The Exploration of Social Media as a Media Relations Tool for Agricultural Organizations

Thesis

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By

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Abstract

Social media has become widely adopted among individuals, businesses, and organizations as a means of communication and has changed the manner in which information is sent and received. As one of the nation’s most important industries, the agricultural industry has also adopted social media to communicate with consumers and the public. Even though there is a shift from traditional media to digital media, the traditional news media remains important to the agricultural industry because most individuals receive information about the agricultural industry from sources such as newspapers and television. As Ohio’s largest industry, the agricultural industry needs to be able to effectively and positively impact the media to communicate truthful and accurate information to consumers and the public. Previous studies have examined why social media is being adopted and how it is being used, but there is little literature about if social media is being used as a media relations tool. A study exploring this topic could benefit agricultural organizations and future research by guiding the development of effective social media practices to communicate with and impact media coverage of the agricultural industry.

The purpose of this study is to examine how agricultural organizations in Ohio communicate via social media and how the messages communicated are impacting
central Ohio media sources. The study is grounded in the agenda-setting theory, uses and gratifications theory, and previous social media studies. The data was collected from seven Ohio agricultural organizations Facebook pages and four central Ohio news sources and used open coding analysis to determine emerging themes. It was found that Ohio agricultural commodity organizations are using social media, but not to communicate with the news media. It was also found that the agricultural industry is receiving limited news coverage and it was unable to be determined if the Facebook content had an impact on the news media coverage. By communicating the results of this study with agricultural organizations and researchers, effective social media strategies can be developed to guide the future of social media as a media relations tool.
Dedicated to my family, friends, and all those who have supported, guided, and believed in me throughout my life.
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Chapter 1: Introduction

The agriculture industry has played an important role in American society since early colonization. (Lilly, n.d.). Although 98 percent of Americans are not involved in the agriculture industry, agriculture is the groundwork of civilization (Grant, 2010; The University of Rhode Island, 2001). Agriculture can be defined as “the science, art, or occupation concerned with cultivating land, raising crops, and feeding, breeding, and raising livestock” (Dictionary.com Unabridged, n.d., para. 1). Although agriculture is often only associated with the food supply and production, it affects, and is a component of, various industries including health care, manufacturing, education, personal care, and construction (The University of Rhode Island, 2001). Due to the far-reaching influence of the agriculture industry, it is important for society to receive truthful and accurate information about agriculture.

With the need for quality information about the agriculture industry, it is important to understand where the public receives their agricultural news. Although news distribution has shifted from print to digital, consumers and the public still receive information about the agricultural industry through traditional media, such as television and newspapers (Tweeten, 2014). Traditional media, or any form of media that was
present before the Internet, has continued to serve as a source of information, entertainment, and education to society while evolving to meet new consumer needs. The growth of technology has led to Americans consuming more media than ever before, therefore presenting an opportunity for agricultural communicators to reach the public with agriculture friendly messages via old media and new media, such as social media (Waldman, 2011). Due to the importance of the traditional news media in disseminating agricultural information to the public and consumers, agricultural communicators need to take advantage of communication tools that reach large audiences, such as social media, and use those resources as a media relations tool.

**Traditional Media**

The earliest forms of mass media included newspapers and magazines, which distributed news, entertainment, and advertisements to the public. These media sources remained the core of mass media but began to evolve alongside technological advancements. New communication technologies evolved over time and slowly gained acceptance by the public and organizations (Public Broadcasting Service, n.d.). The introduction of radio entertainment in the early 1920s and the television in the 1940s allowed for individuals to interact with the media in a new manner (Public Broadcasting Service, n.d.). The latest technology that changed the manner in which individuals communicate is the Internet. According to White, Meyers, Doerfert, and Irlbeck (2014),
“Internet adoption and the introduction of social media have changed how many individuals seek and receive information” (p. 1).

Although individuals and organizations are changing the manner in which they communicate and how they receive their news, the traditional media remains important in the dissemination of information to society (Noble, 2014). Traditional news media were associated with print (newspapers and magazines), television, and radio until approximately 10 years ago, but even with technological advancements, the “traditional media remain[s] a trusted [and valued] source of information” (Smith Koch, 2013; Noble, 2014, para. 6). According to the Institute for Communication Technology at the USC Marshall School of Business, it is estimated that media consumption among Americans will be approximately 15 hours per day per person by 2015 (Short, 2013). Researchers project that more that sixty percent of that media consumption will be television (Short, 2013).

Although traditional media sources continue to be popular, this has not stopped the news media from taking advantage of the technological advancements and new means of digital communication. Many news media sources are now placing information with links to their website on their business social networking sites (Noble, 2014). Audience members who click the links are being redirected to the news media’s website (Noble, 2014). The traditional media may not be in its original audio/visual format, but is still able to reach out to a large audience by having the same news video content and print stories posted on their websites (Noble, 2014).
Traditional Media and Organizations

Traditional media is not only important to society but to the success of organizations. Many smaller and non-profit organizations receive inadequate coverage in the media because they lack the influence or recognition of larger governmental and corporate organizations (Nah, 2010). These smaller organizations can be valuable to the news sources and vice versa (Nah, 2010).

From the organizational perspective, organizations need the media to establish their brand, build credibility, and create a buzz about their organization’s message (Kelly, 2010). One successful method of gaining media attention is through traditional advertising (Kelly, 2010). Traditional advertisements, no matter how small or large, give the organization one thing, control over their brand message, control that can “help launch, guide, encourage, or even offset the broader conversation of tweets, texts, posts, and sound-bites flying around the online universe and mainstream media” (Kelly, 2010, para. 16). The news media can also be beneficial to smaller and non-profit organizations because they can provide coverage of activities and events, which may help the organization gain more external resources (Nah, 2010).

