

COMMUNICATION CHANNEL PREFERENCES OF
DIGITALLY-ENGAGED NATIONAL SWINE
REGISTRY MEMBERS

By

HANNAH HUNTER HAWKESWORTH

Bachelor of Science in Agriculture Business

California State University, Fresno

Fresno, California

2021

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
MASTER OF SCIENCE
May 2023

COMMUNICATION CHANNEL PREFERENCES OF
DIGITALLY-ENGAGED NATIONAL SWINE
REGISTRY MEMBERS

Thesis Approved:

Dr. D. Dwayne Cartmell II

Thesis Adviser

Dr. Audrey E. H. King

Dr. Parker Henley

ACKNOWLEDGEMENTS

To my adviser and committee chair, Dwayne Cartmell, thank you for guiding me through this process and being one of my biggest support systems. I would have never reached this accomplishment without your continuous support. Thank you for always offering life advice and reminding me to take care of myself through this process. I am forever grateful for your mentorship and friendship.

To my fellow inspirational quote lover and coffee enthusiast, Audrey E. H. King, I could have never gotten here without your constant kindness, grace, and tough love. Thank you for continuing to be a listening ear when I need it most, investing countless hours into my success, and the many, many “love notes.” Thank you for putting up with my love for “critters” and your enthusiasm to learn more about them. I will forever cherish the friendship we have built and could never thank you enough.

To Parker Henley, thank you for challenging me to think a little deeper and bringing a different perspective to the team. Thank you for extending kindness through simple conversations. I am grateful for your guidance through this project.

To my ole man, Bill, you have been the single most influential person in my life. You are a shining example of what it means to work hard, do everything with integrity, and love the Lord. Thank you for believing in me no matter what, supporting any and every dream I have had, and reminding me “you can, because you believe you can.” My love for helping others and drive to work hard (so I can play harder) comes from you. Thank you for being my rock every single day. I love you more.

To my sister, Sierra, you have been the best role model and best friend a girl could have. Your support, guidance, love, and care has been more than I could have ever asked for. I would not be the person I am today without you paving the way. My passion for livestock is because of you. Thank you for being there every step of the way, offering sage advice, and taking on more than you ever should have to make sure I would get to where I am today. I love you.

To my family, thank you for continuing to support me while I chase my dreams. I am who I am today and owe any success I have to your love and support. I am blessed with each and every one of you. To my Oklahoma family, Charles, Shannon, Crystal, Odie, and the kids, thank you for giving me a home away from home. The many nights spent in the barn, over the fire making s’mores, and weekends spent at stock shows has made me feel like part of the family. Your love and support makes me want to plant my roots in Oklahoma.

To my best girls and fellow grad students, Abby and Amy, thank you. I could not imagine going through this process without you. The Mariachi’s dates, trips to the Copper Penny, and nights spent singing our hearts out to live music were the simple joys of my life. You made the hard times easier with encouragement, laughs, and Coke. The countless memories made will last a lifetime. You two are some of the greatest blessings grad school has given me and have been one of the biggest support systems through this journey. To my friends, Justin, Joseph, Nathan, Payton, and so many more, thank you for listening to my meltdowns, the weekly phone calls to catch up, providing entertainment every day, and being my emotional support humans.

Always and forever, Loyal and True. As always, Go Pokes!

Name: HANNAH H. HAWKESWORTH

Date of Degree: MAY, 2023

Title of Study: COMMUNICATION CHANNEL PREFERENCES OF DIGITALLY-
ENGAGED NATIONAL SWINE REGISTRY MEMBERS

Major Field: MASTER OF SCIENCE, AGRICULTURAL COMMUNICATIONS

Abstract: Understanding membership preferences for communication channels is important to the success of any breed association. Although research has studied beef breed associations, there is a lack of research focusing on swine breed associations and membership perceptions. The purpose of this study was to gauge digitally-engaged National Swine Registry members' perspectives of the organization's communication channels and provide the NSR more knowledge about its digitally-engaged members. Specifically, this study sought to determine members' communication preferences, reasons for following digital media channels, and suggested enhancements for the organization's current communication channels. A review of literature concluded livestock producers prefer print publications over social media as the primary form of communication from breed associations. The literature also indicated social media has the potential to be beneficial, and the most preferred platform for producers is Facebook. The Uses and Gratifications Theory undergirded this study. Dillman's Tailored Design Method (2014) guided this study. The questionnaire combined 5-scale Likert-Type, demographic, and open-ended questions to achieve the research objectives. Due to the response rate, the findings from this study are only generalizable to the 85 respondents. Results noted digitally-engaged NSR members found the organization's communication channels to be useful, appropriate, educational, informative, and engaging. This study aligned with many of the findings concluded from previous literature. The digitally-engaged members' preferred Facebook as their primary communication channel. This finding contradicted previous research, which found social media to be the least preferred communication channel amongst producers. It is recommended the NSR conduct a digital media audit on all digital platforms and increase educational content across communication channels. Further research with swine breed associations and evaluating swine producers is recommended. Specifically, an evaluation of the remaining NSR communication channels, media platforms, as well as a qualitative study focusing on active members at shows is recommended.

TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION.....	1
Background and Setting.....	1
Need for the Study	3
Statement of the Problem.....	3
Purpose of the Study	4
Research Objectives.....	4
Limitation of the Study	5
Definition of Terms.....	5
Basic Assumptions.....	6
II. REVIEW OF LITERATURE.....	7
Overview.....	7
Theoretical Framework.....	7
History of Uses and Gratifications Theory	9
Uses and Gratifications in Agricultural Communications	10
Digital Media	12
User Demographics.....	14
Communication Channels in Agriculture	14
Livestock Producer Communication Channel Preferences.....	15
Digital Communication Channels.....	16
Swine Industry Overview	17
NSR Digital Media Users	19
III. METHODOLOGY	20
Institutional Review Board	20
Research Design.....	20
Population	21
Instrumentation	21
Instrument Design.....	21

Chapter	Page
Validity	23
Reliability.....	24
Data Collection	24
Timeline & Budget	25
Data Analysis	26
Response Rate.....	26
IV. FINDINGS.....	28
Overview.....	28
Research Objective 1	29
Research Objective 2	31
Research Objective 3	32
Likert-Type Scale.....	33
Open-Ended Questions	37
Research Objective 4	44
V. CONCLUSIONS & RECOMMENDATIONS.....	49
Overview.....	49
Conclusions & Discussion	50
Research Objective 1	50
Research Objective 2	51
Research Objective 3	52
Research Objective 4	54
Recommendations.....	56
Recommendations for Practice	56
Recommendations for Future Research	59
REFERENCES	62
APPENDICES	70
A: IRB Approval.....	71
B: Instrument	73
C: Drawing Instrument	93
D: Emails to Participants	95
E: Social Media Graphics	104
F: Social Media Captions.....	113
G: Panel of Experts	115

LIST OF TABLES

Table	Page
1: Digitally-Engaged NSR Members' Demographics	30
2: Digitally-Engaged NSR Members' Social Media Platform Usage	31
3: Digitally-Engaged NSR Member's Usage of Organization's Digital Communication Channels.....	32
4: Digitally-Engaged NSR Members' Perceptions of the NSR/NJSA's Instagram Content.....	34
5: Digitally-Engaged NSR Members' Perceptions of the NSR/NJSA's Twitter Content.....	35
6: Digitally-Engaged NSR Members' Perceptions of the NSR Facebook Content.....	36
7: Digitally-Engaged NSR Members' Perceptions of the NJSA's Facebook Content.....	36
8: Digitally-Engaged NSR Members' Perceptions of the Seedstock EDGE Content.....	37
9: Digitally-Engaged NSR Members' Demographics Related to Instagram Use.....	46
10: Digitally-Engaged NSR Members' Demographics Related to Facebook Use	47
11: Digitally-Engaged NSR Members' Demographics Related to Twitter Use	48

LIST OF FIGURES

Figure	Page
1: Audience Persona for Instagram Users.....	55
2: Audience Persona for Facebook Users	56
3: Audience Persona for Twitter Users.....	57

CHAPTER I

INTRODUCTION

Background and Setting

This study examined the perceptions of digitally-engaged National Swine Registry (NSR) members. The NSR is a “pedigree livestock association for the purebred Duroc, Hampshire, Landrace and Yorkshire swine breeds in the United States” (National Swine Registry, 2018). The four breeds that comprise the NSR represent 87% of the United States purebred swine industry (National Swine Registry, 2018). These breeds provide significant contributions to the profitability of swine industry as a whole (National Swine Registry, 2018).

Previously, the purebred Duroc, Yorkshire, and Hampshire sectors were represented by individual organizations. In 1994, the American Yorkshire Club, the Hampshire Swine Registry, and the United Duroc Swine Registry consolidated to form the NSR (National Swine Registry, 2018). Through this consolidation, the industry saw an increase in efficiency of services provided to breeders, advancement of programs and services, and a more unified resource allocation (National Swine Registry, 2018).

The rich history of each respective breed association making up the NSR can be dated back to the 1800’s (National Swine Registry, 2018). In the early years of the United States seedstock industry, it was common for producers to raise one breed (National Swine Registry, 2018). As the seedstock industry progressed, producers began

maintaining several breeds on their farms to meet the demands of commercial producers (National Swine Registry, 2018). Therefore, producers became involved with more than one purebred organization (National Swine Registry, 2018). Refinement of commercial clients also increased alongside this trend increase in the 1970s and 1980s (National Swine Registry, 2018). The increase in production diversity and commercial clients created a higher demand on seedstock producers (National Swine Registry, 2018). This increase led to a greater need for the diverse services offered by breed organizations (National Swine Registry, 2018).

The NSR mission, as stated in its *Long-Range Strategic Plan*, is to “enhance the value of pedigreed swine, maintain breed integrity, and provide relevant member education and youth development experiences” (Ochsner, 2019, p. 3). The *Long-Range Strategic Plan* also states the NSR vision is: “to be recognized as the global leader in providing pedigree services, marketing platforms and educational resources that support members in promoting and merchandising documented swine genetics” (Ochsner, 2019, p.3).

The NSR offers two membership types: Senior Life Membership and Junior Membership (National Swine Registry, 2018). Both membership types have subclassifications of active and inactive (National Swine Registry, 2018). To qualify as a senior life member, an individual must be at least 21 years of age and a resident of the United States, or a corporation incorporated under United States law (National Swine Registry, 2018). Those under the age of 21 qualify for junior membership (National Swine Registry, 2018).

As an avenue of communication to the senior and junior membership, the NSR has published approximately four issues of the *Seedstock EDGE* per year since 2012 (National Swine Registry, 2018). The NSR also maintains communication with their membership through digital media platforms including Facebook, Twitter, Instagram, Snapchat, TikTok, LinkedIn, and the NSR Weekly Newsletter. The NSR has a Marketing and Communications Manager, who is responsible for the various communication tools used to connect with its membership (National Swine Registry, 2018).

Need for the Study

Throughout the organization's 19 years in business, membership evaluation has been limited. A *Long-Range Strategic Plan* was created in 2017 to improve services provided to the membership. The Marketing and Communications Manager at the NSR expressed a need to self-audit the organization's communication channels. Developing and executing a membership evaluation is an effective way for the organization to self-audit the strategic plan and the communication channels (Barnhart, 2020).

Statement of the Problem

Along with services such as litter registrations and performance pedigrees, the NSR provides breed promotion and marketing assistance to its membership (National Swine Registry, 2018). The *Long-Range Strategic Plan*, created in 2017, is the first document for the organization to highlight its mission and vision. NSR leadership is eager to learn if the current communication channels are helping the organization make progress on this long-term plan. In addition, as technology has advanced and various communication channels have surfaced, the NSR leadership is interested in learning if the communication channels of the organization are meeting the needs of the membership

and advancing the mission and vision of the organization (NSR, personal communication).

Purpose of the Study

The purpose of this study was to gauge digitally-engaged NSR members' perspectives of the organization's communication channels and provide NSR more knowledge about its digitally-engaged membership. Specifically, this study sought to determine members' communication preferences, reasons for following digital media channels, and suggested enhancements for the organization's current communication channels.

Research Objectives

The following objectives were developed to accomplish the purpose of this study:

1. Describe personal demographics (age, gender, ethnicity, education, location, and involvement in the swine industry) of digitally-engaged NSR members.
2. Describe digital media use of digitally-engaged NSR members.
3. Determine content the digitally-engaged membership find most beneficial, suggestions for improvement, and common reasons for following the organization's communication channels.
4. Identify audience persona characteristics of digital media channels used by digitally-engaged NSR members.

Limitation of the Study

This study sought the perspective of digitally-engaged members; therefore, results of this research should only be generalized within the population of those who chose to participate in this study.

Definition of Terms

The following terms were defined for use in this study:

Digital media – “information shared through a digital device or screen” (Copy Press, 2023).

Pedigree livestock – animals who have maintained genetics from the same breed (Collins dictionary, 2019).

Seedstock – pedigreed livestock maintained for breeding purposes (Collins dictionary, 2019).

Litter – “the baby pigs born to a sow at one time” (Pork Check Off, 2016).

Digital engagement – refers to all interactions your customer or membership have with your brand through digital media (Team, 2023). For the purpose of this study, we used the term ‘digitally-engaged’ to describe members who interact with the organization’s digital media channels by opening emails from the NSR.

Audience Persona – a fictional, detailed description of an organization’s target audience based on research of the existing or desired audience (McLachlan, 2021).

Digital Media Audit – reviewing current social media practices to identify growth, opportunities, and improvements (Barnhart, 2020).

Basic Assumptions

Three assumptions were made for this study. First, although recipients may not have access to the internet, it was assumed respondents do. Next, it was assumed respondents reported accurate personal demographics (age, race, gender, education level, geographic location, and swine industry involvement/experience). Finally, it is also assumed respondents reported true and honest opinions regarding their preferences, understanding, and suggested enhancements of the organization's current communication channels (Instagram, Twitter, Facebook, and the *Seedstock EDGE*).

CHAPTER II

REVIEW OF LITERATURE

Overview

This chapter summarizes the Uses and Gratifications Theory, describes the history of the theory, and reviews literature in the agricultural communications discipline using the theory. This chapter also reviews literature related to digital media, communication channels in agriculture, livestock producer communication channel preferences, and an overview the swine industry.

Theoretical Framework

This study focused on understanding the preferences and media usage of an agricultural organization's membership through the use of survey methodology. The Uses and Gratification theory guided this study. An audience-focused approach to research, the Uses and Gratification theory elaborates on the satisfaction a consumer receives when their needs are fulfilled from their media use (Katz et al., 1973). This theory attempts to understand and explain how individuals use communications to achieve their goals and obtain satisfaction, also known as gratification (Katz et al., 1973). The theory implies individuals use distinct media channels for unique results or gratifications (West & Turner, 2018). An individual's intentional evaluation of distinct media channels to obtain desired results and gratifications deems them active consumers in the context of this

theory (West & Turner, 2018).

