TRUST IN AGRICULTURE	35
Abstract.....	36
Introduction.....	37
Theoretical Framework and Literature Review	39
Purpose and Objectives.....	42
Methodology.....	42
Results.....	47
Conclusions and Discussion	51
5 DISCUSSION AND RECOMMENDATIONS.....	53
Summary of Key Findings	53
Recommendations for Future Research	55
Recommendations for Practitioners	56
REFERENCES	58
APPENDICES	
A Qualtrics Survey.....	71

LIST OF TABLES

	Page
Table 1: Demographics of Respondents	22
Table 2: Respondent's Climate Term Preference	26
Table 3: Respondent's Rankings of Climate Term Preferences	27
Table 4: ANOVA Summary Table for Gender Climate Term Preferences	28
Table 5: ANOVA Summary Table for Location Climate Term Preferences	28
Table 6: ANOVA Summary Table for Race Climate Term Preferences.....	29
Table 7: ANOVA Summary Table for Generational Age Climate Term Preferences	30
Table 8: ANOVA Summary Table for Ethnicity Climate Term Preferences	31
Table 9: ANOVA Summary Table for Political Ideology Climate Term Preferences	32
Table 10: Demographics of Respondents	44
Table 11: Response Analysis of Agriculture Trust Based on Demographics	49

LIST OF FIGURES

	Page
Figure 1: Majorities of Young Adults Only See 3 of 22 Foreign Policy Goals as Top Priorities for the U.S.	2
Figure 2: Which Social Media Platforms are Most Popular	7
Figure 3: Media Dependency Theory	41
Figure 4: Social Media Platform Usage.....	46

CHAPTER 1

INTRODUCTION

Agriculture is a dynamic topic, with a surplus of new advancements, legislation, and challenges to communicate about. The introduction chapter offers a comprehensive overview of the key topics that will be covered in this thesis, such as climate change, climate-smart agriculture, trust in agriculture, and social media. Additionally, the chapter provides a brief history of the topics, laying a foundation for future information.

Climate Change

Climate change is the most dangerous natural hazard impacting agricultural production globally and threatens food security for our growing population if we fail to conserve the land and resources we currently have (Praveen & Sharma, 2019). Extreme weather, altered water supply, and loss of biodiversity are just a few of the negative impacts climate change has on production agriculture (Dabalén et al., 2024).

Over the past few decades, there has been increased concern about climate change from all agricultural sectors in the U.S. and internationally (Southwell & Schneider, 2024; Ganpat & Ramdwar, 2021). This concern is resulting in the public wanting to see proactive measures related to climate change (Tyson et al., 2023, as cited in Southwell & Schneider, 2024). In 2023, a survey indicated that 67% of adults believe the United States should prioritize efforts to develop renewable energy sources (Tyson et al., 2023, as cited in Southwell & Schneider, 2024). Another study asked U.S. adults under the age of 30 what three foreign policy goals should be top priorities for the U.S. (Pew Research Center, 2024, para.1). The data revealed that 59% of

adults under the age of 30 believe that “dealing with climate change” should be a top priority for the U.S. (Pew Research Center, 2024, para. 1). As seen in Figure 1 “Dealing with climate change” was also the highest-ranked priority in the study (Pew Research Center, 2024, para. 3). A survey conducted across 19 countries discovered a median of 75% of adults believe that climate change is a major threat to their country (Pew Research Center, 2024, para. 3). These findings highlight Americans’ interest in identifying options for mitigating climate change.

Majorities of young adults only see 3 of 22 foreign policy goals as top priorities for the U.S.

% of U.S. adults ages 18-29 who say the following long-range foreign policy goals should be given ...



Note: Those who did not answer are not shown.
Source: Survey of U.S. adults conducted April 1-7, 2024.

PEW RESEARCH CENTER

Figure 1. Majorities of Young Adults Only See 3 of 22 Foreign Policy Goals as Top Priorities for the U.S. (Pew Research Center, 2024 para. 3)

With the increased concern and focus on climate change, new climate terminology has been developed by researchers, legislators, and organizations to gain new traction and have a

greater impact. According to an article written by Climate Hubs, USDA (2023) the climate term “global warming” was used in the 1980s and 1990s. The term led people to believe that the impacts of global warming were going to be far into the future, and the impacts were mild (USDA, 2023). The term “did not spur much action outside the environmental and natural resources profession” (USDA, 2023, para. 2). A major newspaper, *The Guardian* is in agreement with introducing more impactful climate terms, instead of “climate change” the paper used the terms “climate emergency, crisis or breakdown” and “global heating” over “global warming” (USDA, 2023). The editor explained, “We want to ensure that we are being scientifically precise, while also communicating clearly with readers on this very important issue. The phrase ‘climate change’ sounds rather passive and gentle when what scientists are talking about is a catastrophe for humanity” (USDA, 2023, para. 3). Another example of a headline that more accurately depicts the climate change situation is from the *Washington Post*, which reads, “World is on brink of catastrophic warming, UN climate change report says” (USDA, 2023, para.7). The *New York Times* also had a gripping headline, “Earth to Hit Critical Warming Threshold by Early 2030s, Climate Panel Says” (USDA, 2023, para. 7).

Examples of new climate terms are “Climate Smart,” “Climate Resilient,” “Regenerative Agriculture,” and “Sustainable Agriculture”; however, little is known about which term most effectively resonates with the public (Dabalen et al., 2024). Previous research has shown labels and terms regarding many agriculture topics, including climate change, can be misconstrued by consumers, ultimately influencing their food purchasing decisions (Cook et al., 2023). This misunderstanding can be due to a lack of scientific knowledge or familiarity with jargon associated with the topic (Southwell & Schneider, 2024). Previous research acknowledged that even some extension educators have low to moderate knowledge on certain climate change

topics, such as the nature of greenhouse gases and long-term changes in atmospheric temperature (Hunter, 2022), therefore making it difficult for even those within higher education to effectively share complex information about the science. Additionally, research has shown that news references, scientific institutions, risk perceptions, government policy, weather experiences, natural disasters, previous beliefs, and other personal experiences may also affect consumers' interpretation of climate terminology (Hmielowski et al., 2014; Kim et al., 2021; Sloggy et al., 2021; Wonnerberger et al., 2020; as cited in Southwell & Schneider, 2024). Thus, communicating climate information is complicated and mired in individual beliefs.

The Paris Climate Agreement

In 2015, United States President Barack Obama and other world leaders from nearly 200 countries joined The Paris Climate Agreement, a global action plan to fight against climate change (Hu & Denchak, 2025). Iran, Libya, and Yemen are the only countries that have not yet formally committed to the agreement (Hu & Denchak, 2025). In September 2016, the U.S. formally entered the agreement (Hu & Denchak, 2025). Before the first withdrawal, the U.S. pledged to reduce greenhouse gas emissions to 26%-28% below 2005 levels in 2025 (Congressional Research Service, 2021). In January 2017, President Donald Trump was elected and withdrew the U.S. from the agreement officially on November 4th, 2020 (Hu & Denchak, 2025). President Trump framed climate change as a hoax idea that would lower the U.S. economy and empower other countries (Huber, 2020; Selby 2019; as cited in Sanders et al., 2022). However, in January 2021, President Joe Biden was elected, and as a day-one executive order, the U.S. rejoined the agreement, this symbolized the administration's concern about the effects of climate change (Choi, 2021). The Biden administration viewed climate change as an issue regarding national security (Choi, 2021).

President Donald Trump was re-elected in January 2025, and as a day-one executive order, he withdrew the U.S. from the agreement (Hu & Denchak, 2025). President Trump expressed that he believed the agreement was one-sided and would not benefit the U.S. industries (Igini, 2025).

Climate-Smart Agriculture

While climate change affects everyone, the negative impact is keenly felt by farmers, ranchers, private forest landowners, and their surrounding communities (USDA, 2023). Climate Smart agriculture empowers farmers, ranchers, and forest landowners “by reducing or removing greenhouse gas emissions (mitigation) and adapting and building resilience (adaptation) while sustainably increasing agricultural productivity and incomes” (USDA, 2023, p. 1). With this in mind, some ways climate smart agriculture is reducing or removing greenhouse gas emissions and mitigating climate change is by enhancing soil health, improving nitrogen management, refining livestock waste management systems, upgrading grazing land management, strengthening agroforestry, forestry, and upland wildlife habitat, restoring disturbed lands, increasing energy, combustion, and electricity efficiency, and precisely managing water on rice fields (USDA, 2023). Ultimately climate smart agriculture is building resilience and adapting to climate change (USDA, 2023).

With financial assistance from the Inflation Reduction Act implemented by the Biden-Harris Administration, the U.S. Department of Agriculture invested \$3.1 billion in “Partnerships for Climate-Smart Commodities” (USDA, 2024). This is the largest climate-change investment in history, the investment will fund 141 projects under “Partnerships for Climate-Smart Commodities” (USDA, 2024). According to the United States Secretary of Agriculture, Tom Vilsack a key goal of the “Partnerships for Climate-Smart Commodities” is to provide small and

underserved producers opportunities by expanding the markets for climate smart commodities (USDA, 2024). Vilsack explains, “Small and underserved producers are facing the impacts of climate change head-on, with limited resources, and have the most to gain from leveraging the growing market demand for agricultural goods produced in a sustainable, climate-smart way” (USDA, 2024, para. 2).

Climate smart practices involve the use of innovative technologies and techniques, such as slow-release fertilizer or the introduction of a hardier breed of livestock, or they comprise long-standing practices such as terraced farming or integration of woody plants with annual crops (Amadu et al., 2020). These practices are intended to advance the threefold objectives of climate-smart agriculture: increasing agricultural productivity, mitigating climate change, and enhancing resilience (USDA, 2024). Climate-smart agriculture can transform the way resources are used to better the future (USDA, 2024).

Trust in Agriculture

When making decisions about what food to buy, consumers are burdened with an array of factors to consider (Robinson et al., 2020a). Labeling, marketing, news reports, and personal conversations are some examples of these factors (Kent et al., 2019; Leal et al., 2017, as stated in Robinson et al., 2020). However, research supports that trust is a key factor in fostering a collaboration system for the agri-food supply chains (Dania et al., 2018). Despite labels and marketing, most consumers do not possess the knowledge to understand how their food is grown and processed (Leal et al., 2017, as stated in Robinson et al., 2020). This is not surprising considering that less than 2% of the U.S. population is involved in agriculture (American Farm Bureau, n.d.). When consumers trust in agriculture increases there is an increase in sales of food grown using conventional agricultural practices (Robinson et al., 2020). When consumers trust in

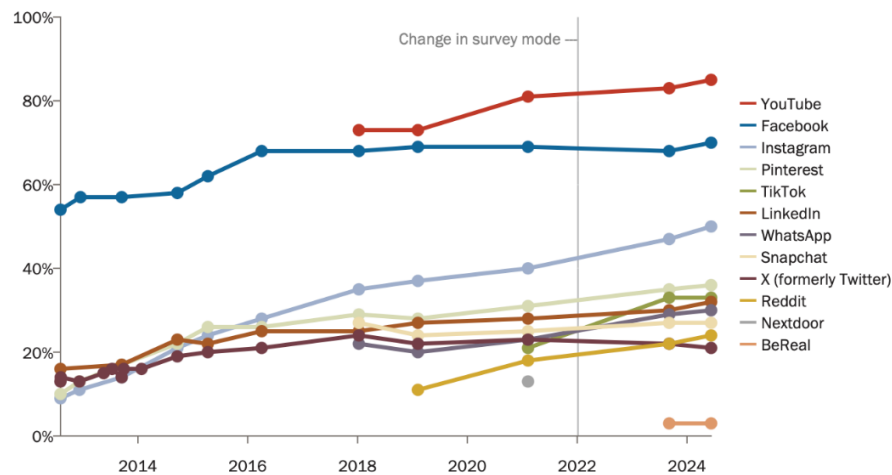
agriculture it creates a relationship that influences their attitudes and acceptance in a crisis (Kim & Benbasat, 2003; as cited in Robinson et al., 2020).