On the other hand, the smaller and non-profit organizations may be of value to the news media because they work within the communities of the news media’s target audience (Nah, 2010). The stories these organizations are able to provide add personal value to what the media is reporting, in turn increasing the news media’s credibility and
ratings among the public (Nah, 2010). Due to the often-limited resources that the smaller and non-profit organizations have, technological advancements and new digital communication technologies may prove useful in further developing media relations with the traditional media (Nah, 2010).

The Agriculture Industry and the Traditional Media

Media coverage of the agriculture industry flourished in early newspapers and magazines, but in recent years, the industry has received limited interaction and coverage from news media sources. The decline in agricultural media coverage can be attributed to the distance between agriculture and society, the challenges of cost and accessibility, and limited agricultural knowledge by the news media staff (New Agriculturalist, 2009; Stringer & Thomson, 1999; Treise & Weigold, 2002). Recently, the agriculture industry has only received coverage of issues pertaining to natural disasters, food shortages, and rising food prices (New Agriculturalist, 2009). As consumers and society are becoming more concerned with food safety and other agricultural issues, it is important for farmers and agricultural communicators to develop a further connection with the media because the media can play a role in influencing decision makers and communicating the needs and concerns of the industry as a whole (New Agriculturalist, 2009).

As coverage of agricultural issues are becoming less salient in the news media, it is important to understand how the agricultural industry is practicing media relations because the news media plays a key role in communicating agricultural information to
the public (Ruth-McSwain, 2008). The current research on media relations in the agricultural industry is limited, and there is a need for further exploration to improve the media relations strategies in the agricultural industry (Ruth-McSwain, 2008). According to Ruth-McSwain (2008), agriculturalists are using agricultural media and print media, but do not feel that they are effectively reaching out to the mainstream media. The relationship between the agricultural industry and the news media should focus on how the agricultural industry communicates with the media and vice versa. Many agriculturalists feel that the news media is not doing enough to cover agricultural issues and an interview with mainstream media personnel confirmed those thoughts by expressing the new media’s interest in breaking news instead of a partnership with the agricultural industry (Agriculturalist, 2009). It is clear that there is a weak connection between the news media and the agricultural industry; therefore, agriculturalists need to take the initiative to develop a long-term relationship with the media to increase agricultural media coverage. (New Agriculturalist, 2009).

Due to the decline in media seeking out the agricultural industry, agricultural communicators need to find a new and innovative way to reach out and communicate with the mass media to get their stories told. Therefore the emergence of social media has provided agriculturalists with a new communication channel and potential media relations tools that can further impact the news media’s coverage of the agricultural industry.
The Internet and the Emergence of Social Media

The introduction of the World Wide Web in 1989 was the first technological advancement that created a platform for the development of social media. (Pew Research Center, 2014). The World Wide Web, which later became known commonly as the Internet, changed the way that individuals and organizations would interact and connect with the media forever (Pew Research Center, 2014). The first forms of communication technology in Web 1.0 included basic webpages and limited personal messaging via email (Boyd & Ellison, 2008; Kaplan & Haenlein, 2010). Although no technological changes were made, the World Wide Web entered a new phase, Web 2.0, which facilitated more interactive and advanced applications to enhance the users experience (Kaplan & Haenlein, 2010). Due to the interactive and technologically advanced qualities of Web 2.0, it facilitated the emergence of social media as the newest form of communication technology (Kaplan & Haenlein, 2010).

Social media can take on many forms, and has evolved since it was first introduced in the late 1980s and early 1990s. Various forms of social media include text messaging, chat rooms, social network sites, email, and instant messaging (Boyd & Ellison, 2008). Although social media can encompass a wide variety of mediums for communication, today many individuals only consider social network sites (SNSs) under the classification of social media. A social networking site is defined as:
“web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others in the system.” (Boyd & Ellison, 2008, p. 211)

SNSs are unique means of communication because they are moving social networks, which may or may not have previously existed, outside of the web that makes the networks visible via an online platform (Boyd & Ellison, 2008).

There are various social media platforms that enable individuals to communicate with one another online, including Facebook, Twitter, YouTube, LinkedIn, and Instagram. Each of these SNS is unique in the way it enables users to interact and comes with individual affordances.

Facebook is currently the largest SNS with 71 percent of all adults online using it and 1.3 billion active accounts (Pew Research Center, 2014a). Facebook began as a means for university students to connect with one another and required a university email address to register, but due to increased popularity, it expanded to public use in 2005 (Boyd & Ellison, 2008). Facebook allows individuals to post background information about themselves on a profile, upload photos and videos, post messages on other users’ walls, and like interest, group, or business pages. Facebook not only allows individuals and organizations to post their original content but also to share other users content via their Facebook profile page.
Organizations and Social Media

In the past, organizations were not able to achieve certain goals due to limitations with technology, but social media has reduced those limitations (Curtis, Edwards, Fraser, Gudelsky, Homquist, Thornton, & Sweester, 2010). Social media use by organizations has become almost universal, but not all organizations were quick to adopt social media as a communication tool. Early research of social media adoption by organizations examined how individuals were using organizations’ websites. It was discovered that individuals found the ability to connect with other individuals and organizations the most valuable feature of websites (Gordon, 2009). Therefore, many organizations deemed social media as a viable communication tool because it is able to facilitate a connection with consumers in a new manner.