Theorists who developed the Uses and Gratifications Theory believed: (a) As much as researchers focused on the intentions behind communication channels, the needs of desired audiences deserve an equal amount of focus; and (b) in the context of traditional communication effects, audience requirements should be treated as intervening variables (Katz et al., 1973). Five assumptions have been formed regarding Uses and Gratifications: 1) audiences are active and goal-oriented, 2) the connection between needs and media choice can only be connected through the audience, 3) media channels compete with other communication sources to meet consumer needs, 4) individuals maintain enough self-awareness of their interests, needs, and motives to elaborate their usage to researchers, and 5) value judgements should not be considered by the researcher, rather identified by the audience on their own terms (Katz et al., 1973).

Originally, the theory only included the gratifications gained through using media (Katz et al., 1973). As it developed, the theory considered consumers' needs they were attempting to satisfy through the use of media (Katz et al., 1973). Rather than just what consumers were getting out of media, Uses and Gratifications also considers what consumers desire from media (Katz et al., 1973). Katz et al. (1973) suggests five possible desired gratifications for a consumer's media usage: (a) relax and relieve stress (b) gain information or be educated, (c) enhance social interaction (d) affirmation and reinforcement, and (e) opportunity. There are several possible desired gratifications an audience can obtain from media channels, and it is important to note consumers can obtain more than one gratification from a single media channel (Katz et al., 1973).

The desired gratification of relaxation and relieving stress indicates consumers use media to escape the stresses of everyday life (Katz et al., 1937). Gaining information or being educated from the media shows consumers use media as a primary source of information on social situations, industry news, etc. (Katz et al., 1973). Enhancing social interaction through media implies consumers use media to interact with a wider range of organizations or individuals (Katz et al., 1973). Using media for affirmation and reinforcement indicates consumers value societal opinions and gain support through media (Katz et al., 1973). Media allows the consumer to be informed of a broader field of opportunities, which draws those consumers to the media (Katz et al., 1973).

History of Uses and Gratifications Theory

Mass Society Theory is viewed as the beginning of Uses and Gratifications Theory (West & Turner, 2018). Mass Society Theory is “the idea that average people are helpless victims of powerful mass media” (West & Turner, 2018, p. 388). The theory was discredited when researchers realized audience members were not always affected by media, and when they were, the message was not universal but rather circumstantial to each member (West & Turner, 2018). As mass society theory became discredited, the limited effects theory began to replace researchers’ focus with two approaches: individual differences perspective and social categories model (West & Turner, 2018). The individual differences perspective noted an individual’s intelligence and self-esteem influences the media’s power (West & Turner, 2018). The social categories model states associations and group affiliations limit the media’s power (West & Turner, 2018). These approaches suggest audience members have little to no control over how media messages will impact them and how they interpret the messages (West & Turner, 2018). Uses and

Gratifications Theory was developed in response to the lack of understanding of audience viewpoints of media (West & Turner, 2018).

An interest in uses and gratifications dates back to the beginning of mass communication research in the 1940s (Katz et al., 1973). Listening to soap operas, music on radios, newspaper readings, and children's interests in comics were the primary foci in of the first studies using the Uses and Gratifications Theory (Katz et al., 1973). Lasswell (1948) was the first to propose a four-functional interpretation of media including: surveillance, correlation, entertainment, and socialization (Katz et al. 1973). Wright (1960) later expanded on this interpretation of media (Katz et al., 1973). Surveillance refers to information concerning societal events; correlations refers to interpretation of events and the reactions; entertainment refers to communications intending to amuse the consumer; and socialization refers to social norms, information, and values from one generation to another (Wright, 1960). McQuail, Blumler, and Brown (1972) found this range did not adequately encompass the entirety of functions from Uses and Gratifications, leading them to create their own list: diversion, personal relationships, personal identity, and surveillance (Katz et al., 1973). Diversion includes an escape from routines, problems, and an emotional release; personal relationships include companionship and social utility; personal identity includes examining one's reality and values (Katz et al., 1973).

Uses and Gratifications in Agricultural Communications

Indicated by Perse (2014), the Uses and Gratifications Theory serves as the theoretical framework in the majority of communications research across all disciplines (West & Turner, 2018). Currently, the theory is evolving to adapt to the advancement of

online media channels (West & Turner, 2018). The agricultural industry has evolved with the advancements of online media channels, and with that, Uses and Gratifications has been used to guide research in agricultural communications.

Trissel et al. (2014) used the Uses and Gratifications theory to guide their study focusing on Interscholastic Equestrian Association (IEA) members perceptions of the organization's magazine. Respondents were self-aware, meaning they understand their desired needs and identified how the IEA magazine fulfilled those needs (Trissel et al., 2014). Fulton et al. (2015) undergirded their study with the Uses and Gratifications theoretical framework to identify Oklahoma Farm Bureau Young Farmers and Rancher leader's perceptions of the organization's magazine. Respondents were comfortable with individual characteristics and sections of the magazine, allowing them to fulfill their needs through those sections (Fulton et al., 2015). Underwood et al. (2022) studied the desired uses and gratifications of beef cattle producers in the United States relating to beef breed association publications. This study found the majority of beef cattle breed association magazine readers sought to obtain information useful in advancing their respective breed (Underwood et al., 2022).

Although the Uses and Gratifications Theory has been used to understand perceptions of print communications, studies have also used this theory to examine online media. Shaw et al. (2015) used the theory to study social media channels used by American farmers and ranchers. This study found respondents used Facebook and websites for personal needs and other channels, such as Twitter or blogs, for business related needs (Shaw et al. 2015). Carter et al. (2019) used the Uses and Gratifications Theory to identify the gratifications Illinois farmers hoped to gain through the use of

Facebook. This study found Illinois farmers “seek and obtain gratifications from Facebook” (Carter et al., 2019, p. 87).

Digital Media

Fox et al. (2016) describes social media as “a new form of communication that leverages the Internet to create online or virtual communities,” (par. 1). Social media sites differ in the purposes they serve (Verduyn et al., 2017). Facebook, Twitter, Instagram, and LinkedIn are the most popular social media platforms (Verduyn et al., 2017). Social media platforms have different purposes and modes of communication (Verduyn et al., 2017). Facebook and LinkedIn are primarily used for business and leisure purposes, and Instagram and Twitter are centered around text or image-based communication (Verduyn et al., 2017). Study has shown two-thirds of adults use social media to receive news reports (Fox et al., 2016).

Whiting and Williams (2013) found 10 gratifications for using social media: social interaction, information seeking, pass time, entertainment, relaxation, expression of opinions, communicatory utility, convenience utility, information sharing, and surveillance/knowledge about others. Maintaining relationships with family, friends, colleagues, etc. falls under social interaction with media (Whiting & Williams, 2013). Using social media to learn new skills or facts, obtain information related to events, doing research on business, etc. falls under information seeking (Whiting & Williams, 2013). Using social media to pass the time often looks like scrolling social media leisurely (Whiting & Williams, 2013). Playing games, watching videos, or viewing content for pleasure is using social media for entertainment (Whiting & Williams, 2013).

Using a platform to escape reality and stress is an example of using social media for relaxation (Whiting & Williams, 2013). Commenting, liking, sharing posts, and venting is using social media to express opinions or feelings (Whiting & Williams, 2013). Using social media for “communicatory utility” means consumers use a platform as a topic of conversation or gossip amongst friends (Whiting & Williams, 2013). Convenience utility means social media is the quickest and easiest way to obtain information (Whiting & Williams, 2013). Information sharing describes using social media to share information about yourself with others (Whiting & Williams, 2013). Using social media for surveillance or knowing about others indicates a consumer uses a platform to stay informed on another’s day-to-day activities (Whiting & Williams, 2013).

Understanding communication channel preferences and uses is important for an organization to tailor content to its target audience (Diekmann & Batte, 2009). Producers have more access to information than ever before through adapting to advances in technology and information (Diekmann & Batte, 2009). Information must be relevant and presented in the most desirable form for consumers to find it valuable (Diekmann & Batte, 2009). Social media allows an organization to disseminate information to a broader target audience, expanding past its typical audience (Fox et al., 2016). Diekmann et al. (2009) found agriculture producers seek information based on their communication channel preferences. Producers use communication channels for three primary reasons: gather information, gather knowledge relating to production practices for future use, and simple satisfaction (Diekmann et al., 2009).

User Demographics

Dixon (2023b) reported 238 million adults in the United States used Facebook in 2021. Seventy-seven percent of United States Facebook users were between the ages of 30 – 49 (Dixon, 2022a). The majority, 77%, of United States Facebook were women (Dixon, 2022c) and 73% had at least one college degree or more (Dixon, 2022b).

Dixon (2023) reported 159.75 million United States Instagram users in 2021 (Ruby, 2023). The majority of Instagram users, 77.7%, were between the ages of 18 – 44 (Ruby, 2023). The gender demographics of Instagram users were closely divided with 50.7% males and 49.3% females (Ruby, 2023).

Dixon (2023a) reported 40 million United States Twitter users in 2021. The majority of Twitter users, 69%, fell between the ages of 18 – 49 (Dixon, 2022d). Twenty-five percent of Twitter users were male (Dixon, 2022e) and 33% had at least one college degree or higher (Dixon, 2022f).

Communication Channels in Agriculture

With ever evolving technology comes new opportunities for advancing information dissemination and diversifying the channels agricultural communicators use. Lamm et al. (2019) studied the relationship between demographic characteristics and communication channel preferences, providing practical resources for communicators among the agriculture and natural resources (ANR) community (Lamm et al., 2019). Web pages and blogs were the most preferred communication channels for ANR industry members (Lamm et al., 2019). The study also found Facebook groups to be more “audience-specific” and Twitter to be the least preferred communication channel (Lamm et al., 2019, p. 13).

Understanding what communication channels agriculturalists use to obtain information is critical for agricultural communicators (Scott et al., 2020). A study was conducted to understand Oklahoma wheat producers' communication channel preferences for obtaining production practice information (Scott et al., 2020). Oklahoma producers preferred a combination of print and digital media channels for production practice information (Scott et al., 2020). The study's findings suggest using a variety of communication channels when disseminating production practice information to industry members (Scott et al., 2020, 58).

Livestock Producer Communication Channel Preferences

Little research has examined swine producer preferences regarding communication channels. Various studies have sought to understand beef cattle producer perceptions of communication channels. Norton et al. (2009) sought to understand Angus Journal reader perceptions of the publication and their suggestions for potential improvements. Readers desired information about technologies and herd improvement (Norton et al., 2009). They preferred print forms of publication over digital (Norton et al., 2009). Beef cattle producers preferred delivery methods for Extension and Outreach have also been examined (Diderikson et al., 2019). Researchers conducted interviews to understand beef cattle producer communication preferences (Diderikson et al., 2019). In-person programs with hands-on demonstrations and take-home items were preferred by producers (Diderikson et al., 2019). Demographic characteristics, including scale of operation, segment, region, and experience, were influential on beef cattle producer communication preferences (Diderikson et al., 2019, p. 63).

Underwood et al. (2022) studied the uses and gratifications of beef breed association magazines for beef producers. This study found beef producers used breed association magazines to learn more about many facets of the industry, such as news, events, improvement practices, technological advancements, etc. (Underwood et al., 2022). Researchers also found a clear majority of respondents preferred to access their subscription of beef breed association magazines via print rather than digitally (Underwood et al., 2022).

Digital Communication Channels

Technology advancements, such as social media, have made sharing information both rapid and efficient (Gillespie et al., 2011). Gillespie et al. (2011) explored the use and perceived credibility of social media as a communications tool within the agricultural industry. Livestock publications and the internet were the preferred sources of information for producers (Gillespie et al., 2011). Although social media was the producers least preferred source of information, 50% of the target population used social media, and of that 50%, the majority preferred to use Facebook to access beef industry information (Gillespie et al., 2011). Gillespie et al. found a potential for using technology, like social media, as an effective communication channel in the livestock industry (2011).

Tweeten et al. (2014) examined producer and consumer communication channel usage and preferences. This study concluded beef cattle producers and consumers in Iowa were not interested in obtaining industry information through social media (Tweeten et al., 2014). This study also found as producers' needs changed, their communication channel preferences changed (Tweeten et al., 2014).

Turk et al. (2013) evaluated equine industry member preferences for acquiring industry information via digital media (Turk et al., 2013). Individuals relied on multiple sources of media for information and expected a variety of information from those channels (Turk et al., 2013). Equine industry members spent minimal time on social media seeking industry information (Turk et al., 2013). Although this study supported the conclusion that digital media allowed industry members an opportunity to learn about new products or services within the industry, the findings also indicated social media platforms were not the best use of organizational resources (Turk et al., 2013).

Swine Industry Overview

The swine industry is often categorized into two sectors: commercial and show pig. The commercial sector focuses on producing high-quality pork for the general consumer (Nold, 2006). Show pig producers manage pigs to achieve maximum results in a show ring, often focusing on phenotypical features (Nold, 2006). Production practices are different for show pig producers and commercial producers, indicating desired information and gratifications can be different (Nold, 2006).

The NSR is often thought of as an organization strictly governing show pig producers. However, in recent years purebred commercial registrations with the NSR have increased (Claeys, 2023). Claeys noted, “Global demand for pork continues to drive interest in commercial registrations and the Certified DUROC Pork Program has made big steps forward into becoming a viable branded product that can creditably enter the marketplace,” (2023, par. 2). In 2022, 13,692 litters were registered as show pigs, and 3,432 litters were registered for commercial purposes (Claeys, 2023). Although the

organization primarily registers show pigs, the commercial sector has a presence in the purebred industry and the NSR (Claeys, 2023).

The industry structure and producer numbers have shifted during the last 40 years (USDA, 2022). Large-scale production operations have declined by more than 70% and smaller, individual operations have increased (USDA, 2022). According to the 2012 Census of Agriculture, 48,753 swine production operations had a herd size between 1 and 199 (USDA, 2014a). The majority of production operations are located in the Midwest (USDA, 2022). Large production numbers have also been found in Oklahoma, Texas, and Eastern North Carolina (USDA, 2022). The 2012 Census of Agriculture reported farms with swine sales declined by 29% (USDA, 2014b). The 2012 Census of Agriculture also reported 83% of swine production operations were family or individually owned (USDA, 2014b).

Three types of swine producers are identified by the census: “independent growers raising hogs and pigs for themselves, contract growers raising hogs and pigs for someone else, and contractors using contract growers to raise some or all of their hogs and pigs,” (USDA, 2014b, para. 8). Independent producers accounted for 85% of total producers and contract producers accounted for 44% of total producers in the U.S. (USDA, 2014b). Producers may fall into more than one category depending on the structure of their operation. On average, herdsmen responsible for daily care of production operations specializing in swine were 51 years old (USDA, 2014b). The 2012 Census of Agriculture reported most producers considered farming their primary source of income (USDA, 2014b). The 2012 Census of Agriculture also reported the majority of swine producers were male and between the ages of 45 and 64 (USDA, 2014b).