Social Media

When it comes to consumers' trust in agriculture, social media plays a key role. It is no secret that social media is widely used, according to the Pew Research Center (2021) 72% of U.S. adults use social media (see Figure 2). The most popular platforms are Facebook, which had 2.989 billion monthly active users in the first quarter of 2023, and YouTube, with 2.514 billion (Statista; as cited in Kumar & Kumar, 2025). Social media has the potential to influence more than half of the U.S. adult population. However, social media has been found to decrease consumers' trust in agriculture (Robinson et al., 2020) and even create fear regarding agriculture production (Roberts & David, 2020).

Which social media platforms are most popular

% of U.S. adults who say they ever use ...



Note: The vertical line indicates a change in mode. Polls from 2012-2021 were conducted via phone. In 2023, the poll was conducted via web and mail. In 2024, the poll was conducted via web, mail and phone. For more on the mode shift in 2023, [read our Q&A](#). Refer to the topline for more information on how question wording varied over the years. Pre-2018 data is not available for YouTube, Snapchat or WhatsApp; pre-2019 data is not available for Reddit; pre-2021 data is not available for TikTok; pre-2023 data is not available for BeReal. Respondents who did not give an answer are not shown. Source: Surveys of U.S. adults conducted 2012-2024.

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Figure 2. Which Social Media Platforms are Most Popular by Pew Research Center (2021)

Echo Chambers and Algorithm

Social media groups users together based on similar characteristics such as political leaning, religious beliefs, and hobbies, creating what is known as “echo chambers”, making groups less diverse (Cinelli et al., 2021). Echo chambers ultimately result in users receiving less exposure to points of view different from their own, (Elmore et al., 2023) making it more difficult for the communication sender to reach the user and change their mind. Social media algorithms have also changed the way users receive information; the algorithm displays feed based on the user’s interests, reactivity, and relationships (Leaver et al., 2020). An algorithm is based on a user’s engagement with previous topics; therefore, it is not likely to display new topics that the user has never viewed before (Elmore et al., 2023). Therefore, users are not likely to gain new interest or views from social media; what they often see on their feed is a reflection of what they already believe or enjoy.

Statement of the Problem

With the development of new climate terms, there is a need to determine which term is most liked or preferred among different audiences. Because climate is such a hazardous issue, knowing which term is most preferred can help agriculturists best connect with the public about the issue (Praveen & Sharma, 2019). With large issues facing the agriculture industry such as climate change, it is more important than ever to gain consumers’ trust. Because of the large usage of social media among U.S. adults, there is a need to determine how agriculturalists can utilize this outlet to gain consumers’ trust (Pew Research Center, 2021).

CHAPTER 2

CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

Audience Segmentation

An approach to identifying the most effective terms to use when communicating about climate change involves implementing audience segmentation (Grunig, 1989; Slater, 1996; Byrd, 2023). Audience segmentation recognizes the value of different needs or preferences for unique groups of individuals (Grunig, 1989; Slater, 1996; Byrd, 2023). By identifying key individual factors, audience segmentation allows communicators to identify how to most effectively engage with a specific audience, based on their unique needs, wants, or interests (Grunig, 1989; Slater, 1996; Byrd, 2023).

Global Warming's Six Americas is an example of how researchers used audience segmentation to group consumers based on their perceptions and responses to global warming (Chryst et al., 2018). Participants from nearly 200 countries and territories across the globe were segmented into the following regions: Asia and the Pacific, Europe, North America, South America, Southwest Asia and North Africa, and Sub-Saharan Africa (Verner et al., 2023). Participants answered a four-question survey that segmented the participants into one of the following segments: Alarmed, Concerned, Cautious, Disengaged, Doubtful, and Dismissive (Chryst et al., 2018). The segments describe Americans' attitudes and concern towards climate change with "Alarmed" being the most concerned and "Dismissive" having no concern. The participants in the "Alarmed" segment believe global warming is occurring now, caused by human actions, is an intense threat, and fully support climate policies (Chryst et al., 2018).

However, most of the “Alarmed” do not know what they or others can do to solve global warming (Chryst et al., 2018). The “Concerned” segment has the same outlook as the “Alarmed” except they do not see climate change as an urgent issue needing immediate action rather, they see it as an issue occurring in the future, making it a lower priority (Chryst et al., 2018). The “Cautious” segment still has questions regarding global warming, they are unsure what they believe (Chryst et al., 2018). The “Disengaged” segment hears little or nothing about global warming in the media and knows little about it (Chryst et al., 2018). The “Doubtful” segment does not think global warming is a serious problem or believe that it is a natural cycle, and they do not consider it a serious risk (Chryst et al., 2018). The “Dismissive” segment does not believe global warming is happening, or a threat, and some even endorse conspiracy theories (Chryst et al., 2018).

After all the data was collected, researchers examined the participants’ responses based on region (Verner et al., 2023). Researchers were able to conclude the regions that are most and least concerned about climate change and then tailor information specific to each group’s needs (Verner et al., 2023). With this information, communicators can tailor what type of information and messaging they share with each segment to best resonate with their interests, concerns, and engagement level.

Media Dependency Theory

Media Dependency Theory is “a relationship in which the capacity of individuals to attain their goals is contingent upon the information resources of the media system—those resources being the capacities to (a) create and gather, (b) process, and (c) disseminate information” (Ball-Rokeach & DeFleur, 1976, p. 487). First, to understand the concept of Media Dependency Theory it is important to understand how the theorist defined media and

dependency nearly 50 years ago. At the time media was simply mass communication that involved a complex relationship between large sets of interacting variables that were only partially designated as “media,” “audiences,” or “society” (Ball-Rokeach & DeFleur, 1976).

Dependency was defined as a “relationship in which the satisfaction of needs or the attainment of goals by one party is contingent upon the resources of another party” (Ball-Rokeach & DeFleur, 1976). Therefore, the combination of the two terms is the reliance on mass communication platforms to reach society, which is still a universal phenomenon for more than half of people in 2024 (Kumar & Kumar, 2025; Vaezpour et al., 2024). An individual’s goals as well as increase in structural instability and conflicts, drive their dependency on media (Ball-Rokeach & DeFleur, 1976). The degree of media dependence is subject to the society being studied and their reliance on media (Kumar & Kumar, 2025). In this study, the motivation and drive for dependency on media being tested is an individual’s trust in agriculture. Media dependency theory connects social environments, media systems, and interpersonal networks.

Purpose and Research Objectives

The purpose of this study was to identify consumers’ preferences regarding climate terms and to explore if a relationship exists between consumers’ social media usage and their trust in agriculture.

Based on the findings, researchers will gain insights into consumer preferences for identifying food produced using climate-smart practices, with a focus on demographic factors. These findings will be paramount to creating robust educational and marketing initiatives aimed at increasing consumer awareness about climate-smart production within agriculture. The data will also be used to provide recommendations on how this project could be scaled internationally.

Additionally, based on the data, researchers will be able to determine if time spent on social media influences consumers' trust in agriculture and which social media platform has the greatest effect on consumers' trust in agriculture. This information will be invaluable for marketers when deciding if they should utilize social media and if so, which platforms to prioritize.

Therefore, the following research objectives guided this study for chapters three and four:

Chapter Three: Climate Term Smart: Message Testing Consumers' Preferred Climate

Terminology

The research objectives guiding this study were:

1. Identify consumers' preferences for terms used to communicate about climate.
2. Examine if demographic variables impacted consumers' most preferred climate term.

Chapter Four: Farm to Feed: Understanding Social Media's Impact on Trust in Agriculture

1. Identify if a relationship exists between consumers' trust in agriculture and the amount of time they spend using social media.
2. Examine if a relationship exists between consumers' trust in agriculture and the number of social media platforms they use.
3. Examine if demographic variables impacted consumers' trust in agriculture.

Design Overview

Data for this study was collected from a non-probability, opt-in, online survey with Qualtrics. The survey was distributed to approximately 2,000 participants in metropolitan areas throughout 14 states in the U.S. Participants ranged from 90 to 16 years old. The data was quantitative and was analyzed through Statistical Packing for Social Science (SPSS) software. The survey questions were a mix of Likert scale questions, multiple choice, and fill-in-the-blank.

Participants were asked eight questions regarding their preference on the following climate terms: “Climate Smart,” “Climate Resilient,” “Environment Smart,” “Environment Resilient,” “Regenerative Agriculture,” “Regenerative Farming,” “Sustainable Agriculture,” and “Sustainable Farming.” Additionally, participants were asked demographic questions regarding their race, gender, location, and age. Next, they answered eight Likert-type scale questions regarding their trust in agriculture. Participants were also asked what social media platforms they use and indicated how often they use each platform on a Likert-type scale.

Definition of Terms

Climate Change- Involves significant changes in average conditions such as temperature, precipitation, wind patterns, and other aspects of climate that occur over years, decades, centuries, or longer (EPA, n.d.). Climate change involves longer-term trends, such as shifts toward warmer, wetter, or drier conditions (EPA, n.d.). These trends can be caused by natural variability in climate over time, as well as human activities that add greenhouse gases to the atmosphere like burning fossil fuels for energy (EPA, n.d.).

Climate Smart- Include activities that store carbon and improve resilience and soil health, such as reduced and no-till, cover crops, and prescribed grazing; reduce GHG emissions, including methane and nitrous oxide, using practices such as ruminant feed management, manure management, and fertilizer management; improve on-farm energy efficiency, such as improved irrigation efficiency, reduced fuel use, and energy conservation; and improve forest management to increase forest resilience and health (USDA, 2021).

Climate Resilient- The ability to prepare for, recover from, and adapt to the effects of climate change (Center for Climate and Energy Solutions, n.d.).

Regenerative Agriculture- “Regenerative agriculture describes holistic farming systems that, among other benefits, improve water and air quality, enhance ecosystem biodiversity, produce nutrient-dense food, and store carbon to help mitigate the effects of climate change,” (Food and Agriculture Organization of the United Nations, 2022, “Regenerative Agriculture” section).