Organizations benefit from the adoption of social media because it has become a tool which bridges the gap between individuals’ and consumers’ desires and the organization’s goals (Gordon, 2009). According to Treem and Leonardi (2012), some benefits of using social media include visibility, edibility, persistence, and association. These benefits, along with the improved technology of Web 2.0, enable organizations to have a two-way conversation with their publics (Meyers, et al., 2011).

Social media has not only benefited organizations by enabling them to reach out to their publics and consumers but has also provided a way to strengthen media relations
Traditionally, organizations performed media relations and public relations tasks through press releases, advertising, and press conferences, but the adoption of social media enables those organizations to have direct and immediate contact with potential media outlets and journalists across many platforms (Boyd, 2013).

**Agricultural Organizations and Social Media**

Understanding social media use by agricultural organizations is important because they are speaking to an older, more rural, and less technologically savvy audience (Barbassa, 2010). To develop a relationship with the media, individuals and organizations within the agricultural industry need to understand how to use new technology to benefit communication efforts. Farmers and agricultural communicators often lag in the adoption of technology and have historically been limited in their access to new communication technologies (Tweeten, 2014). In the past, news and trends within the agricultural industry traveled via face-to-face interactions, but social media has sparked a change in the way the agricultural industry communicates (Varner, 2012). With increased Internet access and mobile technology, more individuals within the agricultural industry now have access to communication technologies, such as social media (Sutter, 2009).

In recent years, there have been efforts to educate farmers and individuals in the agricultural industry about social media and its importance. One example is the development of the Ag Chat Foundation. The Ag Chat Foundation is “empowering
farmers and ranchers to connect communities through social media platforms” (Ag Chat Foundation, 2014). This online platform encourages farmers to learn about and use SNSs such as Facebook and Twitter to communicate their messages. AgChat is just one of many efforts being made to help the agricultural industry become an active participant in the social media world.

Social media is a great value for the agricultural industry because it can be used for marketing, branding, agricultural news, combating of myths and bad publicity, monitoring public opinion, and crisis and risk communication (Payne-Kopner, 2009). Farmers and agricultural communicators are now able to reach audiences that would not have received their messages in the past (Knutson, 2011; Meyers et al., 2011). The ability to distribute information in a faster and more direct manner enables agricultural communicators to distribute information that may help consumers and the public gain a better understanding of the industry as a whole (Allen, Abrams, Meyers & Shultz, 2014). This stronger representation of the agricultural industry is not only educating individuals, but it also is putting a face to the industry, making it more relatable to consumers and the public (Payne-Kopner, 2009).

The agricultural industry also benefits from social media use because it allows advocates to reach a younger audience, who will in turn make decisions in the future that will impact the industry (Grant, 2010). The agricultural industry is highly dependent on the public, and vice versa, and needs the public’s support to remain in tact. Recent agricultural technological developments and political issues have caused a crucial need to
effectively communicate about agricultural issues to the public (Roth, Vogt, & Weinheimer, 2002).

Facebook is the most popular social networking site used among agricultural organizations because it is well-known among the target audience and has received the most scholarly attention (Tweeten, 2014). Agriculturalists are using Facebook to “agvocate,” tell their stories, and communicate with consumers and the public (White, et al, 2014). Although Facebook has been an effective social media platform, agriculturalists believe it is important to build interconnectivity between different types of social media in order to be more successful (Meyers, Irlbeck, Graybill-Leonard, & Doerfert, 2011). Agriculturalists have been satisfied with their adoption and use of social media and plan to continue forward with social media as a communication tool (White, et al., 2014).

As previously mentioned, the agricultural communicators are using agricultural media sources and print media as media relations tools but do not believe they are effectively reaching out to the mainstream media (Ruth-McSwain, 2008). Since then, there has been limited research in the agricultural industry about using social media as a media relations tool. Due to the success of social media as a communication tool, social media as a media relations tool for agricultural organizations should be further explored.
The Agricultural Industry in Ohio: Media Relations and Social Media

According to former Senator Darrell Aubertine, Chairman of the Senate Committee on Agriculture (2010), “agriculture is the foundation of our economy” (para. 1). The agricultural industry provides more jobs for individuals in the U.S. than any other industry (Willows Unified School District, n.d.)

The agricultural industry is not only important to the U.S. as a whole, but specifically to the state of Ohio. It is Ohio’s largest industry, contributing over $105 billion to the state’s economy each year (Ohio Farm Bureau Federation, 2015). Ohio has over 13 million acres in farmland and over 75,000 farms (2012 Census of Agriculture, 2014). The total number of farms accounts for all agricultural commodity farms. Ohio’s top agricultural commodities include corn, cattle, soybeans, dairy products, and swine (United States Department of Agriculture Economic Research Service, 2014).

Throughout the state, various agricultural and commodity-specific organizations promote and seek support for the agricultural industry. One of the largest agricultural organizations in Ohio is the Ohio Farm Bureau Federation. The Ohio Farm Bureau is a federation of 87 counties run by community-based board of trustees and volunteers along with a state board of trustees. The ultimate goal of Ohio Farm Bureau is to “forge a partnership that meets consumers needs and ensures agricultural prosperity through a global marketplace” (Ohio Farm Bureau Federation, 2015b, para. 7). This organization, along with others including the Ohio Beef Council, Ohio Cattlemen’s Association, Ohio Corn and Wheat Growers Association, Ohio Dairy Producers Association, Ohio Pork
Producers, and Ohio Soybean Association, seek to promote the agricultural industry and its specific commodities through political and educational actions. These, along with similar organizations, are important to the agricultural industry in Ohio because they are the voice of the producers within the industry. By uniting to promote and generate awareness about issues and products, these agricultural organizations are able to make an impact on public awareness of the agricultural industry.