NSR Digital Media Users

The NSR maintained two Facebook pages, one for NSR and one for the National Junior Swine Association (NSR, personal communication). The majority, 51.6%, of the 26,212 NSR Facebook page followers were male. The majority, 58.4%, of the NJSA 23,878 Facebook page followers were female. The majority of followers for both Facebook pages fell between the ages of 25 – 54 (NSR, personal communication). The organization’s Facebook pages reached approximately 37,000 viewers. The NSR/NJSA Instagram page had 14,800 followers, and the NSR/NJSA Twitter account had 4,318 followers. The NSR’s Events and Education Manager stated, “our organic posts get the most interactions. Because we are pushing so many deadlines and graphics, our engagement isn’t as high as pictures with kids showing, our youth spotlights, etc.,” (NSR, personal communication).

CHAPTER III

METHODOLOGY

Institutional Review Board

Oklahoma State University utilizes the ethical principles outlined in the Belmont Report as guidance and direction for campus-based research (Oklahoma State University, 2022). Student researchers conducting a study with human subjects are required to have their study reviewed and approved by the Institutional Review Board (IRB). This study was submitted for review by the IRB office at Oklahoma State University on February 15, 2023, and was approved on February 16, 2023. The IRB assigned number for this study was IRB-23-71 (see Appendix A).

Research Design

This study used survey methodology to gauge member perspectives of the National Swine Registry (NSR) communication channels. Survey methodology was the most efficient way to analyze a digitally-engaged audience across the United States (Dillman, 2014). Members on the organization's email list were assumed to have access to the internet. The questionnaire was distributed through the NSR's email database and only accessible online.

Population

Creswell (2012) defined a target population as “a group of individuals with some common defining characteristic that the researcher can identify and study” (p. 142). The target population for this study included digitally-engaged adult members of the NSR and the NJSA. Members with active email addresses on the NSR email list and who open emails from the organization were considered digitally-engaged (NSR, personal communication). All study correspondence were distributed through the NSR’s email database. The target population consisted of the 4,180 members on the NSR email list and 8,149 members on the NJSA email list (NSR, personal communication).

Instrumentation

An instrument was designed and developed based on Dillman’s Tailored Design Method (TDM) (2014) to fulfill the objectives of this study (see Appendix B). A panel of experts was assembled to verify validity (see Appendix G), and a post hoc reliability analysis was conducted to analyze reliability of the instrument (Creswell, 2012).

Instrument Design

The TDM illustrates procedures for conducting self-administered surveys to generate high response rates and quality responses (Dillman, 2014). Qualtrics XM was used to ensure the instrument was designed appropriately, regardless of the web browser used to view it (Dillman, 2014). Qualtrics XM is a web-based survey software that allows researchers with minimal coding knowledge to design, construct, and publish a survey instrument and collect responses (Oklahoma State University, 2021). Oklahoma State University’s Ferguson College of Agricultural Sciences and Natural Resources provided this tool.

The instrument included 33 questions divided into four categories: communication channel engagement, desirable characteristics of the communication channels, suggested improvements for the communication channels, and demographics. Eight questions were designed to understand the memberships' engagement with a selection of the organization's communication channels (Facebook, Instagram, Twitter, and the *Seedstock EDGE* magazine). Twelve questions were designed to understand and allow members to express their preferences regarding the desirable characteristics of these communication channels. Six questions were designed to allow respondents to express suggested improvements for the communication channels. Seven questions were tailored to understanding membership demographics such as age, ethnicity, gender, education level, geographic locations, and swine industry involvement.

An introductory page informing the participants of their rights and the purpose and benefits of this study was included. Participants were required to complete a participation agreement, sorting those who met the eligibility requirements to complete the instrument. Participants had to be 18 or older to participate in this study. At the conclusion of the original instrument, participants were taken to an additional questionnaire if they wanted to enter into a drawing for a digital subscription to the *Seedstock EDGE* magazine (see Appendix C). An existing instrument evaluating technology use and information preferences of digitally-engaged American Quarter Horse Association members guided the development of this instrument. (Turk et al., 2013).

An 'if-then' display logic was used throughout the instrument. Participants were asked to indicate if they used each of the NSR's communication channels. If the

respondent chose 'yes,' a 5-point Likert-Type scale and three open-ended questions were populated. If the respondent chose 'no,' they were directed to the following communication channel. The 5-point Likert-Type scale questions evaluated respondents' perceptions of the organization's communication channels based on five adjectives identified by the Marketing and Communications Manager at the NSR. These adjectives were identified as the desired gratifications the Marketing and Communications Manager intends their digitally-engaged membership to glean from the communication channels. One open-ended question sought to understand what content from each channel was most beneficial. One open-ended question sought to understand reasons for following the organization's digital media channels. One open-ended question sought to identify suggested improvements for the various channels.

Validity

Validity ensures an instrument's interpretation will align with its proposed use (Creswell, 2012). Responses from an instrument must be consistent and solid before they can be meaningful (Creswell, 2012). A panel of experts was gathered to evaluate the face and content validity of the instrument (Creswell, 2012). Face validity evaluated the visual representation of the instrument, the order of questions, and usability (Creswell, 2012). Content validity evaluated if the objectives were accurately measured through the questions of the instrument (Creswell, 2012). The panel of experts included an agricultural communications professor, an agricultural communications assistant professor, an animal science assistant professor, and a communications professional from the NSR. The panel of experts were chosen for their research knowledge, the agricultural communications industry, the seedstock industry, and communications within the

seedstock industry. The panel of experts reviewed and critiqued the instrument while providing improvement suggestions. Suggestions included word tightening, reordering questions, and some refinement of objective-related questions.

Reliability

Reliability is an internal measurement of consistency (Creswell, 2012). Deeming an instrument reliable is ensuring the responses are consistent across time and the instrument is measuring the objectives consistently (Creswell, 2012). To establish reliability, a post-hoc reliability analysis was conducted on the Likert-Type scaled items on the instrument. The Cronbach's Alpha coefficients for the scaled items in the instrument ranged from .86 to .96. An instrument is deemed reliable with a Cronbach's Alpha coefficient of at least .70 (Bonett & Wright, 2015).

Data Collection

The data collection process for this study was based on mixed methods suggested in Dillman's TDM (2014). All email correspondence with participants was distributed through the NSR's email database (see Appendix E). The instrument was available to the target population through a link to Qualtrics XM. Participation in the study was optional, and respondents were allowed to exit the survey at any point. The instrument took approximately 20 minutes to complete. The target population received four emails which included the link to Qualtrics XM instrument. The link to the instrument was live for one month following the date of the initial email.

Using the NSR brand guidelines, graphics were created to remind digitally-engaged members to check their email for the link to the instrument and posted on the organization's Facebook and Instagram pages (see appendices E and F). Graphics were

designed for the NSR Facebook page, the NJSA Facebook page, and the NSR/NJSA Instagram page. Graphics were posted the same day email correspondence was sent out.

Timeline & Budget

Dillman's TDM guided the timeline used to deliver the instrument (2014). The initial email sent on February 21, 2023, included a link to the Qualtrics XM instrument. The questionnaire remained open for one month. Throughout the month, there were three email reminders, one on February 28, 2023; one on March 7, 2023; and a final reminder the day the instrument closed on March 14, 2023. Graphics designed to remind digitally-engaged members to check their emails were shared via the organization's Facebook and Instagram pages in addition to the email correspondence. These graphics were posted the same day email correspondence was sent out.

A self-administered questionnaire allows respondents to complete the instrument independently and at their own pace (Dillman, 2007). The NSR offered five free digital subscriptions to the *Seedstock EDGE* magazine to incentivize participants. As noted above, participants could follow an additional link at the end of the instrument to enter to win one of these digital subscriptions. Participants were asked to provide contact information to be considered for the drawing. Each participant was assigned a number, and a random drawing was done to determine the winners. The responses from this instrument were kept separately from the responses of the original instrument. Both instruments were anonymous with no time stamps, therefore the results were not used for interpretation. The drawing was completed, and winners were contacted, shortly after the conclusion of the study.

Data Analysis

This study collected quantitative and qualitative data. Quantitative data was analyzed using the Statistical Package for Social Sciences (SPSS) software for Mac. The qualitative data was analyzed by coding responses for themes. Themes were created by evaluating responses and grouping them by like terms.

The first research objective was satisfied by describing the demographic frequencies of digitally-engaged NSR members. The second research objective was satisfied by evaluating frequencies of digitally-engaged members' social media platform usage and NSR communication channel usage. The third research objective was satisfied by evaluating digitally-engaged members' perceptions of the organization's communication channels via Likert-Type scales. Research objective three was also satisfied by coding for themes around beneficial content, suggested improvements, and reasons for following the organization's social media platforms. Themes were coded by analyzing responses to each open-ended question, grouping responses by commonalities, and creating over-arching themes based on commonalities. The fourth research objective was satisfied by cross-tabulating data between the personal demographics of digitally-engaged members and digital media channel usage. Frequencies were analyzed from this crosstabulation to create audience personas.

Response Rate

The NSR email list had an open rate of 37% (n = 1,096) and the NJSA email list had an open rate of 39% (n = 2,512) (NSR, personal communication). The data collection process resulted in 103 responses, providing a response rate of 2.85%. Of those 103

responses, 18 were incomplete. The researcher deemed 85 responses complete and usable.

CHAPTER IV

FINDINGS

Overview

This chapter provides the results of NSR members' perspectives of the organization's communication channels. It also provided the NSR with more knowledge about its membership, specifically related to members' preferences, understanding, and suggested enhancements for the organization's communication channels. Data was collected and analyzed to meet the following research objectives:

1. Describe personal demographics (age, gender, ethnicity, education, location, and involvement in the swine industry) of digitally-engaged NSR members.
2. Describe digital media use of digitally-engaged NSR members.
3. Determine content the digitally-engaged membership find most beneficial, identify suggestions for improvement, and common reasons for following/subscribing to the organization's communication channels.
4. Identify audience persona characteristics of digital media channels used by digitally-engaged NSR members.

Research Objective One – Describe Personal Demographics of Digitally-Engaged NSR Members

Research objective one sought to describe the personal demographics of digitally-engaged NSR members. Seven questions identified digitally-engaged members' age, gender, ethnicity, education, resident location, and involvement in the swine industry. Participants indicated their demographics based on ranges or terms used in the U.S. Census. Age ranges were divided into 10-year intervals, and most respondents (n = 33) were between the ages of 36 – 65. Participants were given the option to identify with a given gender or prefer not to say. The majority of respondents (n = 44) identified as male. Participants also had the option to identify with one of five ethnic groups or describe a group not listed. The majority of respondents (n = 62) identified as white.

Participants chose from nine levels when indicating their highest level of education. The majority of respondents (n = 43) indicated having a higher level of education, either a 4-year degree or a master's degree. Participants chose from four descriptions identified in the U.S. Census to categorize their residency. The majority of respondents (n = 57) identified living on a farm or ranch.

Participants indicated whether they owned their own swine production operation or worked for someone else's operation. The majority of respondents (n = 53) indicated they owned their swine production operation and ran it part-time as either a supplemental source of income or as a hobby. Most respondents also indicated they did not work for someone else's swine production operation (n = 60). Table 1 illustrates the complete demographic responses of digitally-engaged NSR members.

Table 1
Digitally-Engaged NSR Members' Demographics

Demographics	<i>f</i>	%
Age Range (n = 72)		
17 - 25	7	9.7%
26 - 35	9	12.5%
36 - 45	15	20.8%
46 - 55	18	25.0%
56 - 65	13	18.1%
66+	10	13.9%
Gender (n = 71)		
Male	44	61.1%
Female	27	37.5%
Ethnicity (n = 72)		
American Indian or Alaska Native	3	4.2%
Hispanic or Latino	2	2.8%
White	62	86.1%
Other	5	6.9%
Highest level of education (n = 71)		
Less than high school	1	1.4%
High school graduate	4	5.6%
Some college	11	15.5%
2-year degree	8	11.3%
4-year degree	28	39.4%
Master's degree	15	21.1%
Professional degree	1	1.4%
Doctorate	3	4.2%
Residency (n = 72)		
On a farm or ranch	57	79.2%
In a rural area/small town (10,000 or less)	11	15.3%
In a large town (10,000 - 50,000)	4	5.6%
I own my own swine production operation... (n = 72)		
Full-time as my main source of income	7	9.7%
Part-time as a supplemental source of income	34	47.2%
Part-time as a hobby	19	26.4%
I do not own and operate my own swine production operation	12	16.7%
I work for someone else's swine production operation... (n = 71)		
Full-time as my main source of income	4	5.6%
Part-time as a supplemental source of income	3	4.2%
Part-time as a hobby	4	5.6%
I do not work for someone else's swine production operation	60	84.5%

Research Objective Two – Describe Digital Media Use of Digitally-Engaged NSR Members

Research objective two sought to understand the digital media use of digitally-engaged NSR members. Initially, participants were asked to indicate any social media platforms used. Six platforms were provided to choose from, and an option to indicate any not listed. The majority of respondents (n = 74) indicated using the Facebook platform. Table 2 illustrates the complete social media platform usage of digitally-engaged NSR members.

Table 2
Digitally-Engaged NSR Member's Social Media Platform Usage

Platforms	<i>f</i>	%
Facebook	74	87.1%
Instagram	36	42.4%
Snapchat	32	37.6%
TikTok	23	27.1%
LinkedIn	17	20%
Twitter	14	16.5%
Other Social Media Outlets	6	8.2%

Six yes or no questions were used to identify the percentage of digitally-engaged NSR members following the organization's digital communication channels. This study focused on the NSR Facebook page, the NJSA Facebook page, NSR/NJSA Instagram page, NSR/NJSA Twitter page, and the *Seedstock EDGE*. The majority of respondents indicated they followed the NSR and NJSA Facebook pages. Sixty-one respondents followed the NSR Facebook page, and 49 respondents followed the NJSA Facebook page. Most respondents also indicated not following the NSR/NJSA Twitter page or not having a Twitter account. Thirty-nine respondents did not follow the organization's

Twitter page and 40 respondents did not have a Twitter. Table 3 illustrates the complete usage of the organization’s communication channels by digitally-engaged NSR members.