Sustainable Agriculture- “An integrated system of plant and animal production practices having a site-specific application that will over the long-term: satisfy human food and fiber needs, enhance environmental quality and the natural resource base upon which the agriculture economy depends, make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls, sustain the economic viability of farm operations, and enhance the quality of life for farmers and society as a whole” (USDA, n.d., para. 1).

Social Media Platform- “A third party-provided platform that allows for publishing, communication, engagement, and collaboration among individuals and entities” (U.S. Department of State, n.d., para. 15).

Trust- “Reliance on the character, ability, strength, or truth of someone or something” (Merriam-Webster, n.d., para.1).

Preference- “The power or opportunity of choosing” (Merriam-Webster, n.d. para. 1).

Communicating- “to convey knowledge of or information about; make known” (Merriam-Webster, n.d., para. 1).

Limitations

A limitation of this study was that data was being collected during the end of the 2024 presidential election campaign cycle. Climate was a debated topic in many of the election

campaigns, and respondents could have prior knowledge and conclusions about the terms based on political affiliations.

Assumptions

An assumption made is that respondents were familiar with the climate terms and their meanings.

An assumption made was that respondents would be social media users, however, some were not.

CHAPTER 3
COMMUNICATING CLIMATE: MESSAGE TESTING CONSUMERS' PREFERRED
CLIMATE TERMINOLOGY ¹

¹Beauchamp R., Holt J., Byrd A. R., Lu P. To be submitted to *Journal of International Agricultural and Extension Education*.

Abstract

As the effects of climate change intensify, which can lead to more natural disasters such as increasing sea levels, reduced soil quality, resource scarcity, and other issues, some consumers have become more concerned about the issue. As a result, new climate terminology has been developed, such as: “Climate Smart,” “Climate Resilient,” “Environment Smart,” “Environment Resilient,” “Regenerative Agriculture,” “Regenerative Farming,” “Sustainable Agriculture,” and “Sustainable Farming,” however, little is known about which term most effectively resonates with the public. The study used quantitative data from a non-probability opt-in survey that was distributed to 1,996 respondents across 14 states in the U.S. An approach to overcoming this challenge is to identify the most effective terms to use when communicating about climate change, which involves implementing audience segmentation. Results showed that "Sustainable Farming" and "Sustainable Agriculture" were the most liked terms, and "Environment Resilient" and "Climate Resilient" were the least liked. Significant differences between respondents' most liked terms were found based on location, race, and generation.

Introduction

As the effects of climate change intensify, which can lead to more natural disasters such as increasing sea levels, reduced soil quality, resource scarcity, and other issues, some consumers have become more concerned about the issue (Zobeidi et al., 2023; Pew Research Center, 2024). This concern has led to the development of new legislation, research, organizations, and reporting from various sources (Pew Research Center, 2024). As a result, new climate terminology has been developed such as: “Climate Smart”, “Climate Resilient”, “Environment Smart”, “Environment Resilient”, “Regenerative Agriculture”, “Regenerative Farming”, “Sustainable Agriculture”, and “Sustainable Farming”; however, little is known about which term most effectively resonates with the public (Dabalén, et al., 2024). This gap in literature needs to be closed so that mass media does not diffuse the climate terms as they have climate science in the past (Hanson-Easey et al., 2015; as cited in Sanders et al., 2022).

When the 46th President of the United States took office, he set a goal of reducing greenhouse gas emissions by 50% (Hyeonjung, 2021). To achieve this goal, the U.S. administration had a focus on mitigating climate change in 2022, the Biden administration made the largest investment in history of \$3.1 billion (USDA, 2022). The investment catapulted the “The U.S. Department of Agriculture Partnerships for Climate-Smart Commodities” program in 2024 (USDA, 2024). Climate smart practices intend to reduce greenhouse gas emissions, build soil health, and increase productivity (USDA, 2024). Examples of climate-smart practices are cover crops, no-till crops, enhanced efficiency fertilizers, reforestation, and sustainable forest management (USDA, 2024). Some examples of benefits of climate-smart practices are building soil health, reducing greenhouse gas emissions, enhancing productivity, and sequestering carbon

(USDA, 2024). How agricultural communicators segment climate-smart agriculture will be crucial to its success.

Conceptual Framework and Literature Review

This study was guided by the conceptual framework of audience segmentation, which divides or groups audiences often based on similar characteristics or factors (Slater, 1996). To segment audiences, the researcher must know the core of their audience (Slater, 1996). When using audience segmentation messages can be tailored to best fit their target audience (Warner et al., 2017).

Commonly, segments are formed based on demographics such as gender, age, and race, however new techniques are being explored (Orton et al., 2024). In a study, researchers used audience segmentation to identify audience segments based on respondents' climate change concern, political ideology, trust in science, and perceived environmental impacts of the beef industry (Orton et al., 2024). The second objective of the study described the identified audience segments' demographic characteristics (Orton et al., 2024). The third objective describes the identified audience segments' beef consumption frequency (Orton et al., 2024). The fourth and final objective described the identified audience segments' preferred communication sources (Orton et al., 2024). The study identifies and describes the specific target audiences that are discovered (Orton et al., 2024). While this study uses a more traditional approach of audience segmentation.

Audience segmentation has helped answer many questions in the realm of agricultural communications. For example, in a study researchers used audience segmentation to determine if rural, urban, and suburban audiences differ in their willingness to pay for sustainable farming practices that protect water resources (Gibson et al., 2020). The study found consumers are

willing to pay more for more sustainable farming practices, and statistically significant differences were found between urban and rural resident's willingness (Gibson et al., 2020). However, rural residents were the least willing to pay for sustainable farming practices that protect water resources and urban residents were the most willing (Gibson et al., 2020). Therefore, when communicating to residents with differing rurality messages and delivering channels need to be tailored to best reach the audience (Warner et al., 2017).

Purpose and Objectives

The purpose of this study was to identify consumers' preferences regarding climate terms and examine if demographics impacted their preferred term. Therefore, the following research objectives guided this study:

RO1: Identify consumers' preferences for terms used to communicate about climate.

RO2: Examine if demographic variables impacted consumers' most preferred climate-term.

Methodology

Data for this quantitative study was collected from a non-probability opt-in survey with Qualtrics. Previous research supports that when measuring and identifying consumer perceptions within public opinion research non-probability sampling is appropriate (Lamm & Lamm 2019; Corry et al., 2023). The survey was soft launched with a pilot test in October of 2024 to assess its reliability. The test showed reliability with a Cronbach Alpha score above a 0.8 (Dziuban & Shirkey, 1974). Before respondents could complete the survey, they had to agree to the IRB consent statement by the University of Georgia. The survey was crafted by a panel of experts in the agricultural communication field as part of a larger study in junction with Climate Smart Agriculture.

Population and Sample

The survey was distributed to 1,996 respondents (see Table 1) in targeted metropolitan areas throughout the United States. Respondents were from 14 different states, including Arizona, California, Colorado, Florida, Georgia, Illinois, Indiana, Missouri, New Jersey, New York, Oklahoma, Pennsylvania, Texas, and Washington. Climate is a politically charged topic; therefore, the researchers targeted these 14 states based on their political ideology (Mayfield-Smith et al., 2021). In this study, Arizona, Georgia, and Pennsylvania are observed because they are considered “swing states” or “battleground states,” where either party, Democrat or Republican, received less than a 5%-win margin in the 2020 presidential election (Politico, 2024; Aisenpreis et al., 2023). According to the National Archives website, California, Colorado, Illinois, New Jersey, Washington, and New York voted Democrat in the 2020 presidential election (National Archives, 2020). This could mean respondents in these states are more concerned about the climate. Florida, Indiana, Missouri, Oklahoma, and Texas voted Republican in the 2020 presidential election (National Archives, 2020); this could mean respondents in these states are less concerned about climate.

Five generations were represented by the respondents: The Silent Generation (1928-1945), The Baby Boom Generation (1946-1964), Generation X (1965-1980), Generation Y (1981-1996), Generation Z (1997-2010). Multiple different races, and males, females and non-binary people were represented (see Table 1).

Table 1
Demographics of Respondents (N = 1,996)

	N	%
Gender		
Male	897	42.1
Female	1086	50.9
Non-binary	11	0.5
State		
California	353	16.5
Texas	328	15.4
Florida	124	5.8
Georgia	124	5.8
New York	122	5.7
Illinois	126	5.9
Washington	114	5.3
Arizona	162	7.6
Missouri	86	4.0
Oklahoma	71	3.3
New Jersey	36	1.7
Pennsylvania	139	6.5
Indiana	97	4.5
Colorado	114	5.3
Race *		
White or Caucasian	1553	72.8
Black or African American	284	13.3
American Indian/Native	56	2.6
American or Alaska Native		
Asian	96	4.5
Native Hawaiian or Other	11	0.5
Pacific Islander		
Other	71	3.3
Prefer not to say	4	0.2
Generation		
The Silent Generation	74	3.5
Baby Boomer Generation	614	28.8
Generation X	467	21.9
Generation Y/ Millennial	586	27.5
Generation Z	254	11.9
Ethnicity		
Non-Hispanic	1626	76.2
Hispanic	368	17.3

Note. * $N > 1,996$ for race because respondents could select multiple races.

Instrument Development

To begin the search to identify key climate terms, researchers conducted a keyword search. They identified words that received media attention. Media attention is “measured by the volume of stories and space that is given to an issue in the media” (Kioussis, 2004; as cited in Qu & Irani, 2018, p. 4). To uncover the attention given to climate terms researchers searched multiple different sources.

They first consulted CGIAR Climate-Smart Agriculture Key Terms website (CGIAR, n.d.). On the website is a “Key Terms” page with words regarding climate-smart agriculture and their definitions (CGIAR, n.d.). This resource provided an initial set of commonly used terms. Following this, researchers conducted a Google Scholar search to assess how frequently these terms appeared in academic literature. To refine their search and maximize relevant results, they used Boolean operators to combine keywords. Boolean operators help researchers get more focused or simple results (Schwab et al., 2020). The search queries included: "responsible farming" AND "climate-smart agriculture", "conservation agriculture" AND "climate-smart agriculture", "environmental services" AND "climate-smart agriculture", "resilience" AND "climate-smart agriculture", "sustainable agricultural development" AND "climate-smart agriculture", and sustainable agricultural practices.

Using “AND” ensured that both terms appeared in search results, while individual searches for broader concepts (e.g., sustainable agricultural practices) helped capture the range of climate-smart agriculture terminology.

From this search, five primary themes emerged: responsibility, resilience, regenerative practices, environmental considerations, and sustainability. The researchers then collaborated to refine and develop a set of key terms to be tested in the research survey. The final list of terms

included: “Climate Smart”, “Climate Resilient”, “Environment Smart”, “Environment Resilient”, “Regenerative Agriculture”, “Regenerative Farming”, “Sustainable Agriculture”, “Sustainable Farming”.