According to Allen et al. (2014), agricultural organizations have adopted and use social media to promote their products or cause and the agricultural industry as a whole. All of the previously mentioned organizations are currently using social media and have a Facebook page. The organization’s purpose and Facebook profile statistics and characteristics are discussed in detail in Chapter 3. The content that these organizations are sharing vary from educational to political to entertainment and consumer engagement. The growth and use of social media as a communication technology continues; therefore, Ohio agricultural organizations need to take advantage of this opportunity to use social media as a way to enhance communication about the agricultural industry in the future (Anderson-Wilk, 2009).

**Significance Statement**

Agriculture is important to American society socially, economically, and politically, but public knowledge of and involvement in the agricultural industry has significantly decreased over the last century. Due to the decreased public knowledge and
involvement, news media coverage of the agricultural industry has also suffered. New
communication technologies, such as the Internet and social media, have also changed
how society communicates and seeks out and receives information. Even with these
changes, traditional media remains important to the agricultural industry because most
individuals receive information about the agricultural industry through traditional news
media channels (Charanza & Naile, 2012).

Previous research has explored the uses and benefits of social media to
organizations and found social media as a valuable asset because it enables direct
communication with the target audience. Agricultural organizations have also joined the
social media movement and currently use social media tools to “agvocate,” talk directly to
consumers, and put a face to the agricultural industry by telling their stories.

Although the agricultural industry is important to all of the U.S., it is specifically
important to the state of Ohio because it is the state’s largest industry. There are
agricultural commodity organizations throughout the state that seek support for the
agricultural industry. These organizations also serve as leaders and the voices of the
agricultural industry in Ohio. Ohio agricultural organizations have already adopted social
media and are using it as a platform to improve overall support for and recognition of the
agricultural industry and its specific commodities. Ohio agricultural organizations are
already using Facebook to reach out to consumers and the public, but it is unknown if
social media is being used as a media relations tool by agricultural organizations in Ohio.
Using social media as a media relations tool would not only benefit the local sectors of the agricultural industry, but it would also benefit the agricultural industry on a national level by contributing to the American Association for Agricultural Education’s Research Priority Areas. Overall, the AAAE’s Research Priority Areas aim to increase public and political agricultural literacy, develop new technologies, produce a 21\textsuperscript{st} Century progressive workforce, create effective learning environments and education programs, and support and develop thriving communities (American Association for Agricultural Education, 2011). Increasing media relations practices through social media would drive agricultural information to the traditional news media, which is seen by those who are and are not a part of the agricultural industry, which in turn will increase political and public understanding of the agricultural industry. A recent study found that political representatives in Ohio are not using social media to seek out agricultural information (Wells, 2012); therefore, to support the research priority areas, the responsibility indirectly falls to the agricultural communicators to drive agricultural information to the most effective sources, traditional media. The increased understanding of the agricultural industry by the public will also support the development of successful communities and the future agricultural workforce.

Because the agricultural commodity organizations in Ohio have already established a social media presence on Facebook, there is a need to expand upon social media practices to benefit agricultural communications efforts in the future. Therefore,
there is a need for a study to explore if Ohio agricultural commodity organizations are using social media as an effective media relations tool.

Research Objectives

The purpose of this study is thus to examine how agricultural organizations in Ohio communicate via social media and how the messages communicated via social media impact central Ohio (traditional) print and broadcast media sources. The following research objectives were used for this study:

1.) Describe Ohio agricultural organizations use of Facebook to promote current agricultural issues.

2.) Describe central Ohio’s media coverage of agricultural issues through newspapers and television content.

3.) Determine the impact of Ohio agricultural organizations’ social media messages on central Ohio media sources including newspapers and television content.

Definition of Terms

Traditional Media

In this study, traditional media is any form of mass media that has the ability to reach a large audience in a short period of time. Examples of traditional media in this
study include newspaper articles and video and print articles from the television station's website.

Media Relations

Media relations is the development of a relationship with the news media by organizations to communicate the organization’s goals, mission, messages, and practices in a positive manner. The goal of media relations is to produce positive mainstream media coverage for organizations or businesses without paying for the services through traditional advertising.

Social Media

Throughout this study, social media can be defined as a Web-based service that enables users to develop a profile, interact with others users content, and have visible connections. Facebook is the social networking site that referred to as social media in this study.
Chapter 2: Literature Review

This study was developed based on the knowledge that agriculture is the largest industry in Ohio and that the traditional media can have a large impact on how consumers and the public perceive the agricultural industry. Social media has become a common communication tool among agriculturalists and there is a need for more literature to evaluate and understand social media as a media relations tool in the agricultural industry. The purpose of this study is to examine how agricultural organizations in Ohio communicate via Facebook and how the messages communicated via Facebook impact central Ohio media sources. The following research objectives were used for the study:

1.) Describe Ohio agricultural organizations use of Facebook to promote current agricultural issues.
2.) Describe central Ohio’s media coverage of agricultural issues through newspapers and television content.
3.) Determine the impact of Ohio agricultural organization’s social media messages on central Ohio media sources including newspapers and television content.
This chapter reviews agenda setting theory, uses and gratifications theory, and past news media and social media relationship studies related to the agricultural industry as the theoretical foundation for the study.