Table 3
Digitally-Engaged NSR Members' Usage of Organization's Digital Communication Channels

NSR digital communication channels	<i>f</i>	%
NSR Facebook page (n = 84)		
Follow	61	72.6%
Do not follow	12	14.3%
Do not have a Facebook account	11	13.1%
NJSA Facebook page (n = 83)		
Follow	49	59%
Do not follow	23	27.7%
Do not have a Facebook account	11	13.3%
<i>Seedstock EDGE</i> (n = 85)		
Subscribed	41	48.2%
Not subscribed	44	51.8%
Instagram (n = 85)		
Follow	28	32.9%
Do not follow	26	30.6%
Do not have an Instagram account	31	36.5%
Twitter (n = 85)		
Follow	6	7.1%
Do not follow	39	45.9%
Do not have a Twitter account	40	47.1%

Research Objective Three – Determine Content the Digitally-Engaged Membership Find Most Beneficial, Suggestions for Improvement, and Reasons for Following Communication Channels

Research objective three sought to identify what content the digitally-engaged membership found most beneficial, suggestions for improvement, and common reasons for following the organization’s digital media channels. The instrument used a combination of 5-point Likert-type scale questions and three open-ended questions to gain an understanding of the digitally-engaged members’ perceptions.

Likert-Type Scale

Five statements identified the digitally-engaged memberships' perceptions of the organizations' current communication channels. The NSR's Marketing and Communications Manager identified these statements as the desired gratifications the organization intends its digitally-engaged membership receive from the communication channels. Participants rated their level of agreement for each statement on a 5-point Likert-type scale from *strongly agree* to *strongly disagree*. The scale begins with strongly agree at 5, somewhat agree at 4, neither agree nor disagree at 3, somewhat disagree at 2, and strongly disagree at 1. These questions were divided by each communication channel.

The majority of participants indicated to 'strongly agree' or 'somewhat agree' the NSR/NJSA's Instagram content was useful, appropriate, educational, informative, and engaging. Twenty-two respondents found the content useful, 25 found the content appropriate, 20 found the content educational, and 21 found the content informative and engaging. Table 4 illustrates the complete perceptions of the NSR/NJSA's Instagram content from digitally-engaged NSR members.

The majority of participants indicated to 'strongly agree' or 'somewhat agree' the NSR/NJSA's Twitter content was useful, appropriate, educational, informative, and engaging. Four respondents found the content useful, educational, and informative, five found the content appropriate, and three found the content engaging. Table 5 illustrates the complete perceptions of the NSR/NJSA's Twitter content from the digitally-engaged NSR membership.

Table 4*Digitally-Engaged NSR Members' Perceptions of the NSR/NJSA's Instagram Content*

Perceptions	Strongly agree		Somewhat agree		Neither agree nor disagree		Somewhat disagree		Strongly disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
I find the NSR/NJSA's Instagram content useful. (n = 27)	11	40.7%	11	40.7%	4	14.8%	1	3.7%	0	0%
I find the NSR/NJSA's Instagram content appropriate. (n = 28)	17	60.7%	8	28.6%	2	7.1%	0	0%	1	3.6%
I find the NSR/NJSA's Instagram content educational. (n = 27)	9	33.3%	11	40.7%	5	18.5%	2	7.4%	0	0%
I find the NSR/NJSA's Instagram content informative. (n = 26)	10	11.8%	11	42.3%	3	11.5%	2	7.7%	0	0%
I find the NSR/NJSA's Instagram content engaging. (n = 28)	8	28.6%	13	46.4%	4	14.3%	2	7.1%	1	3.6%

The majority of participants indicated to ‘strongly agree’ or ‘somewhat agree’ the NSR’s Facebook content was useful, appropriate, educational, informative, and engaging. Fifty-nine respondents found the content useful and appropriate, 44 found the content educational, 55 found the content informative, and 43 found the content engaging. Table 6 illustrates the complete perceptions of the NSR’s Facebook content from the digitally-engaged NSR membership.

Table 5
Digitally-Engaged NSR Members' Perceptions of the NSR/NJSA's Twitter Content

	Strongly agree		Somewhat agree		Neither agree nor disagree		Somewhat disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
I find the NSR/NJSA's Twitter content useful. (n = 6)	2	33.3%	2	33.3%	2	33.3%	0	0.0%
I find the NSR/NJSA's Twitter content appropriate. (n = 6)	2	33.3%	3	50.0%	1	16.7%	0	0%
I find the NSR/NJSA's Twitter content educational. (n = 6)	2	33.3%	2	33.3%	1	16.7%	1	16.7%
I find the NSR/NJSA's Twitter content informative. (n = 4)	1	25.0%	3	75.0%	0	0.0%	0	0.0%
I find the NSR/NJSA's Twitter content engaging. (n = 6)	2	33.3%	1	16.7%	2	33.3%	1	16.7%

The majority of participants indicated to ‘strongly agree’ or ‘somewhat agree’ the NJSA’s Facebook content was useful, appropriate, educational, informative, and engaging. Forty-three respondents found the content useful, 41 found the content appropriate, 32 found the content educational and engaging, and 38 found the content informative. Table 7 illustrates the complete perceptions of the NJSA’s Facebook content from the digitally-engaged NSR membership.

The majority of participants indicated to ‘strongly agree’ or ‘somewhat agree’ the *Seedstock EDGE* content was useful, appropriate, educational, informative, and engaging. Thirty-eight respondents found the content useful, 37 found the content appropriate, 34 found the content educational, 36 found the content informative, and 33 found the content engaging. Table 8 illustrates the complete perceptions of the *Seedstock EDGE* content from the digitally-engaged NSR membership.

Table 6*Digitally-Engaged NSR Members' Perceptions of the NSR Facebook Page Content*

Perceptions	Strongly agree		Somewhat agree		Neither agree nor disagree		Somewhat disagree		Strongly disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
I find the NSR Facebook content useful. (n = 60)	28	46.7%	31	51.7%	1	1.7%	0	0.0%	0	0%
I find the NSR Facebook content appropriate. (n = 60)	39	65.0%	20	33.3%	1	1.7%	0	0%	0	0.0%
I find the NSR Facebook content educational. (n = 56)	20	35.7%	24	42.9%	10	17.9%	2	3.6%	0	0%
I find the NSR Facebook content informative. (n = 58)	30	51.7%	25	43.1%	3	5.2%	0	0.0%	0	0%
I find the NSR Facebook content engaging. (n = 56)	20	35.7%	23	41.1%	11	19.6%	1	1.8%	1	1.8%

Table 7*Digitally-Engaged NSR Members' Perceptions of the NJSA's Facebook Page Content*

Perceptions	Strongly agree		Somewhat agree		Neither agree nor disagree		Somewhat disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
I find the NJSA Facebook content useful. (n = 44)	19	43.2%	24	54.5%	1	2.3%	0	0.0%
I find the NJSA Facebook content appropriate. (n = 44)	22	50.0%	21	47.7%	1	2.3%	0	0%
I find the NJSA Facebook content educational. (n = 40)	17	42.5%	15	37.5%	6	15.0%	2	5.0%
I find the NJSA Facebook content informative. (n = 41)	19	46.3%	19	46.3%	3	7.3%	0	0.0%
I find the NJSA Facebook content engaging. (n = 41)	14	34.1%	18	43.9%	7	17.1%	2	4.9%

Table 8
Digitally-Engaged NSR Members' Perceptions of the Seedstock EDGE Content

Perceptions	Strongly agree		Somewhat agree		Neither agree nor disagree		Somewhat disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
I find the <i>Seedstock EDGE</i> content useful. (n = 43)	17	39.5%	21	48.8%	4	9.3%	1	2.3%
I find the <i>Seedstock EDGE</i> content appropriate. (n = 43)	23	53.5%	14	32.6%	4	9.3%	2	5%
I find the <i>Seedstock EDGE</i> content educational. (n = 40)	15	37.5%	19	47.5%	4	10.0%	2	5.0%
I find the <i>Seedstock EDGE</i> content informative. (n = 42)	18	42.9%	18	42.9%	4	9.5%	2	4.8%
I find the <i>Seedstock EDGE</i> content engaging. (n = 42)	13	31.0%	20	47.6%	7	16.7%	2	4.8%

Open-Ended Questions

Three open-ended questions gauged digitally-engaged members' perceptions of the organizations' current communication channels. Divided by channel, respondents described what content they find most beneficial, suggested improvements, and reasons for following the organization's digital communication channels.

Open-ended Questions: Benefits

Two primary themes emerged from the 20 responses describing beneficial Instagram content: *shows & events* and *deadlines*. Twelve respondents noted content related to shows and events is most beneficial, including *general information, dates, results, and winners*. One respondent said, "information about the Southeast Regional," and another said, "results from shows" is beneficial content. Five respondents indicated content relating to *deadline reminders* is most beneficial. The remaining respondents indicated content involving *sales, scholarships, and pictures* is most beneficial.

One primary theme emerged from the four responses related to beneficial Twitter content: *shows and events*. Four respondents noted content related to shows and events is most beneficial, including *educational events, results, sires, and updates*. One respondent said, “education events or happening around national shows – also promotion of the swine industry”; another said “show updates” is beneficial content.

Two primary themes emerged from the 36 responses describing beneficial NSR Facebook content: *shows and deadlines*. Twenty-four respondents noted beneficial content is related to shows, including *general information, results, schedules, sale information, and entries*. One respondent said, “champion information at shows and sign-up reminders,” and another said “show champions and sale toppers” is beneficial content. Four respondents indicated content focused on *deadline information* is most beneficial. One respondent said “NJSA deadlines and information,” and another said “reminders about entries” is beneficial content. The remaining respondents indicated the most beneficial content: all content, general announcements, updates, and information.

Two primary themes emerged from the 31 responses noting beneficial NJSA Facebook content: *shows & events and deadlines*. Twenty respondents noted content related to shows and events is most beneficial, including *general information, class listings and catalogs, dates, results, and breed information*. One respondent said, “anything about junior shows or changes in rules”; another said “show and winner information” is beneficial content. Three respondents noted the content they find most beneficial from the NJSA’s Facebook page includes *date and deadline information*. The remaining respondents indicated the most beneficial content is *all content and general information*.

Three primary themes emerged from the 26 responses indicating beneficial *Seedstock EDGE* content: *breeder advertisements, shows, and articles*. Six respondents noted content including *breeder advertisements* was most beneficial. One respondent said, “ads from breeders and feature articles,” and another said “producer advertising” content is beneficial. Ten respondents indicated content related to shows is most beneficial, including *general information and results*. One respondent said, “boars and show winnings,” and another said “sale and show results” is beneficial content. Eight respondents indicated articles are beneficial content, including *breeder promotion, history and news, and youth spotlights*. One respondent said, “history articles and industry news,” and another said “stories on breeders and breed history” was beneficial content. The remaining respondents noted *all content* from the *Seedstock EDGE* was beneficial.

Open-ended Questions: Improvements

Four primary themes emerged from the 16 responses suggesting improvements for the NSR/NJSA’s Instagram: *education, membership engagement, shows, and general information*. Five respondents noted *educational content* could be added for improvement, including *quizzes, knowledge useful to those outside the industry, and fun facts*. One respondent said the content “needs to be more educational if the NSR/NJSA would like to increase their following past just the members. Maybe including more educational content that could be useful for not only members but those outside of the swine industry. This could increase readership and engagement from other sectors respectively.” Another respondent said “more engagement such as educational quizzes” could help improve the content.

Five respondents indicated content focused on *membership engagement* could be added to improve the NSR/NJSA Instagram content, including *breeder spotlights, boar/sow spotlights, youth membership spotlights, breed promotion, and ways to get involved*. One respondent said, “more interaction with NJSA members – surveys – contests, etc.” could improve the content. Three respondents indicated content related to *shows* could be added for improvement, including *breed winners, video updates, show programs, and judge interviews*. One respondent said, “interviews with the judges” could improve the content. Three respondents noted content related to *general information* could be added for improvement. One respondent said, “how NSR is making improvements,” and another said, “services and what the money we are paying is going toward” could improve the content.

Two respondents noted *class results* and *sales* content could be added to the NSR/NJSA’s Twitter account for improvement. Respondents said, “all class results,” and another said, “sales, what the littermates did and where they are. Sale prices and buyers. Add sales reports” could improve content.

Three primary themes emerged from the 28 responses suggesting improvements for the NSR’s Facebook page: *organization information, shows, and general information*. Seven respondents noted content related to *organization information* could be added for improvement, including *rule or classification updates, staff changes, updates, and interactions, services provided other than shows, and items up for discussion*. One respondent said, “breed registry information, rule or classification updates,” another said, “more interaction with breeders, staff and activities,” and an additional respondent said, “more posts about what they do beside put on shows” could improve content.

Seven respondents indicated content related to *shows* could be added to the NSR's Facebook page, including: *preshow updates, results, contest information, more detailed sale reports, and promotion*. One respondent said, "more detailed sales reports," and another said, "promoting events more" could improve content. Eight respondents noted content focused on *general information* could be added for improvement, including *links, educational materials, producer and purebred promotional pieces, and opportunities*. One respondent said, "more education to help expand the show industry," and another said, "more information about upcoming changes" could improve content. Six respondents indicated *no content* needs to be added to the NSR's Facebook page for improvement.

Three primary themes emerged from the 22 responses suggesting improvements for the NJSA's Facebook page: *shows, education, and general information*. Five respondents noted content related to *shows* could be added for improvement, including *broadcasts, entry numbers, judge information, videos, show preparation, and rules and regulations*. One respondent said, "more show information, broadcasts, how many head entered, name judges, and profile them," and another said, "more videos about shows, how to videos for showing/taking care of animals" could improve content.

Four respondents indicated *educational content* could be added to the NJSA's Facebook page, including *contests, scholarship information, and promotional pieces*. One respondent said the content can be "more educational to help expand the show industry." Three respondents noted content focused on *general information* could be added for improvement, including *industry professional Q & A, purebred promotion, and junior board take overs and spotlights*. One respondent said, "more junior take overs,

more on the junior board, and member spotlights” could improve content. The remaining respondents indicated *no content* needs to be added to the NJSA’s Facebook page for improvement.

Four primary themes emerged from the 25 responses offering suggested improvements to the *Seedstock EDGE*: *breeder advertisements, articles, membership engagement, and education*. Five respondents noted content related to *breeder advertisements* could be added for improvement. One respondent said, “it would be nice to see more breeder ads,” and another said “more producer advertising” could improve content. Eight respondents indicated content related to *articles* could be added to the *Seedstock EDGE* to improve it, including *new technology, new techniques, spotlight/breeder articles, and fieldman reviews*. One respondent said, “better people articles that include more variation in breeders’ selection and breeding programs,” and another said, “more breeder thoughts on subjects, ideas about the industry, and incorporate more industry allies” could improve content.

Four respondents noted content related to *membership engagement* could be added to improve the *Seedstock EDGE*, including *youth stories and promotional pieces*. One respondent said, “more personal pages with stories from children with their livestock,” and another said “the promotion of production hogs” could improve content. Three respondents noted *educational content* could be added for improvement. One respondent said, “more educational information for the new or beginning showman or swine breeder” could improve content. The remaining respondents indicated *no content* needs to be added for improvement.