Respondents were asked to indicate their preferences on a five-point Likert-type scale for the following eight climate terms: “Climate Smart”, “Climate Resilient”, “Environment Smart”, “Environment Resilient”, “Regenerative Agriculture”, “Regenerative Farming”, “Sustainable Agriculture”, and “Sustainable Farming”. Participants were asked to indicate their level of likeness using a five-point Likert-type scale (1 = Strongly Dislike; 2 = Dislike; 3 = Neither Like nor Dislike; 4 = Like; 5 = Strongly Like). The real limits of the scale were 1–1.49 = Strongly Dislike, 1.50–2.49 = Dislike, 2.50–3.49 = Neither Like nor Dislike, 3.50–4.49 = Like, 4.50–5 = Strongly Like (Tidwell & Lamm, 2020).

To determine respondents’ most preferred climate terms, participants were asked to rank the eight terms from most preferred (1) to least preferred (8). This data was analyzed through a descriptive analysis on SPSS to find the mean and standard deviation. The lower the mean the more the term was preferred and the higher the mean the less preferred the term was.

Descriptive Statics

A descriptive analysis was run on Statistical Package for Social Sciences (SPSS Version 25) to calculate the mean and standard deviation of the participants’ responses to the Likert-type scale questions. The higher the mean, the more preferred that term was, and the lower the mean, the less preferred the term was.

One-Way ANOVA

Five demographic questions assessed respondents' gender, location, race, generation, and ethnicity. A one-way ANOVA was conducted to determine whether respondents' demographic characteristics influenced their most preferred term. ANOVA is appropriate for comparing means across three or more independent groups to identify significant differences in responses.

Independent Samples t-Test

The demographic question regarding ethnicity was a binary variable (yes/no). Because this comparison involved only two groups, an independent samples t-test was used to assess whether there was a significant difference in the most preferred term between these two groups. The t-test is appropriate as it compares the means of two independent groups to determine whether the differences are statistically significant. The dependent variable was climate term preference, which was measured on the Likert-type scale, and the independent variable was the five demographic variables.

Post Hoc Analysis

To gain more insight into which segments prefer which climate term the most a post-hoc test was conducted. Prior to analyzing the data, the assumption of homogeneity of variance as recommended by Field (2018) was tested. Levene's test was used to assess the assumption of homogeneity of variance (Field, 2018). If Levene's test was significant ($p < 0.05$), indicating unequal variance in the sample, researchers used Games-Howell, if Levene's test was not significant, indicating equal variance in the sample, researchers used Tukey test (Kirk, 1996).

Results

RO1: The research objectives guiding this study were: Identify consumers' preferences for terms used to communicate about climate.

To address research objective one, researchers identified the climate terms respondents preferred to use when communicating about climate. It was found that respondents liked the climate term “Sustainable Farming” ($M = 3.96$, $SD = 0.94$; see Table 2), “Sustainable Agriculture” ($M = 3.90$, $SD = 0.94$), “Environment Smart” ($M = 3.64$, $SD = 1.02$), “Climate Smart” ($M = 3.55$, $SD = 1.01$), and “Regenerative Farming” ($M = 3.54$, $SD = 1.06$). Furthermore, respondents indicated that they neither liked nor disliked the climate terms “Regenerative Agriculture” ($M = 3.46$, $SD = 1.09$), “Climate Resilient” ($M = 3.39$, $SD = 1.04$), and “Environment Resilient” ($M = 3.37$, $SD = 1.04$).

Table 2
Respondents' Climate Term Preference (N = 1,996)

Term	<i>M</i>	<i>SD</i>
Sustainable Farming	3.96	0.94
Sustainable Agriculture	3.90	0.94
Environment Smart	3.64	1.02
Climate Smart	3.55	1.01
Regenerative Farming	3.54	1.06
Regenerative Agriculture	3.46	1.09
Climate Resilient	3.39	1.04
Environment Resilient	3.37	1.04

Note. 1 = Strongly Dislike, 2 = Dislike, 3 = Neither Like nor Dislike, 4 = Like, 5 = Strongly Like.

When respondents were asked to rank the eight climate terms from most preferred to least preferred, the results slightly changed from the Likert-type scale. The lower the mean score the more that term was preferred. Therefore, the most preferred terms were in order were:

“Sustainable Agriculture” ($M = 3.75$, $SD = 1.94$; see Table 3), “Regenerative Agriculture” ($M =$

3.81, $SD = 2.2$), “Sustainable Farming” ($M = 3.98$, $SD = 2.06$), “Climate Smart” ($M = 4.13$, $SD = 2.29$), “Regenerative Farming” ($M = 4.28$, $SD = 2.23$), “Environment Smart” ($M = 4.86$, $SD = 2.36$), “Climate Resilient” ($M = 5.15$, $SD = 2.07$) “Environment Resilient” ($M = 6.04$, $SD = 2.24$).

Table 3

Respondents’ Rankings of Climate Term Preferences (N = 1,996)

Term	<i>M</i>	<i>SD</i>
Sustainable Agriculture	3.75	1.94
Regenerative Agriculture	3.81	2.20
Sustainable Farming	3.98	2.06
Climate Smart	4.13	2.29
Regenerative Farming	4.28	2.13
Environment Smart	4.86	2.36
Climate Resilient	5.15	2.07
Environment Resilient	6.04	2.24

Note. 1 = Most Preferred, 8 = Least Preferred

RO2: Examine if demographic variables impacted consumers’ most preferred climate-term.

To address research objective two, researchers examined if demographic variables impacted respondents’ preferences regarding climate terms. To determine this, a series of one-way ANOVAs were conducted, using the Likert-type scale for respondents’ climate term preference. The demographic variables examined by the researchers were gender, location, race, generation, ethnicity, and political ideology.

Gender

A series of one-way ANOVAs were conducted to examine the impact of gender on respondents’ preferences for different climate-related terminology. There was not a significant difference in gender and respondents’ most preferred climate term (see Table 4). Therefore, gender does not influence consumers’ climate term preferences.

Table 4
ANOVA Summary Table for Gender Climate Term Preferences ($N = 1,996$)

Climate Term	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Climate Smart	5.78	2	2.89	2.84	.05*
Climate Resilient	5.27	2	2.63	2.43	.08
Environment Smart	4.50	2	2.25	2.14	.11
Environment Resilient	3.36	2	1.68	1.55	.21
Regenerative Agriculture	1.27	2	0.63	0.53	.58
Regenerative Farming	5.15	2	2.57	2.27	.1
Sustainable Agriculture	1.02	2	0.51	0.57	.56
Sustainable Farming	0.26	2	0.13	0.14	.86

Note * = $p < .05$ level, ** = $p < .01$ level.

Location

Significant differences were observed across the 14 states on climate term preferences (see Table 5). “Climate Smart” $F(13, 1982) = 2.455, p = .003$, “Climate Resilient” $F(13, 1982) = 4.116, p < .001$, “Environment Smart” $F(13, 1982) = 2.685, p < .001$, “Environment Resilient” $F(13, 1982) = 2.886, p < .001$, “Regenerative Agriculture” $F(13, 1982) = 3.489, p < .001$, “Regenerative Farming” $F(13, 1982) = 2.911, p < .001$, “Sustainable Agriculture” $F(13, 1982) = 3.231, p < .001$, and “Sustainable Farming” $F(13, 1982) = 2.245, p = .006$. Location does impact respondents' climate term preferences.

Table 5
ANOVA Summary Table for Location Climate Term Preferences ($N = 1,996$)

Climate Term	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Climate Smart	32.22	13	2.47	2.45	.00**
Climate Resilient	56.82	13	4.37	4.11	.00**
Environment Smart	36.25	13	2.78	2.68	.00**
Environment Resilient	40.11	13	3.08	2.88	.00**
Regenerative Agriculture	53.09	13	4.08	3.48	.00**
Regenerative Farming	42.30	13	3.25	2.91	.00**
Sustainable Agriculture	37.17	13	2.85	3.23	.00**
Sustainable Farming	25.98	13	1.99	2.24	.00**

Note * = $p < .05$ level, ** = $p < .01$ level.

Race

Each of the 8 climate terms was tested individually for significant differences between groups, and the results indicated that race variables significantly influenced preferences for some climate terms (see Table 6). A significant effect on race was found for the following terms:

“Climate Smart” $F(6,1989) = 4.92, p < .001$, “Climate Resilient” $F(6,1989) = 7.75, p < .001$, “Environment Smart” $F(6, 1989) = 7.989, p < .001$, “Environment Resilient” $F(6, 1989) = 9.040, p < .001$, “Regenerative Agriculture” $(6, 1989) = 2.820, p = .010$, “Regenerative Farming” $F(6, 1989) = 3.193, p = .004$, and “Sustainable Farming” $F(6, 1989) = 2.581, p = .017$. The term “Sustainable Agriculture” was found to not have a significant effect, suggesting that race did not influence this preference.

Table 6
ANOVA Summary Table for Race Impact on Climate Term Preferences (N = 1,996)

Climate Term	Sum of Squares	df	Mean Square	F	p
Climate Smart	29.71	6	4.95	4.92	.00**
Climate Resilient	49.35	6	8.22	7.75	.00*
Environment Smart	49.29	6	8.21	7.99	.00**
Environment Resilient	57.31	6	9.55	9.04	.00**
Regenerative Agriculture	20.01	6	3.33	2.82	.01*
Regenerative Farming	21.53	6	3.59	3.19	.004**
Sustainable Agriculture	7.85	6	1.30	1.46	.19
Sustainable Farming	13.83	6	2.30	2.58	.017*

Note * = $p < .05$ level, ** = $p < .01$ level.

Generation

There were significant differences found among respondents' term preferences based on their generation for all the terms (see Table 7). “Climate Smart” $F(4, 1990) = 19.251, p < .001$, “Climate Resilient” $F(4, 1990) = 40.662, p < .001$, “Environment Smart” $F(4, 1990) = 16.730, p < .001$, “Environment Resilient”, $F(4, 1990) = 38.017, p < .001$, “Regenerative Agriculture” $F(4, 1990) = 36.586, p < .001$, “Regenerative Farming” $F(4, 1990) = 32.003, p < .001$, “Sustainable

Agriculture” $F(4, 1990) = 10.244, p < .001$, and “Sustainable Farming” $F(4, 1990) = 10.570, p < .001$.

Table 7
ANOVA Summary Table for Generation Climate Term Preferences (N = 1,996)

Climate Term	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Climate Smart	75.66	4	18.19	19.25	.00**
Climate Resilient	163.29	4	40.82	40.66	.00**
Environment Smart	68.09	4	17.02	16.73	.00**
Environment Resilient	153.27	4	38.31	38.01	.00**
Regenerative Agriculture	162.53	4	40.63	36.58	.00**
Regenerative Farming	136.45	4	34.11	32.00	.00**
Sustainable Agriculture	36.11	4	9.03	10.24	.00**
Sustainable Farming	37.23	4	9.31	10.57	.00**

Note. * = $p < .05$ level, ** = $p < .01$ level.