**Agenda Setting Theory**

Walter Lippman developed the foundation for the agenda-setting hypothesis when he hypothesized that the world around us is too vast for us to understand, and that we rely on the media to inform us, in turn shaping how individuals perceive the world (Sheafer & Weimann, 2005). McCombs and Shaw recognized the importance of media to society, which led to the further development of the agenda-setting hypothesis. According to McCombs and Shaw (1972), “the mass media set the agenda for each political campaign, influencing salience of attitudes toward political issues” (p. 177). The original agenda-setting research examined the 1968 presidential election and explored the agenda-setting function by comparing which issues voters viewed as important to the mass media content throughout the campaign (McCombs & Shaw, 1972). The results of the study supported that the agenda-setting function occurred during the campaign (McCombs & Shaw, 1972). The agenda-setting theory outlined by the researchers aimed to examine and explain the relationship between the mass media and public opinion and “how issues reported in the media can become important among the public” (Meriliainen & Vos, 2011, p. 296).
Agenda-setting research continued as Funkhouser examined news coverage of issues and public opinion in the 1960s. His approach varied by incorporating an individual’s real life experience into the agenda-setting function (Funkhouser, 1973). Funkhouser found that a relationship between the media and public opinion does exist (Funkhouser, 1973). Shaw and McCombs (1977) later added to their original findings by examining the news media. They found the strength of the agenda-setting function increased as individuals were exposed to more content. It was also found that the impact the agenda-setting function had on an individual varied, depending upon how much exposure and the type of medium through which an individual viewed the content (Shaw & McCombs, 1977).

The integration of the agenda-setting theory into mass communication studies changed how media researchers approached media studies. Assumptions shifted from the media telling people what to think to telling people what topics or issues they should think about (Cohen, 1963). Defleur and Ball-Rokeach (1989), also supported this notion saying that the media is not convincing individuals to change their opinion, but that there is a strong connection between the amount of coverage an issue receives by the news media and the rank of importance by the audience. Therefore, “what the media reports, people at large may see as more important” (Merilainen & Vos, 2011, p. 296).

The mass media also plays an important role in the shaping of public opinion because they drive more attention to certain issues than to others (Lang & Lang, 1981). “Readers learn not only about a given issue, but also the level of importance to assign to
that issue from the amount of information in a news story and its position” (McCombs & Shaw, 1972, p. 176). Priming and framing are two tools that the media uses in order to “shape the audience’s views on issues” (Entman, 2007). According to Weaver (2007), priming is where the media repeats content and emphasizes the importance of a particular issue or story. Framing is different because the media highlights a particular aspect of an issue over another (Schuelfele & Tewksbury, 2007). The manner in which the news media portrays that issue or story also has an impact upon audience interpretation (Schuelfele & Tewksbury, 2007).

As the advancement of the agenda-setting theory continued, Uscinkski (2009) argued that the traditional views of agenda-setting theory place too much power into the hands of the media. He suggested that agenda-setting can also be audience driven. (Uscinkski, 2009). The audience-driven approach occurs if a particular issue or topic becomes popular among the public, the issue/topic can then influence the media to report more on the particular issues or topics (Uscinkski, 2009). Current examples of this can be seen through the public’s increased interest in organic foods and GMOs.

Technology has also had an impact on who plays a role in the agenda-setting function because individuals are now receiving their media from different sources (Merilainen & Vos, 2011). The rise of the Internet and online communication has contributed to the change in who participates in the agenda-setting function. “Online has become the new mass medium” and individuals are now directly going to online sources to retrieve their news instead of traditional media outlets (Merilainen & Vos, 2011, p. 22).
Organizations now have a greater opportunity to participate in agenda-setting functions because online communication enables them to directly interact with their publics (Merilainen & Vos, 2011).

Agricultural studies have also explored how the agenda-setting function occurs and impacts the agricultural industry. How the news media reports on the agricultural industry is considered to be sensational reporting, where an issue receives a high level of attention and then dies off quickly (Nelkin, 1995). Scientific discoveries and crisis are also the focus of most reports on the agricultural industry (Nelkin, 1995). According to Nucci and Kubey (2007), “The media controls who is chosen to present opinions or information about a story presented in the news” (p. 152) and who presented the information assists in framing how the issue is perceived by the public. Agricultural stories are also being framed by what section of the newspaper they are placed in. Most stories about agriculture are reported under the business section because of the investments and economic and social challenges of companies (Logan, 2001).

Much of agenda-setting research in the agricultural industry explores how agricultural issues and crisis are being framed by the news media and their audience, and more recently, how issues are being framed in messages distributed through digital communication technology, such as social media. According to Cannon and Irani (2011), framing is not always positive or negative when discussing stories in the news media, it is just how the story is presented, which in turn shapes the audience’s perception of the issues. A popular agricultural issue or crisis that has produced framing research is bovine
spongiform encephalopathy, BSE, more commonly known as mad cow disease. In 2004, a research study looked at the 1996 BSE outbreak in Britian and how it was framed in *The Guardian* and *New York Times* newspapers (Han, 2004). The study found that there was no change in the issues being covered or the sources being used before and after the outbreak, but there was a shift toward a negative tone, or frame, after the outbreak occurred (Han, 2004). Shortly after, another research study examined how the Canadian media framed the 2003 Canadian BSE outbreak. It was found that the Canadian media was also using a negative frame that shaped the audience’s perception to see the outbreak as severe and disastrous to the cattle industry and to humans who consumed beef (Ruth, Eubanks, & Teig, 2005). The study also found that when a health frame is used, that the negative frame is more commonly used and the severity of the issue is exaggerated (Ruth, Eubanks, & Teig, 2005). This higher chance of a negative frame on health issues poses a problem to the agricultural industry because food production will always be linked to health concerns. For example, a research study was done to determine how organic food is framed through the news media and it was determined that the “national newspapers portrayed organic food as part of a moral and ethical responsibility for the environment, society, and consumers” (Meyers & Abrams, 2010). This positive frame on organic food then began a cycle of agenda-setting, where the media positively portrays an issue, the audience then has increased interest in the issues, which causes the media to continue to report on the issue due to audience-driven agenda-setting (Meyers & Abrams, 2010).