Open-ended Questions: Reasons for Following Digital Media Channels

One primary theme emerged from the 18 responses providing reasons for following the NSR/NJSA's Instagram page: *updates and current information*.

Respondents noted the primary reason for following the organization's Instagram account is to *stay up to date on current events and obtain industry information and details for upcoming events*. One respondent said their reason for following is "it is a great way to keep up to date on NJSA happenings. I find it useful to stay updated on some of the NSR happenings and on how some individuals are placing/selling across the country." Another respondent said their reason for following was "to be aware of when entries and registrations for events, conferences etc. open and close," and another said, "to stay in the loop with what is happening at the NSR and get fun content."

One primary theme emerged from the five responses providing reasons for following the NSR/NJSA's Twitter page: *shows*. Respondents indicated the primary reason for following the organization's Twitter account is to *access show results and information*. One respondent said they follow the organization's Twitter account "for updates for national shows or information," and another said, "for show results."

Two primary themes emerged from the 41 responses noting reasons for following the NSR's Facebook page: *informational updates and shows*. Twenty-one respondents noted *informational updates* are the primary reasons for following. One respondent said they follow because "Facebook is my main social media and I like to keep up to date on events," and another said, "to find out NSR related information." Seventeen respondents indicated they follow for *show information* content, including *results, deadlines, and catalog orders*. One respondent said they follow so they are "aware of information about

upcoming shows,” and another said they have “followed it for years for show information.”

Two primary themes emerged from the 30 responses indicating reasons for following the NJSA’s Facebook page: *shows and current updates*. Sixteen respondents noted following for content related to *show information*, including *results, deadlines, and general information*. One respondent said they follow “for updates for the activities for national shows or content,” and another said, “to get show information and stay in the know. Along with I enjoy the content.” Thirteen respondents indicated following for content related to *current updates*, including *general organization updates and deadlines*. One respondent said they follow “to get the latest information fact,” and another said, “to keep up with the NJSA news.”

Research Objective Four – Identify Audience Persona Characteristics of Digital Media Channels Used by Digitally-Engaged NSR Members

Research objective four sought to identify audience persona characteristics of digital media channels used by digitally-engaged NSR members. Crosstabulation evaluated the age range, gender, education level, residence location, and industry involvement of digitally-engaged NSR members related to their engagement with the digital media channels used by the NSR.

The majority of digitally-engaged NSR members who use Instagram identify as female (n = 16) between the ages of 46 – 55 (n = 10). These respondents had a 4-year degree as their highest level of education (n = 15) and lived on a farm or ranch (n = 25). The majority of these respondents owned their own swine operation part-time as a supplemental source of income or as a hobby (n = 22). The majority of respondents also

indicated they did not work for someone else's swine production operation (n = 27).

Table 9 illustrates typical audience persona characteristics of digitally-engaged NSR members who use Instagram.

The majority of digitally-engaged NSR members who use Facebook identify as male (n = 35), between the ages of 36 – 65 (n = 39). These respondents indicated having a 4-year degree or master's degree (n = 37) and living on a farm or ranch (n = 49). The majority of these respondents own their own swine operation part-time as a supplemental source of income or as a hobby (n = 55). The majority of respondents also indicated they did not work for someone else's swine production operation (n = 51). Table 10 illustrates typical audience persona characteristics of digitally-engaged NSR members who use Facebook.

The majority of digitally-engaged NSR members who use Twitter identify as male (n = 9), between the ages of 36 – 55 (n = 11). These respondents indicated having a 4-year or master's degree (n = 7) and living on a farm or ranch (n = 10). The majority of these respondents own their own swine operation part-time as a supplemental source of income (n = 8). The majority of respondents also indicated they did not work for someone else's swine production operation (n = 11). Table 11 illustrates typical audience persona characteristics of digitally-engaged NSR members who use Twitter.

Table 9*Digitally-Engaged NSR Members' Demographics Related to Instagram Use*

Demographics	Members who use Instagram (n = 30)	
	<i>f</i>	%
Age Range		
17 - 25	5	16.6%
26 - 35	6	20.0%
36 - 45	6	20.0%
46 - 55	10	33.3%
56 - 65	2	6.7%
66+	1	3.3%
Gender		
Male	14	46.6%
Female	16	53.3%
Education		
High school graduate	2	6.7%
Some college	5	16.7%
2-year degree	3	10.0%
4-year degree	15	50.0%
Master's degree	5	16.7%
Residency		
Farm or ranch	25	83.3%
Rural area/small town (less than 10,000)	4	13.3%
Large town (10,000 - 50,000)	1	3.3%
I own my own swine production operation...		
Full-time as my main source of income	4	13.3%
Part-time as a supplemental source of income	13	43.3%
Part-time as a hobby	9	30%
I do not own and operate my own swine production operation	4	13.3%
I work for someone else's swine production operation...		
Full-time as my main source of income	1	3.3%
Part-time as a supplemental source of income	1	3.3%
Part-time as a hobby	1	3.3%
I do not work for someone else's swine production operation	27	90%

Table 10*Digitally-Engaged NSR Members' Demographics Related to Facebook Use*

Demographics	Members who use Facebook (n = 61)	
	<i>f</i>	%
Age Range		
17 - 25	5	8.2%
26 - 35	9	14.8%
36 - 45	13	21.3%
46 - 55	16	26.2%
56 - 65	10	16.4%
66+	8	13.1%
Gender		
Male	35	57.4%
Female	25	41.0%
Prefer not to share	1	1.6%
Education		
High school graduate	4	6.6%
Some college	11	18.0%
2-year degree	6	9.8%
4-year degree	24	39.3%
Master's degree	13	21.3%
Professional degree	1	1.6%
Doctorate	2	3.3%
Residency		
Farm or ranch	49	80.3%
Rural area/small town (less than 10,000)	8	13.1%
Large town (10,000 - 50,000)	4	6.6%
I own my own swine production operation... (n = 60)		
Full-time as my main source of income	6	10.0%
Part-time as a supplemental source of income	29	48.3%
Part-time as a hobby	16	26.7%
I do not own and operate my own swine production operation	10	16.7%
I work for someone else's swine production operation... (n = 60)		
Full-time as my main source of income	3	5%
Part-time as a supplemental source of income	2	3.3%
Part-time as a hobby	4	6.7%
I do not work for someone else's swine production operation	51	85%

Table 11*Digitally-Engaged NSR Members' Demographics Related to Twitter Use*

Demographics	Members who use Twitter (n = 13)	
	<i>f</i>	%
Age Range		
17 - 25	1	7.7%
26 - 35	1	7.7%
36 - 45	4	30.8%
46 - 55	7	53.9%
Gender		
Male	9	69.2%
Female	4	30.8%
Education		
High school graduate	2	15.4%
Some college	2	15.4%
2-year degree	1	7.7%
4-year degree	4	30.8%
Master's degree	3	23.1%
Doctorate	1	7.7%
Residency		
Farm or ranch	10	76.9%
Rural area/small town (less than 10,000)	1	7.7%
Large town (10,000 - 50,000)	2	15.4%
I own my own swine production operation...		
Full-time as my main source of income	2	15.4%
Part-time as a supplemental source of income	8	61.5%
Part-time as a hobby	2	15.4%
I do not own and operate my own swine production operation	1	7.7%
I work for someone else's swine production operation...		
Full-time as my main source of income	1	7.7%
Part-time as a hobby	1	7.7%
I do not work for someone else's swine production operation	11	84.6%

CHAPTER V

CONCLUSIONS & RECOMMENDATIONS

Overview

This chapter provides a summary of the findings listed in Chapter IV, based on the responses of digitally-engaged NSR members. Conclusions and discussions are provided by objective, and recommendations for practice and future research are based on the findings related to each objective. Due to the response rate, these findings and conclusions are only generalizable to the 85 respondents of this study.

The *Long-Range Strategic Plan*, created in 2017, was the first document for the organization to highlight its mission and vision. NSR leadership is eager to learn if the current communication channels are helping the organization progress, meet the needs of the membership, and advance the mission and vision of the organization (NSR, personal communication). This study aimed to gauge the NSR members' perspectives of the organization's communication channels. It also provided the NSR with more knowledge about its membership, specifically related to members' preferences, understanding, and suggested enhancements for the organization's communication channels. The following objectives guided this study:

1. Describe personal demographics (age, gender, ethnicity, education, location, and involvement in the swine industry) of digitally-engaged NSR members.

2. Describe digital media use of digitally-engaged NSR members.
3. Determine content the digitally-engaged membership find most beneficial, suggestions for improvement, and common reasons for following the organization's communication channels.
4. Identify audience persona characteristics of digital media channels used by digitally-engaged NSR members.

Conclusions & Discussion

Research Objective One – Describe Personal Demographics of Digitally-Engaged NSR Members

Research objective one sought to describe the personal demographics of digitally-engaged NSR members. As previously discussed, participants indicated their age, gender, ethnicity, education level, resident location, and involvement in the swine industry. The NSR has a wide age range of digitally-engaged members, and the majority of respondents were white males with a higher level of education. Although the findings of this study did not indicate a definite age range, the majority of respondents being male aligns with the results of the 2012 U.S. Census of Agriculture (USDA, 2014b). The majority of respondents to this survey lived on a farm or ranch and owned their own swine production operation part-time as a supplemental source of income or hobby. The findings of this study did not align with the 2012 U.S. Census of Agriculture, which reported swine producers were most likely to consider farming as their primary source of income rather than a supplemental (USDA, 2014b).

Research Objective Two – Describe Digital Media Use of Digitally-Engaged NSR Members

Research objective two sought to understand the digital media use of digitally-engaged NSR members. As previously discussed, participants indicated the social media platforms they used and which NSR digital communication channels they followed. Facebook was the most used platform by digitally-engaged NSR members. When obtaining information from the NSR, the digitally-engaged members were using both the organization's Facebook pages and the print publication, the *Seedstock EDGE*. Although these members were digitally-engaged, they primarily accessed their subscription to the *Seedstock EDGE* in print form. For the most part, digitally-engaged NSR members either do not have a Twitter account or do not follow the organization's Twitter account.

The findings of this study indicated Facebook to be the preferred communication channel, contradicting previous findings that indicated social media as an ineffective communication tool (Turk et al. 2013; Tweeten et al., 2014; Gillespie et al., 2011). Although the literature indicated social media was the least effective form of communication, Facebook was the preferred social media platform among beef producers, which aligns with the findings of the present study (Gillespie et al., 2011). Gillespie et al. (2011) indicated the potential for social media platforms to be an effective communication channel, supporting this study's finding related to Facebook being the preferred communication channel. In addition, the finding of this study which indicated a preference to a print form of breed association publications aligns with Underwood et al.'s 2022 study.

Research Objective Three – Determine Content Digitally-Engaged Membership Find Most Beneficial, Identify Suggestions, and Common Reasons for Following

Research objective three sought to identify which features of the organization's communication channels the digitally-engaged membership found most beneficial, suggestions for improvement, and common reasons for following the organization's digital media channels. As previously discussed, Likert-type scales and open-ended questions measured perceptions and identified themes of benefits, improvements, and reasons for following.

Preferences

The NSR's digitally-engaged members found the content of the organization's communication channels useful, appropriate, educational, informative, and engaging. This finding indicated respondents were using multiple platforms to gain information and obtained more than one gratification from a single channel. This finding supports the Uses and Gratifications Theory which indicated individuals use different sources of information to fulfill different needs (Katz et al., 1973; West & Turner, 2018). This finding also aligned with literature indicating livestock producers utilized various media sources for an array of information (Underwood et al., 2022).

Benefits

Respondents noted content related shows, including entry information, results, and deadline reminders, were the most beneficial content for each channel. Digitally-engaged NSR members used multiple channels to seek gratification to be informed or educated. This finding supports the Uses and Gratifications Theory (Katz et al., 1973;

West & Turner, 2018). This finding also aligns with Whiting and Williams' 2013 study and Underwood's 2022 study.

Improvements

Respondents suggested the addition of educational content, show information, and organizational information to improve content. Digitally-engaged members indicated they wanted to see more educational content across all platforms. Although these members indicated they found the current content educational, they wanted more content related to education, such as contest preparation and fun facts. These members also indicated they wanted more information about shows. Although content related to show information was found to be beneficial, members wanted to see more results, class postings, and detailed reports shared across all platforms rather than limited results. The last suggested improved for content was the inclusion of organizational information. Members expressed an interest in learning what additional services and events the organization offers aside from shows, and a desire for more staff involvement through the communication channels.

The digitally-engaged membership was active and goal-oriented. They sought to be informed and educated, and gain social interaction from multiple channels to obtain desired gratifications. This finding supports the Uses and Gratifications Theory (Katz et al., 1973; West & Turner, 2018). This finding also aligned with Whiting and Williams' 2013 study and Underwood's 2022 study.

Reasons for Following

The two primary reasons respondents indicated for following the organization's digital communication channels were current information and show updates. Social

media channels were the quickest and easiest way to obtain current breed association information for digitally-engaged NSR members. Updates and results were the primary aspects of show information digitally-engaged members were searching for. Respondents were using digital media channels for convenience utility and obtaining gratification through seeking information. This finding supports the Uses and Gratifications Theory (Katz et al., 1973; West & Turner, 2018). This finding also aligns with Whiting and Williams' 2013 study and Underwood et al.'s 2022 study.

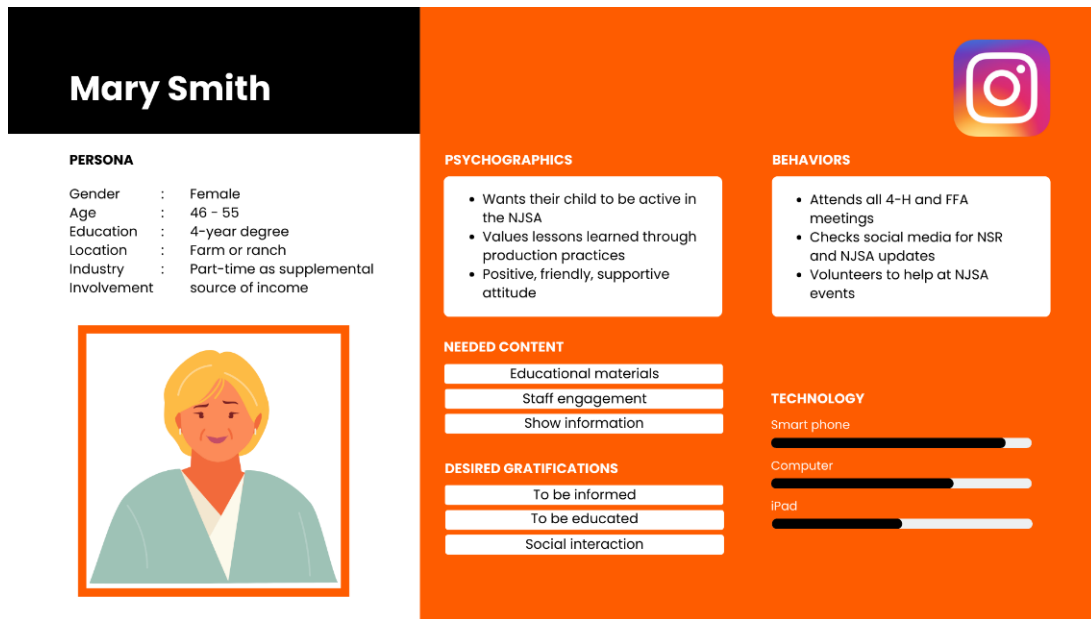
Research Objective Four – Identify Audience Persona Characteristics of Digital Media Channels Used by Digitally-Engaged NSR Members

Research objective four sought to identify audience persona characteristics of digital media channels used by digitally-engaged NSR members. As previously discussed, crosstabulation evaluated the age range, gender, education level, residence location, and industry involvement of digitally-engaged NSR members related to their engagement with select digital media channels used by the NSR. Audience personas allow the organization to tailor the content on each platform to its audience.