Ethnicity

Out of the eight climate terms ethnicity significantly impacted respondents’ preference to six climate terms: “Climate Smart” $F(1, 1992) = 13.165, p < .001$, “Climate Resilient” $F(1, 1992) = 25.711, p < .001$, “Environment Smart” $F(1, 1992) = 12.931, p < .001$, “Environment Resilient” $F(1, 1992) = 22.307, p < .001$, “Regenerative Agriculture” $F(1, 1992) = 5.049, p = .025$, and “Regenerative Farming” $F(1, 1992) = 4.350, p = .037$. “Sustainable Agriculture” (p -value = 0.056) and “Sustainable Farming” (p -value = 0.210) were not impacted by ethnicity (see Table 8).

Table 8
T-Test Summary Table for Ethnicity Climate Term Preferences (N = 1,996)

Climate Term	Sum of Squares	<i>df</i>	Mean Square	<i>t</i>	<i>p</i>
Climate Smart	13.33	1	13.33	3.63	.00**
Climate Resilient	27.51	1	27.51	5.07	.00**
Environment Smart	13.48	1	13.48	3.60	.00**
Environment Resilient	23.90	1	23.90	4.72	.00**
Regenerative Agriculture	5.99	1	5.99	2.25	.02**
Regenerative Farming	4.91	1	4.91	2.09	.03**
Sustainable Agriculture	3.28	1	3.28	1.91	.06
Sustainable Farming	1.41	1	1.41	1.25	.21

Note. * = $p < .05$ level, ** = $p < .01$ level.

Political Ideology

There was a significant relationship between political ideology and all eight climate terms (see Table 9): "Climate Smart," $F(4, 1991) = 27.732, p < .001$; "Climate Resilient," $F(4, 1991) = 22.714, p < .001$; "Environment Smart," $F(4, 1991) = 16.814, p < .001$; "Regenerative Agriculture," $F(4, 1991) = 19.747, p < .001$; "Regenerative Farming," $F(4, 1991) = 19.978, p < .001$; "Sustainable Agriculture," $F(4, 1991) = 30.781, p < .001$; and "Sustainable Farming," $F(4, 1991) = 25.806, p < .001$. With p-values less than 0.001 for each term, the results indicate that political ideology does impact respondents' climate term preferences.

Table 9
ANOVA Summary Table for Political Ideology Term Preferences (N = 1,996)

Climate Term	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Climate Smart	107.3	4	26.82	27.73	.00**
Climate Resilient	94.32	4	23.58	22.71	.00**
Environment Smart	68.45	4	17.11	16.81	.00**
Environment Resilient	66.84	4	16.71	15.90	.00**
Regenerative Agriculture	90.55	4	22.63	19.74	.00**
Regenerative Farming	87.12	4	21.78	19.97	.00**
Sustainable Agriculture	104.33	4	26.08	30.78	.00**
Sustainable Farming	88.27	4	22.06	25.80	.00**

Note * = $p < .05$ level, ** = $p < .01$ level.

Post Hoc

Levene's test was conducted across different demographic groups regarding their preferences for the eight climate terms. When Levene's test yielded a significant result ($p < 0.05$), indicating unequal variance in the sample, the Games-Howell test was applied. If Levene's test was not significant, suggesting equal variance, the Tukey test was used (Kirk, 1996). Significant differences were found based on respondents' gender, except for the terms "Sustainable Agriculture" and "Sustainable Farming." The only term that was significant based on location was "Sustainable Agriculture." In the race demographic, all terms were significant except for "Sustainable Farming." In the generation demographic, "Climate Smart," "Environment Smart," "Environment Resilient," "Regenerative Agriculture," and "Regenerative Farming" were not significant, while "Climate Resilient," "Sustainable Agriculture," and "Sustainable Farming" were significant. In the political ideology demographic, all terms were significant.

Conclusions and Discussion

Based on the results of the current study, it can be concluded that the term “Sustainable” is preferred by consumers. In fact, both “Sustainable Farming” and “Sustainable Agriculture” ranked among the top three most preferred climate terms in both analyses.

In contrast, the term “Climate Resilient” was the seventh most preferred term out of eight in both analyses. Similarly, the term “Environment Resilient” was found to be the least preferred. This suggests that the term “Resilient” does not resonate well with consumers.

Furthermore, “Climate Smart” and “Regenerative Farming” were ranked as the fourth and fifth most preferred terms on both the Likert-type scale and the ranking test. These two terms are consistently placed in the middle of consumers’ preferences, indicating that consumers do not have strong preferences for them.

The primary goal of this study was to identify consumers' preferences regarding climate-related terms and to examine whether demographics influence these preferences. Ultimately, the study revealed that terms containing “Sustainable” are the most preferred and that location, race, and generation are demographic variables that impact consumers' climate term preferences.

A recommendation for practitioners is to use the term "sustainable" in food labeling. A "sustainable" label could educate consumers about how their food was produced. For example, a "Sustainably Sourced" label could indicate that the product was created using climate smart practices. Such labeling would provide consumers with insight into agricultural production. The "sustainable" label could also serve as a marketing strategy, as the research shows that

consumers are highly prefer the term, potentially making the labeled products more likely to make a purchase.

CHAPTER FOUR

FARM TO FEED: UNDERSTANDING SOCIAL MEDIA'S IMPACT ON TRUST IN

AGRICULTURE ²

² Beauchamp R., Holt J., Byrd A. R., Lu P. To be submitted to *Journal of Applied Communications*.

Abstract

Social media has strengthened communication in our families, social lives, and businesses in the past few years; however, fear-based agendas are often shared on social media platforms, creating a disconnect between agriculturalists and consumers. Guided by the media dependency theory, this study explored how time spent on social media, the number of platforms used, and demographics influence consumer trust in agriculture. Data was gathered from 1,996 respondents from diverse backgrounds through a non-probability opt-in survey. Results indicated no significant correlation between either the time spent on social media, or the number of platforms used and consumers' trust in agriculture, meaning that consumer perception of agriculture has a stronger correlation to demographic classification than social media type or usage.

Introduction

Social media has strengthened communication in our families, social lives, and businesses in recent years (Vainola, 2024). Because of this, many relationships have improved; in fact, according to a study by, Sponcil & Gitimu (2013) 91.7% of students reported their main reason for using social media is to communicate with family and friends (Aichner et al., 2021). Nearly all companies also utilize social media as a tool to strengthen relationships and increase brand awareness (Hilong, 2023). Social media uses customer involvement to build consumer engagement, thus creating a relationship between the brand and the customer (Bryła et al., 2022). With more than 660 million LinkedIn users, the “vast majority of Fortune 500” companies use social media to recruit new hires (Aichner et al., 2021). Therefore, social media has not only changed the way we socially interact but also the way we professionally interact (Aichner et al., 2021).

While social media can have many communication benefits, fear-based agendas are often shared on social media platforms (Roberts & David, 2020; Settle et al., 2023). This creates misinformation as people are influenced and informed by social media and not science-based sources (Settle et al., 2023; Raj et al., 2021). Research shows that the majority of consumers have no direct engagement with agriculture (The World Bank, 2025). Consumers are driven by their Fear of Missing Out (FoMo) to seek out social media, the greater the individual’s FoMo is, the more intense their drive is to seek out social media (Roberts & David, 2020). Social media creates echo chambers that group users based on sharing similar viewpoints, resulting in users getting less exposure to diverse opinions (Cinelli et al., 2021), making it more challenging to break barriers once distrust is established.

Social media algorithms have also changed the way users engage across platforms (Kainer et al., 2024). An algorithm is controlled by what a user views or interacts with most on a platform; the more the user connects with a topic the more the algorithm will display that topic (Elmore et al., 2023). The effects of fear-based agendas, FoMo, echo chambers, and social media algorithms combined with most consumers not having direct engagement with agriculture makes social media a complex topic in the agriculture industry (Roberts & David, 2020; Settle et al., 2023; Raj et al., 2021; The World Bank, 2025; Cinelli et al., 2021; Elmore et al., 2023). Therefore, trust must be established in agriculture to create a connection between agriculturalists and consumers (Settle et al., 2023; Raj et al., 2021).

A social media influencer, “The Food Babe”, who had accumulated over 250,000 followers on Instagram and Twitter (now known as X), over a million Facebook followers and even wrote a book “The Food Babe Way: Break Free from the Hidden Toxin in your Food and Lose Weight” (Nordstrom & Egan, 2021). “The Food Babe” stopped eating processed, conventionally grown, and genetically modified foods. She shared with her followers that as a result, she had lost weight, her skin cleared up, and she felt “terrific” (Zimmerman, 2020, p. 182). However, “The Food Babe” has taken much ridicule, with many posts directly calling her out from the influencer “SciBabe” (short for Science Babe) for her content not being factual (Zimmerman, 2020). While false information is on the media and does have a following, this is an example of a time where an influencer stood up to the false media.

Social media is already widespread, with 83% of U.S. adults using YouTube, 68% on Facebook, 47% on Instagram, 35% on Pinterest, 33% on TikTok, 30% on LinkedIn, 29% on WhatsApp, 27% on Snapchat, 22% on X (formerly Twitter), 22% on Reddit, and 3% on BeReal (Pew Research Center, 2024). Therefore, it is imperative for agriculturists to take advantage of

their “chance” to bridge the gap between the producer and the consumer now (Morris and James, 2017, as cited in Locke et al., 2023). However, for this working relationship to ever exist between agriculturists and consumers, trust will be a key concept (Houldsworth et al., 2020).

This background led to a study that will identify if the amount of time consumers spend on social media, the number of social media platforms they have, and demographics variables impact their trust in agriculture.

Theoretical Framework and Literature Review

This study is guided by the Theory of Media Dependency, which explains the effects of mass communication on influences and society (Ball-Rokeach & DeFleur, 1976). The theory of media dependency has four main factors: society systems, media system, audiences, and effects (Ball-Rokeach & DeFleur, 1976). Society systems are the population being examined in the particular study (Ball-Rokeach & DeFleur, 1976). Media systems are the outlets people use to attain their goals; these systems are used to “(a) create and gather, (b) process, and (c) disseminate information” (see Figure 3) (Ball-Rokeach & DeFleur, 1976, p. 487). Audiences are the people who rely on the media for their information (Ball-Rokeach & DeFleur, 1976). The effects can be cognitive, affective, and behavioral changes (Ball-Rokeach & DeFleur, 1976). Cognitive changes guided by the Theory of Media Dependency are when a person changes the way they think about or interpret information; this change can be the result of new information or change in significance of previously known information (Ball-Rokeach & DeFleur, 1976). Affective changes are caused by the person’s feelings and emotional responses, fear, anxiety, and trigger happiness can cause affective changes (Ball-Rokeach & DeFleur, 1976). Behavioral changes can be changes in attitude, and what makes them significant is the degree that they influence someone to act (Ball-Rokeach & DeFleur, 1976). Behavioral changes can be classified

into two categories: “activation” and “de-activation” (Ball-Rokeach & DeFleur, 1976).