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Agenda-setting theory has also been used to explore newer communication technology. One study looked at how agricultural messages were perceived on agricultural websites and used framing as theoretical foundation and how agricultural organizations should frame their messages for the public (Goodwin, Chiarelli, & Irani, 2011). The results of the study suggested that agricultural organizations needed to understand what type of messages attract their target audience so that the organizations are able to frame the messages to benefit the organization (Goodwin, Chiarelli, & Irani, 2011). There have also been framing studies exploring how agricultural issues are framed in social media, such as YouTube (Rhoades & Ellis, 2010).

This study will build a foundation on the agenda-setting theory as it seeks to explore how agricultural organizations and the news media are portraying agricultural information and stories. The sources and authors will be examined to determine to how the agenda-setting function could be occurring through social media and the news media.

Uses and Gratifications

The Theory of Uses and Gratifications (U&G) is founded in psychological and communication research. It explains how individuals use the mass media and why individuals select a particular medium to fulfill their needs (Papacharissi, 2008). Within the theory of U&G, the audience is considered active and consciously selects the media and content (Papacharissi, 2008).
The development of U&G began in the 1940s. The foundation for the theory originated from Lasswell’s communication model of mass communication, which examined the question “who says what, in which channel, to whom, with what effect?” (Papacharissi, 2008) The earliest U&G research was done by Lazarfeld and examined why individuals selected certain radio programming (Papacharissi, 2008). In the early studies, researchers used a qualitative approach to understand why individuals selected media sources and organized gratifications into categories. Most of the studies did not have a strong theoretical foundation, but found that the media evaluated, radio, was used for everyday needs and thus led to further examination of why individuals selected various media. More studies followed the model of the radio U&G studies as new technologies such as television and Internet were introduced to the public.

It was not until the 1970s that a strong theoretical foundation was established for U&G. In 1974, Katz, Blumler, and Gurevitch examined the previous U&G research and defined the theoretical definition of U&G as

the social and psychological origins of needs, which generate expectations of the mass media or other resources, which lead to differential patterns of media exposure (or engagement in other activities) resulting in need gratifications and other consequences, perhaps mostly unintended ones. (p. 20)

Rosengren (1974) also developed a model of U&G but simplified the theoretical definition to “basic needs interact with individual characteristics and society to produce perceived problems and perceived solutions to them” (Papacharissi, 2008, p. 138). The
perceived problems then create a motive for an individual to select a particular media source to fulfill his or her needs.

After years of theory development and redevelopment, the uses and gratification theory began to take hold. The current U&G theory is grounded is five assumptions: (1) communication behavior and media selection is purposive and intended to meet an individuals goals; (2) individuals are active in their choice of communication vehicles; (3); many social and psychological factors contribute to an individuals communication behavior; (4), media must compete with other forms of communication to satisfy an individuals needs or goals; and (5) personal communication with other individuals is most often more influential than the media (Rubin, 1994). Most of the current U&G research falls under six main categories, including, “(1) gratifications and media consumption; (2) social and psychological origins of gratifications; (3) gratifications and media effects; (4) gratifications sought and obtained; (5) expectancy-value approaches to uses and gratifications; and (6) audience activity” (Papachrassi, 2008, p. 139).

As technology has evolved and expanded, U&G has remained a useful theory because it is applicable to various media contexts (Papacharissi, 2008). U&G has become particularly popular in Internet studies because the theory examines what individuals do with the media instead of what the media does to individuals (Katz, et al, 1974). The Internet is also a good research topic for U&G studies because users have to be actively engaged when interacting on the Internet (Ruggiero, 2000). According to Lin (1999), the motivations and media outlets in online studies vary, but some of the common
gratifications sought by users are relaxation, companionship, habit, passing time, entertainment, social interaction, information and surveillance, arousal, and escape.

Not only has U&G been beneficial to understanding uses on the Internet, it has also been used to understand why individuals do or do not use social networking sites (Raacke & Bonds-Raacke, 2008). Social media has become a topic of interest in U&G research because of the interpersonal nature of the medium (Chen, 2011). To understand what type of gratifications individuals were experiencing from social networking sites, Raacke and Bonds-Raacke (2008) explored the gratifications of college students who used MySpace and Facebook. The study found that the most common gratification was the ability to connect with old friends and seek out information on new friends. Some less significant gratifications from the study were found, including learning about events, posting social functions, sharing personal information, academic purposes, and dating. The researchers called for more research to be done to explore and understand the motives behind the gratifications found in the study (Raacke & Bonds-Raacke, 2008). A U&G study has also been done to determine if Twitter users feel more connected due to their social media use (Chen, 2011). It was found that if a user used Twitter consistently over a long period of time as opposed to a lot during a short period of time, the user would feel more connected (Chen, 2011). Following this study, there was a call for more research to understand more potential uses and gratifications of Twitter users.
Using the theory of Uses and Gratifications to examine and understand social media users is important because if a user experiences a gratification, he or she is more likely to return to that medium (Chen, 2011).