Each digital media channel has a unique audience persona. The typical, digitally-engaged NSR member, Instagram user is a woman between the ages of 46 – 55 with a 4-year degree. She lives on a farm or ranch and owns her own swine production operation part-time as a supplemental source of income. This finding aligns with Ruby's 2023 study. Figure 1 illustrates an audience persona for a digitally-engaged NSR member who uses the Instagram platform.

Figure 1

Audience Persona for Instagram Users



Note. This figure illustrates the audience persona characteristics of a digitally-engaged NSR member who uses the Instagram platform. Findings of this study identified individual audience persona characteristics.

The typical digitally-engaged NSR member, Facebook user is a male with a 4-year or master’s degree. He lives on a farm or ranch and owns his own swine production operation part-time as a *supplemental* source of income. The age range of digitally-engaged NSR members who use Facebook varies. This finding contradicts Dixon’s 2022c study but aligns with his 2022b study. This finding also aligned with the Facebook demographics provided by the NSR. Figure 2 illustrates an audience persona for a digitally-engaged NSR member who uses the Facebook platform.

The typical NSR member, Twitter user is a male between the ages of 36 – 55 with a 4-year or master’s degree. He lives on a farm or ranch and owns his own swine production part-time as a supplemental source of income. This finding aligned with

Figure 2

Audience Persona for Facebook Users



Note. This figure illustrates the audience persona characteristics of a digitally-engaged NSR member who uses the Facebook platform. Findings of this study identified individual audience persona characteristics.

Dixon's 2022e and 2002f studies. Figure 3 illustrates an audience persona for a digitally-engaged NSR member who uses the Twitter platform.

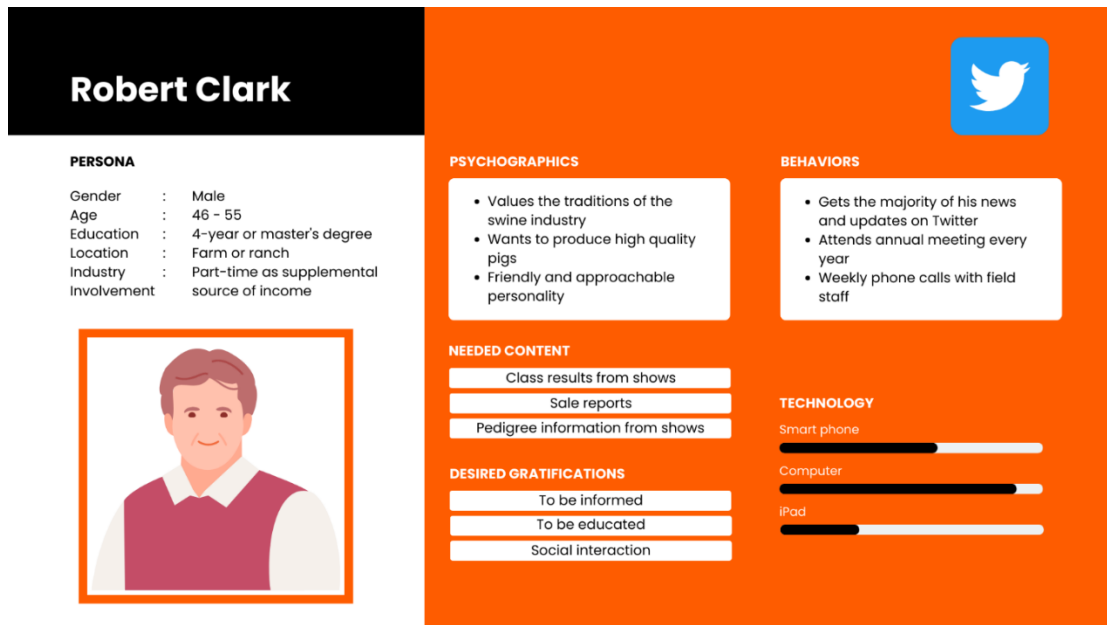
Recommendations

Recommendations for Practice

Based on the literature review and data analysis, I have two primary recommendations for the NSR: conduct a digital media audit on all platforms and increase educational content across communication channels. Conducting a digital media audit on all platforms, coupled with the audience persona characteristics identified through this study, would allow the organization to evaluate the productivity of each platform further and gain a deeper understanding of digitally-engaged members

Figure 3

Audience Persona for Twitter Users



Note. This figure illustrates the audience persona characteristics of a digitally-engaged NSR member who uses the Twitter platform. Findings of this study identified individual audience persona characteristics.

(Barnhart, 2020; McLachlan, 2021). This information would allow the organization to tailor content on each platform to individual audiences effectively (Barnhart, 2020; McLachlan, 2021). Results from this study indicated the organization's Twitter page to be the least used communication channel. Conducting a digital media audit would provide more information on the effectiveness and usage of the platform, allowing the organization to decide whether or not to dissolve the account and consequently allocate time and resources to other communication channels.

Facebook was the preferred communication channel among digitally-engaged NSR members and the most used of the organization's five communication channels. The overall perceptions of both the NSR and NJSA Facebook page were similar. The

digitally-engaged members found similar content beneficial, had similar reasons for following both pages, and suggested similar improvements. A digital media audit on both Facebook pages may provide the information necessary to decide if consolidating the pages would benefit the organization. This audit would allow the NSR to evaluate if the same members follow both pages, and if using one, rather than two, would be ideal for its digitally-engaged members. The NSR/NJSA's Instagram page is currently combined. An audit of this page will help to understand the preferences of the digitally-engaged members and could be helpful in the decision to consolidate the Facebook pages.

Of the five adjectives evaluated via the Likert-Type scale to understand digitally-engaged members' preferences, 'educational' had the least agreement. As stated in the organization's mission, the NSR strives to provide relevant member education. Most respondents expressed a desire for more educational content across all communication channels. The organization had a goal and desire from the digitally-engaged members for educational content. Increasing educational content across all communication channels could increase engagement and provide more gratification to the digitally-engaged membership of the NSR.

The organization could incorporate more video content across digital platforms to provide more educational materials. Short videos or 'reels' have increased in recent years. Capitalizing on this advancement would appeal to digitally-engaged members by staying current with trends. Including staff and organization members will make this content organic, which was noted by the organization to have more engagement across digital platforms. Incorporating this content throughout the year will also maintain the engagement of digitally-engaged members.

The *Seedstock EDGE* was favorable in the print form. Respondents suggested an increase in educational content on this communication channel. The majority of respondents indicated they wanted to hear more from staff. Moving forward, the NSR should consider incorporating feature stories on or written by staff members who typically do not contribute or have a presence in the publication. This may allow the readers to interact with a broader range of staff members. Respondents noted articles on breeders' production practices and advertisements as beneficial content. Increasing the frequency of this content in the *Seedstock EDGE* will increase reader engagement and gratifications obtained from the digitally-engaged members.

I recommend other livestock breed associations conduct digital media audits on all platforms and create audience personas. Conducting a digital media audit on all platforms, coupled with an audience persona, would allow breed associations to evaluate the productivity of each platform further and gain a deeper understanding of digitally-engaged members (Barnhart, 2020; McLachlan, 2021). This information would allow the organization to tailor content on each platform to individual audiences effectively (Barnhart, 2020; McLachlan, 2021). This could also identify if their membership find social media as a preferred communication channel.

Recommendations for Future Research

There is a lack of swine production industry data related to small-scale operations. Continuing further research with swine breed associations and evaluating swine producers will provide depth to findings and increase knowledge of the industry. Data analysis revealed digitally-engaged members use YouTube as a source of information. Further evaluation of digitally-engaged members' perception of YouTube and the

organization's platform usage could provide the research community with knowledge of producer preferences on different digital media channels. This information could also assist the organization in understanding its digitally-engaged members' video content preferences.

The literature revealed websites and blogs as producers' preferred communication channels (Lamm et al., 2019). The organization's owned media channels are its website and the NSR Weekly Newsletter. An analysis of digitally-engaged members' preferences for both communication channels could complete the analysis and provide depth to the findings in the literature. As the primary forms of owned media, the organization needs to better understand the digitally-engaged members' preferences to tailor content effectively.

This study focused on digitally-engaged NSR members and found most respondents interacted with content related to shows. Investigating active members who participate in shows would expand the understanding of NSR members. The Exposition and the National Junior Summer Spectacular and Summer Type Conference are the organization's largest shows of the year (Claeys, 2023). Conducting a qualitative analysis at both shows could better gauge active members' preferences for the organization's overall communication efforts.

For researchers using this study to guide similar studies investigating perceptions of communication channels, I recommend incorporating the organization's owned media channels. Owned media is the form of media an organization has the most control over. Evaluating channels such as a website or email could provide depth to the findings in the literature and provide knowledge to an organization that will assist in tailoring content for those channels effectively.

REFERENCES

- Barnhart, B. (2020). *How to conduct a speedy social media audit*. Sprout Social.
<https://sproutsocial.com/insights/social-media-audit/>
- Bonett, D. G., & Wright, T. A. (2015). Cronbach's alpha reliability. *Journal of Organizational Behavior*, 36(1). <https://www.jstor.org/stable/26610966>
- Carter, J. J., Rodriguez, L., Turk, M., Hudson, M., & Moose, S. (2019). Use of and information seeking behaviors on facebook among illinois farmers and farm families.
<https://www.proquest.com/docview/2634906122/779BD8544EDA44FBPQ/2?accountid=4117>
- Claeys, M. (2023). *2023 annual meeting report - final - copy* [PDF]. National swine registry. <https://nationalswine.com/events/other-events/annual-meeting/2023%20Annual%20Meeting%20Report%20-%20Final%20-%20Copy.pdf>
- Collins dictionary. (2019). *Collins English dictionary*. Collins.
<https://www.collinsdictionary.com/us/>
- Copy Press. (2023). *Digital media: Definition and examples*. Content Marketing Agency | Content Marketing Services by CopyPress.
<https://www.copypress.com/kb/content-marketing/digital-media-definition-and-examples/>.

- Creswell, J. W. (2012). *Educational research: Planning, conducting and evaluating quantitative and qualitative research* (4th ed.). Pearson Education Inc.
- Dideriksen, S. M., Rhoades, R. D., Ahola, J. K., Fankhauser, T. R., Mooney, D. F., & Roman-Muniz, I. N. (2019). A needs assessment for colorado beef producers: Understanding rancher priorities, preferred communication strategies, and influential factors on prioritization and relationships with land grant universities. *ProQuest LLC*.
<https://www.proquest.com/docview/2170587702/7D168EDE41E4BDAPQ/1?accountid=4117>
- Diekmann, F., & Batte, M. T. (2009). Examining information search strategies of Ohio farmers. *Journal of Extension*, 47(6).
https://archives.joe.org/joe/2009december/pdf/JOE_v47_6a8.pdf
- Diekmann, F., Loibl, C., & Batte, M. T. (2009). The economics of agricultural information: Factors affecting commercial farmers' information strategies in Ohio. *Review of Agricultural Economics*, 31(4). <https://www.jstor.org/stable/40588532>
- Dillman, D. A. (2014). *Internet, phone, mail, and mixed-mode surveys: The tailored design method* (4th ed.). John Wiley & Sons, Inc.
- Dixon, S. (2022a). *U.S. Facebook reach by age group 2021*. Statista.
<https://www.statista.com/statistics/246221/share-of-us-internet-users-who-use-facebook-by-age-group/>
- Dixon, S. (2022b). *U.S. Facebook reach by education 2021*. Statista.
<https://www.statista.com/statistics/246225/share-of-us-internet-users-who-use-facebook-by-education-level/>

- Dixon, S. (2022c). *U.S. Facebook reach by gender 2021*. Statista.
<https://www.statista.com/statistics/246220/share-of-us-internet-users-who-use-facebook-by-gender/>
- Dixon, S. (2022d). *U.S. Twitter reach by age group 2021*. Statista.
<https://www.statista.com/statistics/265647/share-of-us-internet-users-who-use-twitter-by-age-group/>
- Dixon, S. (2022e). *U.S. Twitter reach by gender 2021*. Statista.
<https://www.statista.com/statistics/265643/share-of-us-internet-users-who-use-twitter-by-gender/>
- Dixon, S. (2022f). *U.S. Twitter usage by education 2021*. Statista.
<https://www.statista.com/statistics/265648/share-of-us-internet-users-who-use-twitter-by-educational-degree/>
- Dixon, S. (2023a). *Twitter MDAU in the United States 2022*. Statista.
<https://www.statista.com/statistics/970911/monetizable-daily-active-twitter-users-in-the-united-states/>
- Dixon, S. (2023b). *U.S.: Facebook users 2018-2027*. Statista.
<https://www.statista.com/statistics/408971/number-of-us-facebook-users/>
- Fox, C. S., Barry, K., & Colbert, J. (2016). Importance of social media alongside traditional medical publications. *Circulation*, *133*(20), 1978–1983.
<https://www.ahajournals.org/doi/10.1161/CIRCULATIONAHA.115.020303>
- Fulton, C. M., Sitton, S. P., Baker, M., Riggs, A., & Stein, D. (2015). Perceptions of selected Oklahoma Farm Bureau young farmers and ranchers leaders toward the "Oklahoma Country" magazine. *ProQuest LLC*.

<https://www.proquest.com/docview/1806144313/AA21C46897124F84PQ/4?accountid=4117>

Gillespie, J. L., Cartmell, D. D., II, Terry, R., Jr., Lalman, D. L., & Tucker, S. A. (2011).