“Activation” is when a person does something out of character as a reaction to receiving a message, and “de-activation” is when a person does not do something they would have otherwise done as a reaction to receiving a message (Ball-Rokeach & DeFleur, 1976).

In this study, the society system being examined are the U.S. consumers; the media system being tested is social media platforms; the audience is the respondents in the survey; and the effects are the respondents’ trust in agriculture. Media systems have changed drastically since the Theory of Media Dependency was established in 1976. Research shows that mainstream media has begun to outpace traditional news forms with as much as 20% of our personal computer time and 30% of our mobile device usage being dedicated to information consumption (Pentina et al., 2015). Surveys suggest that the majority of current news updates come from platforms such as Instagram or TikTok, which have seen a 12% and 30% increase, respectively, in news viewership since 2020 (St. Aubin & Liedke, 2024a). Overall consumption of news from media devices is up by 6% since 2020 with a slight decline from between 1-5% for print and television networks (St. Aubin & Liedke, 2024b). Other studies have shown that newspaper printing has declined significantly though the same time period as usage declined (Naseer & St. Aubin, 2023).

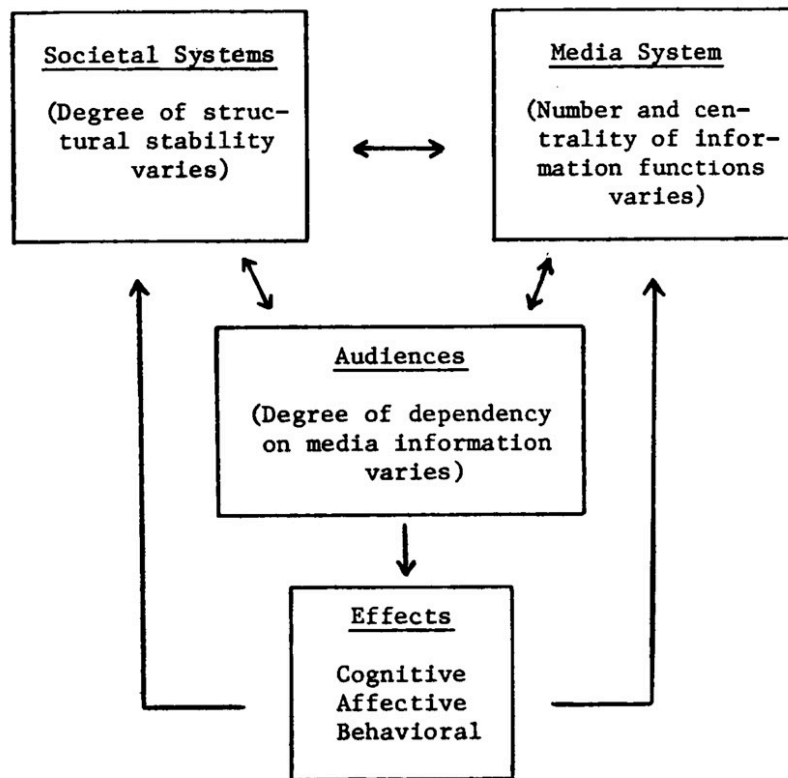


Figure 3.

Media Dependency Theory by Ball-Rokeach & DeFleur (1976)

In another study, researchers used media dependency theory to understand Facebook users' reactions to product recall (Opat et al., 2015). In 2015, a popular ice cream company Blue Bell issued a recall on their ice cream product due to it being linked to a contamination causing *Listeriosis* (Opat et al., 2015). Customers reacted online, particularly on Facebook, using it as a "sounding board" in response to the recall (Ahmed & Natarajan, 2016; Opat et al., 2018, p. 1). The researchers explained media dependency supports the idea that dependency on media is "heightened" during a crisis period (Ball-Rokeach & DeFleur, 1976; Opat et al., 2015). Because of this, Blue Bell customers were more likely to rely on media as a source of information during the time of the recall (Ball-Rokeach & DeFleur, 1976). This can cause cognitive effects such as ambiguity, which has been defined as having insufficient or conflicting information on a subject matter until clarification or the scenario is resolved (Ball-Rokeach, 1973; Ball-Rokeach &

DeFleur, 1976; Opat et al., 2018). Certain content can also provoke emotional triggers based on shared thoughts, experiences, and behaviors (Mesch & Liu, 2024; Zhang et al., 2015). Other examples of this theory have arisen from disease outbreaks such as COVID-19 or swine flu (H1N1) (Avery, 2010; Zhang et al., 2015).

Purpose and Objectives

This study aimed to determine if U.S consumers' trust in agriculture is influenced by the amount of time they spend on social media, the number of social media platforms they have, and demographic variables.

Therefore, the following research objectives guided this study:

RO1: Identify if a relationship exists between consumers' trust in agriculture and the amount of time they spend using social media.

RO2: Examine if a relationship exists between consumers' trust in agriculture and the number of social media platforms they use.

RO3: Examine if demographic variables impacted respondents' trust in agriculture.

Methodology

This study was part of a larger study in collaboration with a larger project which explored U.S. farming practices.

Instrument

The instrument was developed by a panel of experts, ensuring face and content validity. The survey was soft-launched in October of 2024 with a soft launch as a pilot test to ensure all scales were reliable ($\alpha \geq .80$). The survey was approved by the University of Georgia IRB prior to data collection. Data for this quantitative study was collected from a non-probability opt-in survey through Qualtrics. Non-probability sampling has been proven to be appropriate when

measuring and identifying consumer perceptions within public opinion research (Lamm & Lamm, 2019; Corry et al., 2023). Researchers chose this method because it offered convenience for reaching the respondents in the targeted cities across the United States (Lamm & Lamm, 2019). Previous research has used similar sampling methods, such as (Holt et al., 2015; Qu et al., 2017). Holt et al., (2015) investigated messaging tactics through online surveys, and Qu et al., (2017) researched marketing messages to local audiences both by using a non-probability sample (Lamm & Lamm, 2019).

Population and Sample

The 1,996 respondents were recruited by Qualtrics, with demographics representing approximate data shown in the 2020 U.S. Census (see Table 10). The respondents were from 14 different states and multiple different cities including: Los Angeles, San Diego, San Francisco, Austin, Dallas, Houston, Miami, Atlanta, New York City, Chicago, Seattle, Scottsdale, Phoenix, Kansa City, Oklahoma City, Newark, Philadelphia, Indianapolis, and Denver to examine politically divisive cities prior to the 2024 president election. Multiple different races were represented, including White or Caucasian, Black or African American, American Indian/Native American or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander. There were five generations in the sample: The Silent Generation (1928-1945), The Baby Boom Generation (1946-1964), Generation X (1965-1980), Generation Y (1981-1996), Generation Z (1997-2010). A Hispanic population was also represented in the sample population, as indicated by ethnicity.

Table 10
Demographics of Respondents (N = 1,996)

	N	%
Gender		
Male	897	42.1
Female	1086	50.9
Non-binary	11	0.5
State		
California	353	16.5
Texas	328	15.4
Florida	124	5.8
Georgia	124	5.8
New York	122	5.7
Illinois	126	5.9
Washington	114	5.3
Arizona	162	7.6
Missouri	86	4.0
Oklahoma	71	3.3
New Jersey	36	1.7
Pennsylvania	139	6.5
Indiana	97	4.5
Colorado	114	5.3
Race *		
White or Caucasian	1553	72.8
Black or African American	284	13.3
American Indian/Native American or Alaska Native	56	2.6
Asian	96	4.5
Native Hawaiian or Other Pacific Islander	11	0.5
Other	71	3.3
Prefer not to say	4	0.2
Generation		
The Silent Generation	74	3.5
Baby Boomer	614	28.8
Generation X	467	21.9
Generation Y/ Millennial	586	27.5
Generation Z	254	11.9
Ethnicity		
Non-Hispanic	1626	76.2
Hispanic	368	17.3

Note. * n > 1,996 for race because respondents could select multiple races.

Instrument Development

To measure respondents' trust in agriculture, a scale with eight statements about agriculture trust was evaluated. Examples of these statements include: "Developments in agriculture help make society better," "Agriculturalists contribute to the well-being of society," "New technology used in food production allows people to live better lives," and "Modern agriculture makes our way of life change too fast." Researchers used responses to these prompts as gauges of respondents' perceptions about agriculture in general.

The statements were not focused on a specific topic in agriculture but rather encompassed agriculture as a general idea. Respondents answered the questions on a 5-point Likert-type scale with 1 indicating *strongly disagree*; 2 indicating *disagree*; 3 indicating *neither agree nor disagree*; 4 indicating *agree*; and 5 indicating *strongly agree*. The first six statements on the "Agriculture Trust Scale" were worded to be positive statements about current agricultural practices, whereas two of the statements were negative in nature toward agriculture and reverse coded in subsequent data analysis. The wording was intentional to check for respondent awareness throughout the reading the individual statements.

To measure social media use, respondents were asked to select all of the social media platforms they used. The social media options provided were Facebook, Instagram, Snapchat, X (formerly Twitter), TikTok, Pinterest, YouTube, BeReal, and Other. Additionally, there was the option for respondents to indicate if he/she did not use social media. For analysis, a grand sum was calculated for each respondent and for each social media platform (see Figure 4).