Agricultural communication research has also employed the theory of U&G to determine what medium agricultural communicators are using to communicate and why. According to the Academy for Educational Development (1985), “communicators traditionally group their activities around their preferred medium” (p. 6). Ruth-McSwain’s (2000) agricultural communications study supports this fact through its findings that agricultural communicators are familiar with and use agricultural media and print sources as the primary means of communication. The study also found that agricultural communicators used the agricultural media sources because they are friendly and convenient, and there is less of a chance that facts will be skewed by non-agriculturally literate media reporters (Ruth-McSwain, 2008). Agricultural communicators were also choosing print media because it provided more in-depth coverage and they are comfortable with the effectiveness of the medium (Ruth-McSwain, 2008). Although the study supported the traditional assumptions of U&G, it also suggested that agricultural communicators need to use a mixed methods media relations strategy to select the proper medium to reach the target audience (Ruth-McSwain, 2008).

This study applied the theory of U&G to indirectly examine how agricultural communicators in organizations used Facebook to distribute messages to the target audience and if the selected medium was effective as a media relations tool. New media
personnel are also affected by U&G because they seek out and select mediums and sources that have previously provided some gratification in the past. As mentioned earlier, there are six popular categories of U&G research and this study falls under the category of “expectancy-value approach to U&G” and “gratifications and media effects” (Papacharassi, 2008, p. 139).

Social Media Use for Media Relations

The development of social media provided new communication tools that public relations practitioners can potentially transform into media relations tools. The literature and research surrounding social media as a public relations tool is scarce because it is still considered an emerging trend. Below is a summary of the literature on organizations and the agricultural industry using social media as a public relations tool.

Organizations are changing their methods of public relations because journalists are changing how they retrieve information. According to Jung and Hyun (2014), the use of the Internet by newsroom staff to seek out information and communicate with sources is becoming more popular. Journalists are now participating in social media discussions, therefore creating a new channel of communication for public relations professionals to communicate with the news media (Yoo & Kim, 2013). Data has been collected to examine which social media sites are most often used by journalists. According to the TEK Group (2012), 26 percent of journalists use Facebook to retrieve basic information about a source, 34 percent like receiving newsworthy information via a timely tweet, and
90 percent believe that blogging is the most valuable tool in developing news stories. The increase in social media as a media relations tool has caused a call for research to understand this new and emerging trend.

A foundation was built for examining social media as a media relations tool by researching the online newsroom. One study determined what factors can be attributed to the success of a corporation’s public relations online newsroom. It was found that strong financial stability and professional resources allowed the corporation to maintain a more effective online newsroom (Jung & Hyun, 2014). Although online newsrooms have become a useful tool for media relations, it was found that most of the content online newsrooms provided were not complete enough to meet the needs of the journalists (Hill & White, 2000; Magnet, 2000, 2006; Gonzalez-Herrero & Ruiz de Valbuena, 2006). For example, the online newsrooms lacked in their usability, content availability, and information distribution (Yoo & Kim, 2013). In order to keep up with the changing need of the media, organizations and corporations need to develop and utilize online newsrooms to their full capability (Jung & Hyun, 2014).

From the foundation of the online newsroom analysis, researchers looked at the role social media played in the online newsroom and its capability to enhance media relations. One study explored the impact of social media on traditional media practices. It was found that social media is creating a clearer line of communication between the organization and journalists (Bajkiewicz, Kraus, & Hong, 2011). It was also found that many journalists have strayed away from communicating via traditional channels, such as
phone calls and emails, but are willing to communicate via social media (Bajkiewicz, Kraus, & Hong, 2011). For example, the Associated Press encourages all AP journalists to obtain social media accounts and use social media as a source as long as they follow the sourcing guidelines (Associated Press, 2013). This change in communication practices allow the organizations to have immediate and interactive conversations with the media, while providing up-to-date, unfiltered messages (Bajkiewicz, Kraus, & Hong, 2011). Social media is valuable in media relations because it has enhanced traditional media, newsrooms-via new media-and social media (Bajkiewicz, Kraus, & Hong, 2011).

Although there are benefits to using social media as a communication channel with journalists, poor usability practices can result in a reduction of positive press coverage (Nielsen Norman Group, 2001). Even though social media has created a new means of communication in media relations practices, the core of media relations remains to build relationships and retrieve accurate and solid information (Bajkiewicz, Kraus, & Hong, 2011). The increased use of the Internet by consumers and individuals to retrieve information has caused concern about the “ability to tell ‘good’ information from ‘bad’ information” and checking the credibility of information online can be difficult (Bates, Romina, Ahmed, & Hopson, 2006, p. 45; Greer, 2003). According to Greer (2003), “The problem for news media comes when the public struggles to distinguish information produced by trained journalists from information placed online by groups or individuals with lower standards” (p. 12). Many organizations and companies have adopted the use of social media as a media relations tool, but due to the previously mentioned credibility
concerns, public relations professionals still think that the traditional media practices are more reliable, credible, and accurate (Write & Hinson, 2010).