U.S. beef producers' current use and perceptions of social media as a communications tool. <https://shareok.org/handle/11244/8381>

Katz, E., Blumler, J. G., & Gurevitch, M. (Winter, 1973–1974). *The public opinion quarterly: Vol. 37. Uses and gratification research* (, Ed.; 4th ed.). Oxford University Press on behalf of the American Association for Public Opinion Research. <https://www.jstor.org/stable/2747854>

Lamm, K. W., Borron, A., & Holt, J. (2019). Communication channel preferences: A descriptive audience segmentation evaluation. *Journal of Applied Communications*, 103(3). <https://newprairiepress.org/jac/vol103/iss3/6/>

McLachlan, S. (2021). *How to create a buyer persona (free buyer/audience persona template)*. Social Media Marketing & Management Dashboard.

<https://blog.hootsuite.com/buyer-persona/>

National Swine Registry. (2018a). *NSR seedstock past issues*. National swine registry.

<https://nationalswine.com/seedstock/seedstock-past-issues.php>

National Swine Registry. (2018b). *NSR staff*. National swine registry.

<https://nationalswine.com/about/about-staff.php>

National Swine Registry. (2018c). *What is NSR?* National swine registry.

<https://nationalswine.com/about/about-nsr-info.php>

Nold, R. (2006). *Comparing-the-commercial-swine-industry-and-the-show-pig-industry1* [PDF]. Pork information gateway. <https://porkgateway.org/wp->

[content/uploads/2015/07/comparing-the-commercial-swine-industry-and-the-show-pig-industry1.pdf](https://www.proquest.com/docview/304845805/31401885E2C8422CPQ/3?accountid=4117)

Norton, M., Edgar, L., Johnson, D. M., Popp, J., & Miller, J. D. (2009). Readership: A study of the Angus Journal audience. *ProQuest LLC*.

<https://www.proquest.com/docview/304845805/31401885E2C8422CPQ/3?accountid=4117>

Ochsner, K. (2019). *Nsr-long-range-plan-2017* [PDF]. National swine registry.

<https://nationalswine.com/about/docs/nsr-long-range-plan-2017.pdf>

Oklahoma State University. (2021). *Qualtrics - Oklahoma State University*. Oklahoma state university spears school of business.

https://business.okstate.edu/departments_programs/marketing/qualtrics.html

Oklahoma State University. (2022). *Institutional review board*. Division of the vice president for research. <https://research.okstate.edu/research-compliance/irb/about-irb.html>

Pork Check Off. (2016). *Pigtionary* [PDF]. pork.org.

<https://www.porkcdn.com/sites/porkorg/library/2016/10/Pigtionary.pdf>

Ruby, D. (2023). *71+ Instagram statistics for marketers in 2023 (data & trends)*.

Demand Sage. <https://www.demandsage.com/instagram-statistics/>

Scott, T. L., Inman, R., Settle, Q., & Silva, A. O. (2020). Oklahoma wheat producers' uses of sources of information when selecting a wheat variety. *ProQuest LLC*.

<https://www.proquest.com/docview/2445946319/D7CD174F656447BEPQ/28?accountid=4117>

- Shaw, K., Meyers, C., Irlbeck, E., Doerfert, D., Abrams, K., & Morgan, C. (2015).
Agriculturists personal and business use of online communication tools. *Journal
of Applied Communications*, 99(2). <https://newprairiepress.org/jac/vol99/iss2/3/>
- Team, D. A. (2023). *Digital engagement: The complete a-z guide*. Digital Adoption.
<https://www.digital-adoption.com/digital-engagement/>
- Trissel, J. L., Sitton, S. P., Cartmell, D. D., II, Riggs, A., & Fitch, G. (2014). Perceptions
of interscholastic equestrian association members regarding the "Take The Reins"
magazine: A readership study. *ProQuest LLC*.
[https://www.proquest.com/docview/1626737462/AA21C46897124F84PQ/6?acco
untid=4117](https://www.proquest.com/docview/1626737462/AA21C46897124F84PQ/6?accountid=4117)
- Turk, J. C., Riggs, A. N., Naile, T. L., & Cartmell, D. D., II. (2013). Technology use and
information preferences of digitally engaged american quarter horse association
members. *ProQuest LLC*.
[https://www.proquest.com/docview/1318523011/31401885E2C8422CPQ/2?acco
untid=4117](https://www.proquest.com/docview/1318523011/31401885E2C8422CPQ/2?accountid=4117)
- Tweeten, J. F., Paulsen, T. H., Martin, R. A., & Loy, D. D. (2014). Perceptions regarding
importance and the frequency of use of selected communication tools by Iowa
cattle producers. *ProQuest LLC*.
[https://www.proquest.com/docview/1558874404/D7CD174F656447BEPQ/5?acc
ountid=4117](https://www.proquest.com/docview/1558874404/D7CD174F656447BEPQ/5?accountid=4117)
- Underwood, M. R., Starzec, K., Hill, & Weaber. (2022). The uses and gratifications of
beef cattle breed association magazines for United States beef cattle producers.
<https://krex.k->

state.edu/bitstream/handle/2097/42866/MeganUnderwood2022.pdf?sequence=1%26isAllowed=y

United States Department of Agriculture. (2014a). *2012-united-states-st99_1_020_023* [PDF]. https://agcensus.library.cornell.edu/wp-content/uploads/2012-United-States-st99_1_020_023.pdf

United States Department of Agriculture. (2014b). *2012 census of agriculture - hog and pig farming highlights*. United States Department of Agriculture: National Agricultural Statistics Service. https://www.nass.usda.gov/Publications/Highlights/2014/Hog_and_Pig_Farming/index.php#producer_characteristics

United States Department of Agriculture. (2022). *USDA ERS - Sector at a glance*. Economic Research Service, USDA. <https://www.ers.usda.gov/topics/animal-products/hogs-pork/sector-at-a-glance/#Loc2>

Verduyn, P., Ybarra, O., Résibois, M., Jonides, J., & Kross, E. (2017). Do social network sites enhance or undermine subjective well-being? a critical review. *Social Issues and Policy Review*, *11*(1), 274–302. <https://spssi.onlinelibrary.wiley.com/doi/10.1111/sipr.12033>

West, R., & Turner, L. H. (2018). *Introducing communication theory: Analysis and application* (6th ed.). McGraw-Hill Education.

Whiting, A., & Williams, D. (2013). Why people use social media: A uses and gratifications approach. *Qualitative Market Research*, *16*(4). <https://www.emerald.com/insight/content/doi/10.1108/QMR-06-2013-0041/full/html>

Wright, C. R. (1960). Functional analysis and mass communication. *The Public Opinion Quarterly*, 24(4). <https://www.jstor.org/stable/2746529>

APPENDICES

APPENDIX A
IRB APPROVAL



Oklahoma State University Institutional Review Board

Date: 02/16/2023
Application Number: IRB-23-71
Proposal Title: National Swine Registry Communication Channels Review

Principal Investigator: Hannah Hawkesworth
Co-Investigator(s):
Faculty Adviser: Dwayne Cartmell
Project Coordinator:
Research Assistant(s):

Processed as: Exempt
Exempt Category:

Status Recommended by Reviewer(s): Approved

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in 45CFR46.

This study meets criteria in the Revised Common Rule, as well as, one or more of the circumstances for which continuing review is not required. As Principal Investigator of this research, you will be required to submit a status report to the IRB triennially.

The final versions of any recruitment, consent and assent documents bearing the IRB approval stamp are available for download from IRBManager. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be approved by the IRB. Protocol modifications requiring approval may include changes to the title, PI, adviser, other research personnel, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms.
2. Submit a request for continuation if the study extends beyond the approval period. This continuation must receive IRB review and approval before the research can continue.
3. Report any unanticipated and/or adverse events to the IRB Office promptly.
4. Notify the IRB office when your research project is complete or when you are no longer affiliated with Oklahoma State University.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact the IRB Office at 405-744-3377 or irb@okstate.edu.

Sincerely,
Oklahoma State University IRB

APPENDIX B

INSTRUMENT

Block 1

National Swine Registry Communication Channels Review

Directions: Please read the information below. This information is intended to provide you with a summary of this research study, what is expected of you as a participant, and your rights as a participant. After you have read all of the instructions, you will be given the opportunity to verify your age and give your consent. If you have any questions, please email dwayne.cartmell@okstate.edu. Thank you for your time!

Investigators: Hannah Hawkesworth and Dr. Dwayne Cartmell, Agricultural Communications

Purpose: The purpose of this study is to gauge the National Swine Registry members' perspective of the organization's communication channels and provide the NSR more knowledge about its membership, specifically related to identifying members' preferences, understanding, and suggested enhancements for the organization's

current communication channels.

What to Expect: This research study is administered online. Participating in this study will require you to complete one questionnaire. You will only be expected to complete the questionnaire once. It should take you about 15 minutes to complete.

Risks: There are no risks associated with this project above normal daily risks. However, to minimize associated risks, your responses will be anonymous and separated from identifying information.

Benefits: By participating in this study, you have the opportunity to voice your opinions on the current communication channels of the National Swine Registry. This will allow the NSR to become more knowledgeable about its membership, as well as identify members' suggested improvements. You may also gain an appreciation and understanding of how research is conducted and exposure to the types of research being done by students at Oklahoma State University.

Compensation: Those who complete this survey will be entered to win one of five free subscriptions to the Seedstock EDGE.

Your Rights: Your participation in this study is voluntary.

Confidentiality: Your responses to this survey are completely anonymous. Any written results will discuss group findings and will not include information that may identify you. Research records will be stored on a password-protected computer in a locked office and only researchers and individuals responsible for research oversight will have access to the records. The research team works to ensure confidentiality to the degree permitted by technology. It is possible, although unlikely, that unauthorized individuals could gain access to your responses because you are responding online. However, your participation in this online survey involves risks similar to a person's everyday use of the internet. If you have concerns, you should consult the survey provider privacy policy at <https://www.qualtrics.com/privacy-statement/>.

Contacts: If you have any questions regarding the research, you may contact Dwayne Cartmell (405-880-7953 or dwayne.cartmell@okstate.edu). If you have any questions about your rights as a research volunteer, you may contact the IRB Office at 223 Scott Hall, Stillwater, OK 74078, 405-744-3377, or irb@okstate.edu.

Participant Agreement:

I have read the procedures described previously. I voluntarily agree to participate and understand that by clicking "I agree" below, I am consenting to participate in this study and am at least 18 years of age. If I choose not to participate, I will click "I do not agree."

I agree I do not agree

Instructions:

As you complete this survey, please consider your personal experiences with the National Swine Registry and the National Junior Swine Association. This survey includes two sections. The first section relates to your perception(s) and the second section is a demographic inventory. Please choose the best response and answer openly and truthfully.

Please mark all social media outlets you engage with.

- Instagram
- Facebook
- Twitter

- Snapchat
- TikTok
- LinkedIn
- Other

Block

Do you follow the NSR/NJSA's Instagram account?

- Yes
- No
- I do not have an Instagram account

Please indicate your agreement with the following statements.

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
I find the NSR/NJSA Instagram content useful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the NSR/NJSA Instagram content appropriate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
I find the NSR/NJSA Instagram content educational.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the NSR/NJSA Instagram content informative.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the NSR/NJSA Instagram content engaging.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Why do you follow the NSR/NJSA's Instagram account?

What content from the NSR/NJSA's Instagram account do you find most beneficial?

What content can be added to the NSR/NJSA's Instagram

account to improve it?

Do you follow the NSR/NJSA's Twitter account?

- Yes
- No
- I do not have a Twitter account

Please indicate your agreement with the following statements.

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
I find the NSR/NJSA Twitter content useful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the NSR/NJSA Twitter content appropriate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the NSR/NJSA Twitter content education.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the NSR/NJSA Twitter content informative.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
I find the NSR/NJSA Twitter content engaging.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Why do you follow the NSR/NJSA's Twitter account?

What content from the NSR/NJSA's Twitter account do you find most beneficial?

What content can be added to the NSR/NJSA's Twitter account to improve it?

Do you follow the NSR's Facebook page?

- Yes
- No
- I do not have a Facebook account

Please indicate your agreement with the following statements.

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
I find the NSR Facebook content useful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the NSR Facebook content appropriate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the NSR Facebook content educational.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the NSR Facebook content informative.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the NSR Facebook content engaging.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Why do you follow the NSR's Facebook page?

What content from the NSR's Facebook page do you find most beneficial?

What content can be added to the NSR's Facebook page to improve it?

Do you follow the NJSA's Facebook page?

- Yes
- No
- I do not have a Facebook account

Please indicate your agreement with the following statements.

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
I find the NJSA Facebook content useful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the NJSA Facebook content appropriate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the NJSA Facebook content educational.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the NJSA Facebook content informative.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the NJSA Facebook content engaging.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Why do you follow the NJSA's Facebook page?

What content from the NJSA's Facebook page do you find most beneficial?

What content can be added to the NJSA's Facebook page to improve it?

Are you subscribed to the Seedstock EDGE?

- Yes
- No

How do you access your subscription to the Seedstock EDGE?

- Digitally
- Print
- Both

Please indicate your agreement with the following statements.

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
I find the Seedstock EDGE content useful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the Seedstock EDGE content appropriate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the Seedstock EDGE content educational.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the Seedstock EDGE content informative.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the Seedstock EDGE content engaging.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What content from the Seedstock EDGE do you find most beneficial?

What content can be added to the Seedstock EDGE to improve it?

Are you subscribed to the NSR Weekly Newsletter?

- Yes
- No

Please indicate your agreement with the following statements.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I find the NSR Weekly Newsletter content useful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the NSR Weekly Newsletter content appropriate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the NSR Weekly Newsletter content educational.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I find the NSR Weekly Newsletter content informative.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the NSR Weekly Newsletter engaging.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What content from the NSR Weekly Newsletter do you find most beneficial?

What content can be added to the NSR Weekly Newsletter to improve it?

Please indicate your age.

- 17 - 25
- 26 - 35

- 36 - 45
- 46 - 55
- 56 - 65
- 66 +

How would you describe yourself?

- American Indian or Alaska Native
- Asian
- Black or African American
- Hispanic or Latino
- Native Hawaiian or Other Pacific Islander
- White
- Other

What is your gender?

- Male
- Female
- Non-binary / third gender
- Transgender
- Prefer not to say

Please select the highest level of education you have completed.

- Less than high school
- High school graduate
- Some college
- 2 year degree
- 4 year degree
- Masters degree
- Professional degree
- Doctorate

Where do you live? *Pick the response that most closely matches.*

- On a farm or ranch
- In a rural area/small town (10,000 or less)
- In a large town (10,000 - 50,000)
- In a large city (50,000 or more)

I own and operate my own swine production operation...

- Full-time as my main source of income
- Part-time as a supplemental source of income
- Part-time as a hobby

I do not own and operate my own swine production operation

I work for someone else's swine production operation...

- Full-time as my main source of income
- Part-time as a supplemental source of income
- Part-time as a hobby
- I do not work for someone else's swine production operation

We thank you for your time spent taking this survey. Please copy and paste the following link into a NEW browser window to enter the drawing for one of five free digital subscriptions to the Seedstock EDGE.