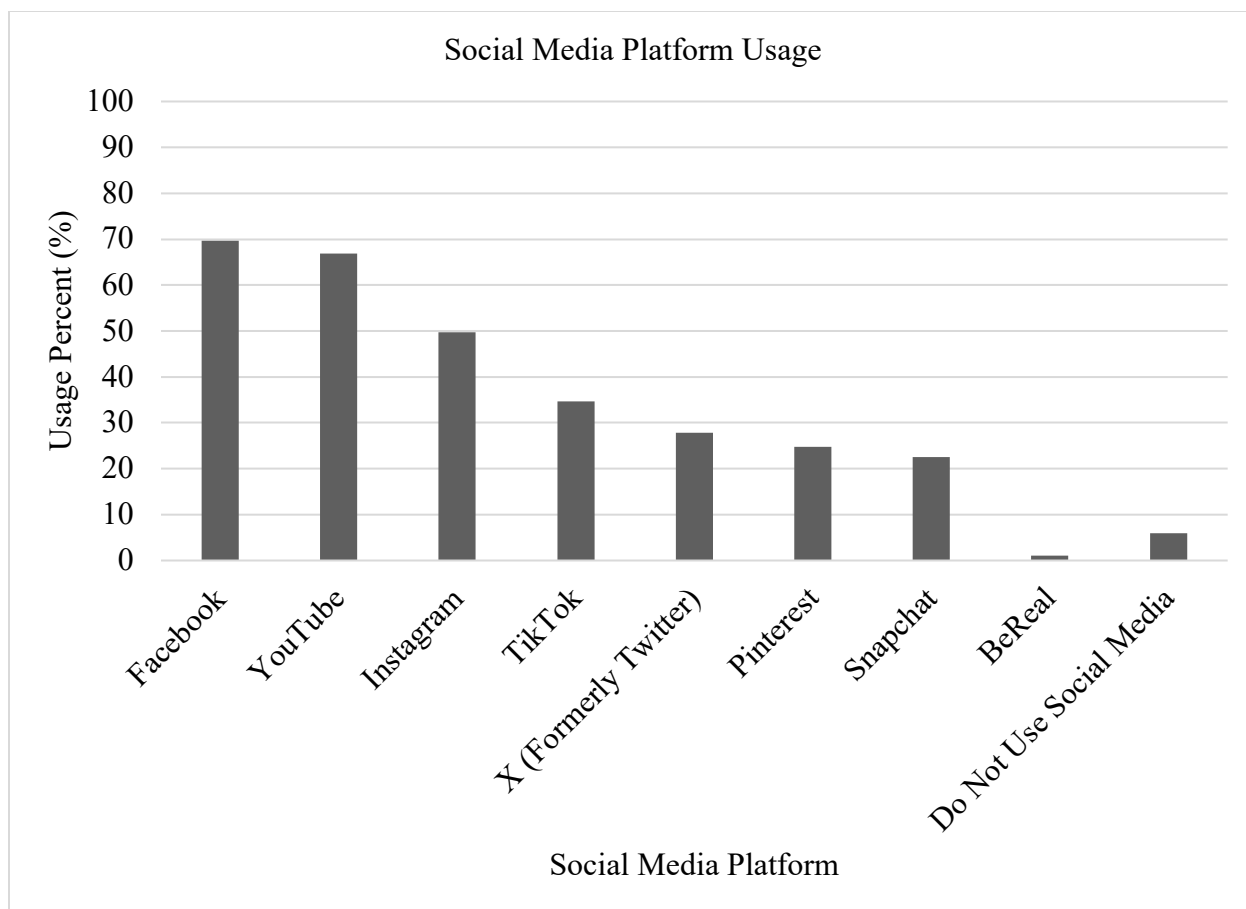


Figure 4. *Social Media Platform Usage*

Respondents' social media platform selections were then carried forward to the next question which asked to indicate how often they used each of their social media platforms. Respondents answered this question on a 6-point scale: less than once a week (1), once a week (2), several times a week (3), about once a day (4), several times a day (5), almost constantly (6). Researchers then added these scores to get a sum of the amount of time respondents spend on social media across all platforms tested.

Descriptive Statistics

A descriptive analysis was run on Statistical Package for Social Sciences (SPSS Version 25) to calculate the mean and standard deviation for respondents' trust in agriculture, the total amount of time spent on social media, and the number of social media platforms used.

Pearson's Correlation

Pearson's correlation was used to determine the relationships between trust, time spent on social media and the sum of social media platforms used. Significance was concluded based on two-tailed alpha level of 0.05 to account for positive and negative response variability.

One-Way ANOVA

A One-Way ANOVA test was used to determine the variability and mean response in trust in agriculture within each demographic. The purpose of this analysis was to assess whether different demographic groups reported significantly different levels of trust in agriculture.

Results

RO1: Identify if a relationship exists between consumers' trust in agriculture and the amount of time they spend using social media.

To address research objective one, researchers ran a correlation test between the respondents' total amount of time spent on social media and their trust in agriculture. To estimate total social media use, the sum value of all responses was totaled to create a unitless response metric that was used to quantify the frequency of social media usage. Using this method, a maximum value of 48 is achievable if a respondent selected almost constantly for all eight of the given platforms. A baseline of 1 was established if only one platform was used less than once a week according to survey results ($M = 14.09$, $SD = 9.64$) and their trust in agriculture ($p = .312$) (see Table 10). No relationship was found between respondents' total amount of time spent on social media and their trust in agriculture.

RO2: Examine if a relationship exists between consumers' trust in agriculture and the number of social media platforms they use.

To address research objective two, a correlation analysis between the sum of social media platforms was conducted ($M = 3.17$, $SD = 1.89$) to evaluate respondents' trust in agriculture ($p = .812$ (See Table 11); with no significant relationship observed. The scale used contained eight social media platform options, available for respondents to select from; therefore, a response of eight indicates that the respondent used all eight platforms listed in the survey.

RO3: Examine if demographic variables impacted respondents' trust in agriculture.

To address research objective three, a One-Way ANOVA was used to determine if the respondents' demographics have any significant effect on respondents' trust in agriculture. Respondents answered the questions on a 5-point Likert-type scale with 1 indicating *strongly disagree*; 2 indicating *disagree*; 3 indicating *neither agree nor disagree*; 4 indicating *agree*, and; 5 indicating *strongly agree*. A slight positive trust was observed across all demographics with an approximate mean of 3.67 and a standard deviation of 0.54 throughout all groups (see Table 12). The results of this analysis have shown that there is a significant relationship between genders, race, generation, and ethnicity all of which had a reported p -value of <0.001 . However, no significant relationship was observed between respondents from various states or regions of the country. This indicates that there is a common sentiment regarding the trust in agriculture spatially; however, trustworthiness varies across the human demographics examined in this study.

Table 11
Response Analysis of Agriculture Trust Based on Demographics (N=1,996)

Characteristics	<i>N</i>	Min	Max	Mean	<i>SD</i>	<i>F</i>	<i>p</i>
Gender						9.87***	.00
Male	897	1.00	5.00	3.75	0.55		
Female	1086	1.00	5.00	3.61	0.59		
Non-Binary	11	3.00	5.00	3.99	0.58		
State						1.15	.31
California	353	1.00	5.00	3.69	0.59		
Texas	328	2.13	5.00	3.66	0.55		
Florida	124	2.50	5.00	3.72	0.51		
Georgia	124	1.88	5.00	3.63	0.57		
New York	122	2.00	5.00	3.76	0.56		
Illinois	126	2.50	5.00	3.79	0.54		
Washington	114	2.38	5.00	3.76	0.54		
Arizona	162	1.50	5.00	3.68	0.66		
Missouri	86	2.00	5.00	3.74	0.63		
Oklahoma	71	2.25	5.00	3.60	0.64		
New Jersey	36	2.75	4.88	3.66	0.55		
Pennsylvania	139	2.13	5.00	3.70	0.56		
Indiana	97	2.25	5.00	3.59	0.59		
Colorado	114	2.50	5.00	3.70	0.56		
Race						4.44***	.00
White or Caucasian	1553	1.00	5.00	3.72	0.58		
Black or African American	277	1.88	5.00	3.58	0.57		
American Indian/ Native							
American or Alaska Native	20	2.50	4.50	3.44	0.45		
Asian	82	2.88	5.00	3.70	0.49		
Native Hawaiian or Other Pacific							
Islander	7	2.88	4.25	3.48	0.54		
Other	53	1.00	4.50	3.49	0.59		
Prefer not to say	4	3.00	4.00	3.50	0.51		
Generation						6.84***	.00
The Silent Generation	74	2.50	5.00	3.80	0.52		
Baby Boom Generation	614	1.63	5.00	3.77	0.58		
Generation X	467	1.00	5.00	3.68	0.59		
Generation Y	586	1.00	5.00	3.66	0.56		

Generation Z	254	1.50	5.00	3.57	0.57	
Ethnicity						14.75*** .00
Hispanic or Latino	368	1.00	5.00	3.59	0.58	
No	1626	1.50	5.00	3.71	0.57	

Note. * $p < .05$. *** $p < .001$.

Conclusions and Discussion

From this study, it can be concluded that consumers' trust in agriculture is affected by demographics such as gender, race, and age, but is not affected by the amount of time they spend on social media or by the number of social media platforms they have (Roberts & David, 2020; Settle & Ruth, 2023). These findings are somewhat contrary to previous studies, which showed that social media had a large influence in consumer perceptions (Avery, 2010; Mesch & Liu, 2024; Zhang et al., 2015). However, the data does draw similarities to the case study that Opat et al., (2018) conducted on Blue Bell Ice Cream outlooks on agricultural topics can be positive based on social media influences. The positive perception from Opat et al., (2018) is due to public transparency and trust that was built prior to the catastrophe. Because of this an increase in positive and candid social media presence could help to boost public trust in American agriculture as a safeguard against public downfalls.

The demographic factors of gender, race, generation, and ethnicity significantly influenced consumers' trust in agriculture. However, the total amount of social media use was tremendously high, indicating social media is a key part of people's everyday lives. Based on these findings, it is recommended that agricultural communicators design their social media campaigns to reach a large, diverse audience in order to avoid echo chambers and the influence of social media algorithms. Future research should focus on exploring how agricultural communicators can better understand and navigate echo chambers and social media algorithms. Research should include interviews with individuals about their interests and social media feeds. Through qualitative research, researchers can gain insights into how one's social media feed is formed.

A recommendation for future research is to conduct a search that identifies agricultural social media influencers. The space for agricultural influencers on social media is still relatively new, with many unknowns. This research would also investigate whether agricultural influencers impact consumer trust in the agricultural industry. As previous research has shown, building a positive and trustworthy brand is crucial for sustaining long-term public loyalty, creating future markets, and ensuring profitability in agriculture, while fostering a social connection to the industry—something agricultural social media influencers do (Opat et al., 2018; Robinson et al., 2020; Zimmerman, 2021).

CHAPTER FIVE
DISCUSSION AND RECOMMENDATIONS

Summary of Key Findings

The aim of this study was to assess consumers' preferences for climate-related terms and to examine whether there is a connection between consumers' social media use and their trust in agriculture. The research objectives guiding this study were:

RO1. Identify consumers' preferences for terms used to communicate about climate.

RO2. Examine if demographic variables impacted consumers' most preferred climate term.

RO3. Identify if a relationship exists between consumers' trust in agriculture and the amount of time they spend using social media.

RO4. Examine if a relationship exists between consumers' trust in agriculture and the number of social media platforms they use.

RO5. Examine if demographic variables impacted consumers' trust in agriculture.

The overarching aim of this study was to explore consumer preferences for climate-related terminology and to investigate the potential influence of demographic factors on these preferences through audience segmentation. The results revealed a strong preference for terms associated with

“Sustainable,” with key demographic factors such as location, race, and generation playing a significant role in shaping these preferences.

The first study revealed consumer preferences regarding climate terminology, highlighting the importance of understanding how different terms resonated with segmented audiences. The study examined eight terms “Climate Smart,” “Climate Resilient,” “Environment Smart,” “Environment Resilient,” “Regenerative Agriculture,” “Regenerative Farming,” “Sustainable Agriculture,” and “Sustainable Farming.”

The findings showed that terms containing the word “sustainable” such as "Sustainable Farming" and "Sustainable Agriculture" were the most preferred by respondents, while terms containing the word “resilient” like "Environment Resilient" and "Climate Resilient" were the least preferred. The demographic factors location, race, generation, and ethnicity significantly impacted climate term preferences, suggesting that tailored communication strategies were essential to effectively engage different groups.

Overall, this study highlighted the critical role of climate terminology in agricultural communications. By understanding which terms resonated most with the public it will help ensure climate practices and policies are communicated effectively in the future.

Furthermore, the second study concluded that consumers’ trust in agriculture is not influenced by their level of social media engagement or the variety of platforms they use. These findings are particularly noteworthy, given the prevalence of fear-driven marketing tactics and the limited presence of scientifically grounded information circulating on social media (e.g. Gottlieb, 2016; Nordstrom & Egan, 2021; Roberts & David, 2020). Other significant observations are the variation of trustworthiness across demographics, with location being the only nonsignificant group. This indicates a uniform sentiment about the trust in agriculture and the food system across

the United States. While social media was a large focus for this study and has been for many research projects, the findings of this study show a different perspective that demographics can be more influential than social media. This insight will be crucial for marketers in determining how to leverage social media and public perceptions of agriculture across genders, races, and generations of Americans. The findings also indicate that echo chambers and social media algorithms are creating another barrier for agricultural communicators must break through to reach consumers.

When agricultural communicators share information with consumers, they must be strategic in choosing the terminology and communication channels they use to most effectively reach their audience. By knowing what terminology a segmented audience prefers the most and what influences their trust in agriculture, practitioners can craft messages that best communicate with the segmented audience. When this does not happen, consumers can become overwhelmed and information can be misconstrued which ultimately can lead to a decrease in trust in agriculture and a decrease in sales of food grown using conventional agricultural practices (Cook et al., 2023; Robinson et al., 2020).

Recommendations for Future Research

Future research should explore the definition of “sustainable” and how consumers understand and interpret the term, as it was overwhelmingly preferred. Since “sustainable” can have different meanings across disciplines, future studies should aim to develop a cohesive definition, particularly for “sustainable agriculture.” This would help agricultural communicators better inform consumers about events in the agricultural industry, fostering trust and ensuring it continues to grow.

Social media influencers are becoming the “new” marketers and ambassadors for brands and organizations and the agriculture industry needs. A recommendation for future research is to conduct a search to find agricultural social media influencers. The social media space for agricultural influencers is very new and there are many unknowns. The research would specially explore if agricultural social media influencers influence consumers’ trust in agriculture. An example of a growing social media influencer that could be included in the study is a horse producer in Tennessee, who has 4.5 million followers and continues to gain more daily. The influencer shares content about the daily life of their horse operation to foaling season updates. The cute foals and authentic content make the content appealing to the audience. As prior research has shown creating a positive trustworthy brand is critical to maintaining long-lasting public loyalty creating future markets and profitability in agriculture, while creating a social connection to agriculture, which is what this horse producer and influencer is doing (Opat et al., 2018; Robinson et al., 2020; Zimmerman, 2021).

Recommendations for Practitioners

From the findings it is recommended that practitioners use the term “sustainable” in practice to reach their target audience. Practitioners should avoid using the term “resilient” as it was the lowest ranking term in each scale meaning consumers did not prefer this term. It is recommended that policy makers use the term “sustainable” to help ensure their policies are well-received by the public and their target audience. Using the term “sustainable” in policy development will likely enhance the perceived value and impact of the policies developed.

The term “sustainable” should also be used in food labeling. The “sustainable” label can inform consumers on how their food was produced. For example, a label could be called “Sustainably Sourced” meaning the product was produced using climate smart practices. The

labeling could help inform consumers on agriculture practices. The “sustainable” label could also be a marketing tactic, since the research reveals the term is highly preferred consumers might be more likely to purchase a product with a “sustainable” label.

The study highlights that echo chambers and algorithms on social media can create barriers that prevent agricultural messages from reaching a broader audience. To overcome this, agricultural communicators must develop strategies to break through these hurdles and reach consumers who may be isolated in echo chambers or by social media algorithms. Practitioners should consider diversifying their messaging and using multiple channels including digital and traditional media. This would ensure their message reaches a wider and more diverse audience, widening the spread of the message being sent. Partnerships with social media agricultural influencers or industry experts can also help counteract misinformation and expand the reach of agricultural messages.

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APPENDIX A

Qualtrics Survey

Q1.1 You are being asked to take part in a research study. The information in this form will help you decide if you want to be in the study. Please ask the researcher(s) below if there is anything that is not clear or if you need more information. Principal Investigator: Jessica Holt, Ph.D., Department of Agricultural Leadership, Education and Communication. The purpose of the study is to learn more about consumers' perceptions of climate change and agricultural systems. You are being asked to be in the study because you your thoughts and opinions are important. Participation in this research is completely voluntary and you can refuse to participate before the study begins or stop taking part at any point. If you decide to participate in this study, we will ask a series of questions dealing with the following topics: science, climate, sustainability, and agriculture. We estimate it will take roughly 15 minutes to complete the survey. We do not expect that filling out this questionnaire will create any risks or discomforts on your part. We hope that learning more about consumers' perceptions about agricultural practices will help others by create effective policy. Pursuant to the European General Data Protection Regulation (GDPR) UGA, acting in its capacity as a data controller under the GDPR with respect to the information gathered from you the data subject, must obtain your explicit, affirmative consent before it can collect or process your data for this project. Some of the information you provide may be considered sensitive personal data under the GDPR. Sensitive personal data includes racial or ethnic origin; political opinions; religious or philosophical beliefs; trade union membership; genetic, biometric data; health data; or data concerning a person's sex life or sexual orientation. Any data, including sensitive personal data, that is collected from you will be for the sole purpose of participating in the research study entitled "Harvesting Sustainability" referenced above and is necessary for the completion of the study. This may include processing the data as required to comply with applicable laws. The University has an EU GDPR Compliance Policy which includes your individual rights concerning your data. Please see the EU GDPR Compliance Policy (https://eits.uga.edu/access_and_security/infosec/pols_regs/policies/eu_gdpr/). UGA is committed to ensuring the security of your information. We have put in place physical, technical, and administrative safeguards designed to prevent unauthorized access to your information. Your data will be held under security standards for sensitive devices outlined in Page 2 of 2 the UGA Policy - Minimum Security Standards for Sensitive Devices (https://eits.uga.edu/access_and_security/infosec/pols_regs/policies/minsec_sensitive/). Data will be handled and processed only by the persons who are responsible for the necessary activities for the purposes above. The information you provide will/will not be associated with any identifier. The data will be stored for a period of 5 years. No automated decision making will be performed, including profiling, and the collected Data will not be further processed other than the purpose for which it was collected. If you have any further questions about the research project, please contact Jessica Holt (jaholt@uga.edu); Phone: +1 706 542 35121. Any question(s) or concern(s) about your rights as a research participant should be directed to The Chairperson, University of Georgia Institutional Review Board; +1 706 542-3199; irb@uga.edu. Do you consent to participating in the survey?

- Yes, I agree to participate.** (1)
- No, I do not agree to participate.** (2)

Skip To: End of Block If Q1.1 = No, I do not agree to participate.

End of Block: IRB Consent

Start of Block: Filter questions

*

Q2.1 What year were you born? Please provide a 4-digit year (e.g. 1975).

Q203 Please select the city in which you currently live.

- Los Angeles ([LA](#)) (1)
- San Diego (2)
- San Francisco (3)
- Austin (4)
- Dallas (5)
- Houston (6)
- Miami (7)
- Atlanta (8)
- New York City ([NYC](#)) (9)
- Chicago (10)
- Seattle (11)
- Scottsdale (12)
- Phoenix (13)
- Kansas City (14)
- Oklahoma City (15)
- Newark (16)
- Philadelphia (17)
- Indianapolis (18)
- Denver (19)
- None (21)

Skip To: End of Block If Q203 = None

Q2.2 How do you describe yourself?

- [Male](#) (1)
 - [Female](#) (2)
 - [Non-binary / third gender](#) (3)
 - [Prefer to self-describe](#) (4)
-
- [Prefer not to say](#) (5)

Q2.3 Are you of Spanish, Hispanic, or Latino origin?

- [Yes](#) (1)
 - [No](#) (2)
-

Q2.4 Choose one or more races that you consider yourself to be

- White or Caucasian (1)
 - Black or African American (2)
 - American Indian/Native American or Alaska Native (3)
 - Asian (4)
 - Native Hawaiian or Other Pacific Islander (5)
 - Other (6)
 - Prefer not to say (7)
-

Q6.1 We would now like to gauge your thoughts about agriculture in general. To do so, please indicate your level of agreement or disagreement with the following statements.

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
Developments in agriculture help make society better (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agriculturalists contribute to the well-being of society (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural research should be supported by the government. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural research is essential for improving the quality of human lives (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New technology used in food production allows people to live longer (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New technology used in food production allows people to live better lives (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Modern agriculture makes our	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

way of life
change too
fast (7)

Overall,
modern
agriculture
does more
harm than
good (8)



End of Block: Agriculture Trust Scale

Start of Block: Internet and Social Media Use

Q7.1 Please select the following social media platforms you use.

- [Facebook](#) (1)
 - [Instagram](#) (2)
 - [Snapchat](#) (3)
 - X (formerly [Twitter](#)) (4)
 - [TikTok](#) (5)
 - [Pinterest](#) (6)
 - [YouTube](#) (7)
 - [BeReal](#) (8)
 - Other (please [specify](#)) (9)
-
- I do not use social [media](#) (10)

Skip To: End of Block If Q7.1 = I do not use social media

Page Break

Carry Forward Selected Choices from "Q7.1"



Q7.2 Please indicate how often you use the following social media platforms.

	Almost Constantly (6)	Several times a day (5)	About once a day (4)	Several times a week (3)	Once a week (2)	Less than once a week (1)
Facebook (x1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Instagram (x2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Snapchat (x3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
X (formerly Twitter) (x4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TikTok (x5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pinterest (x6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
YouTube (x7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BeReal (x8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify) (x9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not use social media (x10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Q17.2 When given the choices below, please indicate which one you prefer most and which you prefer least. You can only select one preference for each choice provided.

	Strongly dislike (1)	Dislike (2)	Neither like nor dislike (3)	Like (4)	Strongly like (5)
Climate Smart (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Climate Resilient (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environment Smart (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environment Resilient (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regenerative Agriculture (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regenerative Farming (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sustainable Agriculture (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sustainable Farming (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Q17.3 Please rank the following terms, with "1" being your Most Preferred and "8" being your Least Preferred.

- _____ Regenerative Agriculture (1)
- _____ Regenerative Farming (2)
- _____ Sustainable Agriculture (3)
- _____ Sustainable Farming (4)
- _____ Climate Smart (5)
- _____ Climate Resilient (6)
- _____ Environment Smart (7)
- _____ Environment Resilient (8)

Page Break _____

Q18.3 Which of the following best describes your political beliefs or values?

- Very liberal (1)
- Liberal (2)
- Moderate (3)
- Conservative (4)
- Very conservative (5)

Page Break _____