NOTE: this survey is not complete until your response has been recorded. Please continue to the final page after copying the drawing link to submit your responses.

Drawing

link: https://okstatecasnr.az1.qualtrics.com/jfe/form/SV_3gy4



APPENDIX C
DRAWING INSTRUMENT

Default Question Block

Thank you for participating! Please note completion of this form is strictly to enter the drawing for a free subscription to the Seedstock EDGE and is not tied to your responses on the previous questionnaire.

To enter this drawing, please enter the following information:

First Name

Last Name

Email Address

Powered by Qualtrics

APPENDIX D
EMAILS TO PARTICIPANTS

NSR INITIAL EMAIL

To: NSR Members

Subject: Voice Your Opinion and Get Entered for a Chance to Win a Digital Subscription to the *Seedstock EDGE*!

Dear NSR Member,

As an active member of the National Swine Registry you can voice your preferences on the various communication channels you interact with. Your feedback will allow the NSR to gain knowledge of its membership as well as identify potential improvements that can be made to the organization's communication channels to better serve the membership.

You must be 18 or older to participate in this study. Participants who complete the questionnaire and choose to do so will be entered to win one of five digital subscriptions to the *Seedstock EDGE*. A one-year digital subscription retails for \$25.

This survey will take approximately 20 minutes to complete. You will be able to access the survey one time from your computer, smart phone, or tablet. If you are not able to access the online survey, please reach out to the primary investigator for the study, past NJSA Junior Board Director, Hannah Hawkesworth at hannah.hawkesworth@okstate.edu.

To access the online survey, use the following link:

https://okstatecasnr.az1.qualtrics.com/jfe/form/SV_3rqbXmZe7peZMN0

Your immediate response is greatly appreciated. Your responses are voluntary and anonymous.

If you have any questions about this study, please email Hannah Hawkesworth at hannah.hawkesworth@okstate.edu or Dr. Dwayne Cartmell at Dwayne.cartmell@okstate.edu.

This study is being conducted to assist the National Swine Registry on ways to better serve its membership. Your feedback and participation are encouraged and greatly appreciated!

NSR REMINDER EMAIL #1

To: NSR Members

Subject: Help the NSR and Get Entered for a Chance to Win a Digital Subscription to the *Seedstock EDGE*!

Dear NSR Member,

Last week we sent an email requesting your participation in a survey reviewing the communication channels of the NSR. We are reaching out to remind you it is not too late to complete the survey and get entered to win one of five digital subscriptions to the *Seedstock EDGE*.

This survey will take approximately 20 minutes to complete. You will be able to access the survey one time from your computer, smart phone, or tablet. If you are not able to access the online survey, please reach out to the primary investigator for the study, past NJSA Junior Board Director, Hannah Hawkesworth at hannah.hawkesworth@okstate.edu.

To access the online survey, use the following link:

https://okstatecasnr.az1.qualtrics.com/jfe/form/SV_3rqbXmZe7peZMN0

Your immediate response is greatly appreciated. Your responses are voluntary and anonymous.

If you have any questions about this study, please email Hannah Hawkesworth at hannah.hawkesworth@okstate.edu or Dr. Dwayne Cartmell at Dwayne.cartmell@okstate.edu.

This study is being conducted to assist the National Swine Registry on ways to better serve its membership. Your feedback and participation are encouraged and greatly appreciated!

NSR REMINDER EMAIL #2

To: NSR Members

Subject: Don't Miss Your Chance to Help the NSR and Win!

Dear NSR Member,

Two weeks ago, we sent an email requesting your participation in a survey reviewing the communication channels of the NSR. We are reaching out to remind you there is still a chance to complete the survey and get entered to win one of five digital subscriptions to the *Seedstock EDGE*.

This survey will take approximately 20 minutes to complete. You will be able to access the survey one time from your computer, smart phone, or tablet. If you are not able to access the online survey, please reach out to the primary investigator for the study, past NJSA Junior Board Director, Hannah Hawkesworth at hannah.hawkesworth@okstate.edu.

To access the online survey, use the following link:

https://okstatecasnr.az1.qualtrics.com/jfe/form/SV_3rqbXmZe7peZMN0

Your immediate response is greatly appreciated. Your responses are voluntary and anonymous.

If you have any questions about this study, please email Hannah Hawkesworth at hannah.hawkesworth@okstate.edu or Dr. Dwayne Cartmell at Dwayne.cartmell@okstate.edu.

This study is being conducted to assist the National Swine Registry on ways to better serve its membership. Your feedback and participation are encouraged and greatly appreciated!

NSR FINAL REMINDER EMAIL

To: NSR Members

Subject: Last Chance to Voice Your Opinion and Win!

Dear NSR Member,

Earlier this month you received an email requesting your participation in a survey reviewing the communication channels of the NSR. We are reaching out to remind you, today is the final day to complete the survey and get entered to win one of five digital subscriptions to the *Seedstock EDGE*.

This survey will take approximately 20 minutes to complete. You will be able to access the survey one time from your computer, smart phone, or tablet. If you are not able to access the online survey, please reach out to the primary investigator for the study, past NJSA Junior Board Director, Hannah Hawkesworth at hannah.hawkesworth@okstate.edu.

To access the online survey, use the following link:

https://okstatecasnr.az1.qualtrics.com/jfe/form/SV_3rqbXmZe7peZMN0

Your immediate response is greatly appreciated. Your responses are voluntary and anonymous.

If you have any questions about this study, please email Hannah Hawkesworth at hannah.hawkesworth@okstate.edu or Dr. Dwayne Cartmell at Dwayne.cartmell@okstate.edu.

This study is being conducted to assist the National Swine Registry on ways to better serve its membership. Your feedback and participation are encouraged and greatly appreciated!

NJSA INITIAL EMAIL

To: NJSA Members

Subject: Voice Your Opinion and Get Entered for a Chance to Win a Digital Subscription to the *Seedstock EDGE*!

Dear NJSA Member,

As an active member of the National Junior Swine Association, you can voice your preferences on the various communication channels you interact with. Your feedback will allow the NSR to gain knowledge of its membership as well as identify potential improvements that can be made to the organization's communication channels to better serve the membership.

You must be 18 or older to participate in this study. Participants who complete the questionnaire and choose to do so will be entered to win one of five digital subscriptions to the *Seedstock EDGE*. A one-year digital subscription retails for \$25.

This survey will take approximately 20 minutes to complete. You will be able to access the survey one time from your computer, smart phone, or tablet. If you are not able to access the online survey, please reach out to the primary investigator for the study, past NJSA Junior Board Director, Hannah Hawkesworth at hannah.hawkesworth@okstate.edu.

To access the online survey, use the following link:

https://okstatecasnr.az1.qualtrics.com/jfe/form/SV_3rqbXmZe7peZMN0

Your immediate response is greatly appreciated. Your responses are voluntary and anonymous.

If you have any questions about this study, please email Hannah Hawkesworth at hannah.hawkesworth@okstate.edu or Dr. Dwayne Cartmell at Dwayne.cartmell@okstate.edu.

This study is being conducted to assist the National Swine Registry on ways to better serve its membership. Your feedback and participation are encouraged and greatly appreciated!

NJSA REMINDER EMAIL #1

To: NJSA Members

Subject: Help the NSR and Get Entered for a Chance to Win a Digital Subscription to the *Seedstock EDGE*!

Dear NJSA Member,

Last week we sent an email requesting your participation in a survey reviewing the communication channels of the NSR. We are reaching out to remind you it is not too late to complete the survey and get entered to win one of five digital subscriptions to the *Seedstock EDGE*.

This survey will take approximately 20 minutes to complete. You will be able to access the survey one time from your computer, smart phone, or tablet. If you are not able to access the online survey, please reach out to the primary investigator for the study, past NJSA Junior Board Director, Hannah Hawkesworth at hannah.hawkesworth@okstate.edu.

To access the online survey, use the following link:

https://okstatecasnr.az1.qualtrics.com/jfe/form/SV_3rqbXmZe7peZMN0

Your immediate response is greatly appreciated. Your responses are voluntary and anonymous.

If you have any questions about this study, please email Hannah Hawkesworth at hannah.hawkesworth@okstate.edu or Dr. Dwayne Cartmell at Dwayne.cartmell@okstate.edu.

This study is being conducted to assist the National Swine Registry on ways to better serve its membership. Your feedback and participation are encouraged and greatly appreciated!

NJSA REMINDER EMAIL #2

To: NJSA Members

Subject: Don't Miss Your Chance to Help the NSR and Win!

Dear NJSA Member,

Two weeks ago, we sent an email requesting your participation in a survey reviewing the communication channels of the NSR. We are reaching out to remind you there is still a chance to complete the survey and get entered to win one of five digital subscriptions to the *Seedstock EDGE*.

This survey will take approximately 20 minutes to complete. You will be able to access the survey one time from your computer, smart phone, or tablet. If you are not able to access the online survey, please reach out to the primary investigator for the study, past NJSA Junior Board Director, Hannah Hawkesworth at hannah.hawkesworth@okstate.edu.

To access the online survey, use the following link:

https://okstatecasnr.az1.qualtrics.com/jfe/form/SV_3rqbXmZe7peZMN0

Your immediate response is greatly appreciated. Your responses are voluntary and anonymous.

If you have any questions about this study, please email Hannah Hawkesworth at hannah.hawkesworth@okstate.edu or Dr. Dwayne Cartmell at Dwayne.cartmell@okstate.edu.

This study is being conducted to assist the National Swine Registry on ways to better serve its membership. Your feedback and participation are encouraged and greatly appreciated!

NJSA FINAL REMINDER EMAIL

To: NJSA Members

Subject: Last Chance to Voice Your Opinion and Win!

Dear NJSA Member,

Earlier this month you received an email requesting your participation in a survey reviewing the communication channels of the NSR. We are reaching out to remind you, today is the final day to complete the survey and get entered to win one of five digital subscriptions to the *Seedstock EDGE*.

This survey will take approximately 20 minutes to complete. You will be able to access the survey one time from your computer, smart phone, or tablet. If you are not able to access the online survey, please reach out to the primary investigator for the study, past NJSA Junior Board Director, Hannah Hawkesworth at hannah.hawkesworth@okstate.edu.

To access the online survey, use the following link:

https://okstatecasnr.az1.qualtrics.com/jfe/form/SV_3rqbXmZe7peZMN0

Your immediate response is greatly appreciated. Your responses are voluntary and anonymous.

If you have any questions about this study, please email Hannah Hawkesworth at hannah.hawkesworth@okstate.edu or Dr. Dwayne Cartmell at Dwayne.cartmell@okstate.edu.

This study is being conducted to assist the National Swine Registry on ways to better serve its membership. Your feedback and participation are encouraged and greatly appreciated!

APPENDIX E
SOCIAL MEDIA GRAPHICS



**NATIONAL
SWINE
REGISTRY**

MEMBERS, CHECK YOUR EMAILS!

**Voice your opinion and get entered to win a FREE
digital subscription to the Seedstock EDGE!**



**NATIONAL
SWINE
REGISTRY**

MEMBERS, CHECK YOUR EMAILS!

**Don't forget to voice your opinion and get entered to
win a FREE digital subscription to the Seedstock EDGE!**



NATIONAL SWINE REGISTRY

MEMBERS, CHECK YOUR EMAILS!

**There is still time to voice your opinion and get entered
to win a FREE digital subscription to the Seedstock EDGE!**



**NATIONAL
SWINE
REGISTRY**

MEMBERS, CHECK YOUR EMAILS!

**Today is the LAST DAY to voice your opinion and get entered
to win a FREE digital subscription to the Seedstock EDGE!**



NJSA

MEMBERS, CHECK YOUR EMAILS!

Voice your opinion and get entered to win a **FREE**
digital subscription to the Seedstock **EDGE!**



NJSA

MEMBERS, CHECK YOUR EMAILS!

Don't forget to voice your opinion and get entered to win a **FREE** digital subscription to the Seedstock EDGE!



NJSA

MEMBERS, CHECK YOUR EMAILS!

There is still time to voice your opinion and get entered to win a **FREE** digital subscription to the Seedstock EDGE!



NJSA

MEMBERS, CHECK YOUR EMAILS!

Today is the **LAST DAY** to voice your opinion and get entered to win a **FREE** digital subscription to the Seedstock **EDGE!**

APPENDIX F
SOCIAL MEDIA CAPTIONS

INITIAL POST

CHECK YOUR INBOX! Members have received an email survey and can enter for a chance to win a FREE digital subscription to the *Seedstock EDGE*. This survey allows you to share your thoughts on the #NSR and #NJSA communication channels so we are better able to serve you! Please read thoroughly.

REMINDER #1

DON'T FORGET TO CHECK YOUR INBOX! Members have received an email survey and can enter for a chance to win a FREE digital subscription to the *Seedstock EDGE*. This survey allows you to share your thoughts on the #NSR and #NJSA communication channels so we are better able to serve you! Please read thoroughly.

REMINDER #2

CHECK YOUR INBOX! There is still time to complete the survey in your email and be entered for a chance to win a FREE digital subscription to the *Seedstock EDGE*. This survey allows you to share your thoughts on the #NSR and #NJSA communication channels so we are better able to serve you! Please read thoroughly.

REMINDER #3

CHECK YOUR INBOX! Today is the LAST DAY to complete the survey and enter for a chance to win a FREE digital subscription to the *Seedstock EDGE*. This survey allows you to share your thoughts on the #NSR and #NJSA communication channels so we are better able to serve you! Please read thoroughly.

APPENDIX G
PANEL OF EXPERTS

Panel of Experts:

Dr. D. Dwayne Cartmell
450 Agricultural Hall
Oklahoma State University

Dr. Audrey E. H. King
437 Agricultural Hall
Oklahoma State University

Dr. Parker Henley
109 Animal Science Building
Oklahoma State University

Cassie Godwin
National Swine Registry

VITA

Hannah Hunter Hawkesworth

Candidate for the Degree of

Master of Science

Thesis: COMMUNICATION CHANNEL PREFERENCES OF DIGITALLY-
ENGAGED NATIONAL SWINE REGISTRY MEMBERS

Major Field: Agricultural Communications

Biographical:

Education:

Completed the requirements for the Master of Science in Agricultural Communications at Oklahoma State University, Stillwater, Oklahoma in May 2023.

Completed the requirements for the Bachelor of Science in Agriculture Business at California State University, Fresno, Fresno, CA in 2021.

Experience:

Served as Oklahoma State University Graduate College's Communications Graduate Research Assistant from August 2021 through May 2023.

Served as American Hereford Association's Youth Activities Intern from May 2022 through August 2022

Served as Arizona National Livestock Show's Media Intern & Assistant to the Director of Administration from December of 2021 through December of 2022

Worked as Twin Hills Show Supply Company's Lead Sales Representative from September 2021 through current