Understanding media relations in the agricultural industry is important because the news media is essential to disseminating agricultural information to the public, which in turn improves support and understanding of the agricultural industry in the U.S. (Ruth-McSwain, 2008). News coverage of the agricultural industry is limited and continues to decline due to limited agricultural knowledge of the news media staff (Stringer & Thomson, 1999; Treise & Weigold, 2002). There is limited media relations research and strategies that have been documented in the literature by agricultural communicators (Ruth-McSwain, 2008). One study used a U&G approach to understanding media relations and determined that agricultural communicators are ‘talking to themselves’ via agricultural media, but not to the mainstream media (Ruth-McSwain, 2008). Agricultural communicators are also using print sources to communicate with their audiences, but believe that it may not be the most effective method (Ruth-McSwain, 2008). In another study, it was determined that it was important for the agricultural communicator to become a major source because they “serve as the link between the agricultural industry and the public by disseminating relevant agricultural information through the news media” (Ruth-McSwain & Telg, 2008, p. 47-48). Agricultural communicators can have an impact on media content due to general reporters lack of knowledge (Ruth-McSwain & Telg, 2008, ). There is a need for more media relations research in the agricultural
industry because it will help agricultural communicators navigate the ever-changing media environment and the changing agricultural industry (Ruth-McSwain, 2008).

This study is built on the foundation of previous social media and media relations research from inside and outside of the agricultural industry.

**Summary**

This chapter described and provided examples of the agenda-setting theory, uses and gratifications theory, and previous research of social media as a media relations tool. 

The agenda-setting theory states that the mass media set the agenda, which in turn influences the public’s attitude toward issues. As online media has become more popular, individuals and organizations can also play a role in the agenda-setting function. The theory of uses and gratifications explores the way that individuals select certain media to meet his or her needs. The integration of technology has allowed users to be actively engaged with content, which strengthens U&G research. The emerging trend of social media as a media relations tool has also been a topic of research. Journalists are using social media to reach out and retrieve information for news stories; therefore organizations need to be up-to-date with their online media relations practices. The agricultural industry has also performed research based on the agenda-setting theory and uses and gratifications theory. This thesis is built on the foundation of agenda setting, uses and gratifications, and previous research on social media as a media relations tool.
The theoretical foundation will establish the assumptions in under which analysis and discussion of the data and findings will occur.
Chapter 3: Methodology

The previous chapters discussed the traditional news media and social media and their use and value to the agricultural industry. A theoretical foundation was established for this study using the agenda-setting theory, uses and gratifications, and previous social media use as a media relations tool by organizations in and outside of the agricultural industry. This chapter will further describe the design of the study as influenced by the proceeding research.

Problem Statement

The agricultural industry is an important industry in American society, but there continues to be a growing disconnect between the agricultural industry and the public. Along with the a shrinking public knowledge base about agriculture, the media coverage of the agricultural industry is also declining. The introduction of the Internet and digital communication technologies has change the way that organizations and the media communicate. Even though there is a shift from print communications to digital communications, the traditional media remains important to the agricultural industry because consumers and the public receive their agricultural information via traditional media sources, such as television and newspapers.
As Ohio’s largest industry, the agricultural industry needs to be able to effectively direct agricultural messages to a source that will disseminate the information to consumers and the public. Currently agriculturalists use agricultural media and print media as media relations channels, but do not believe they are effectively reaching out to the news media. Digital communication technology, such as social media, has provided a new communication platform for organizations to use as a media relations tool.

Agricultural organizations in Ohio have already adopted Facebook and use it to reach out to consumers and the public. Due to the importance of the traditional media in disseminating agricultural information, there is a need to study the expansion of social media as a media relations tool by agricultural organizations. A study that examines how agricultural organizations are currently using social media as a media relations tool will benefit the agricultural industry as a whole because developing effective social media media relations practices can increase public and consumer knowledge of the agricultural industry, which in turn leads to future support of the agricultural industry.

Research Objectives

The purpose of this study is to examine how agricultural organizations in Ohio communicate via Facebook and how the messages communicated via Facebook impact central Ohio media sources. The following research objectives were used for this study:

1.) Describe Ohio agricultural organizations use of Facebook to promote current agricultural issues.
2.) Describe central Ohio organizations’ use of media sites to promote television content.

3.) Determine the impact of Ohio agricultural organizations’ social media messages on central Ohio media sources including newspapers and television content.

Research Design

This study used a mixed methods approach with an emphasis on the qualitative results. According to Lisle (2011), “qualitatively driven or qualitative dominant mixed methods studies are best able to capture the complexity of some educational and social issues” (p. 95). The design for this study included quantitative and qualitative content analyses of Ohio agricultural organizations' Facebook posts and central Ohio news media stories and articles. According to Holsti (1969), “A content analysis is any technique for making inferences by objectively and systematically identifying specified characteristics of messages” (p. 14). Content analysis was selected for this study due to the text- and image-heavy nature of the content. It was crucial in meeting the research objectives because themes could be identified and analyzed to determine if there is a relationship between the Ohio’s agricultural organization's Facebook posts and news stories distributed by central Ohio’s traditional news media.
Media Selection

The population was selected according to the top agricultural commodities in Ohio and the most popular news sources in central Ohio.

There were two target populations for the study. The first is the Ohio agricultural organizations that represent the main agricultural commodities in Ohio. The organizations included in the study are the Ohio Beef Council, Ohio Cattlemen’s Association, Ohio Corn and Wheat Growers Association, Ohio Dairy Producers Association, Ohio Farm Bureau, Ohio Pork Producers, and Ohio Soybean Association. These organizations were selected because they represent the top agricultural interests of the state of Ohio. The preceding organizations’ Facebook page name, mission, and number of likes can be found in Table 1.

The second target group for this study is the major news media outlets of central Ohio. This sample will include, the Columbus Dispatch, WBNS 10 TV News, WCMH-TV NBC 4, and WSYX ABC 6. These sources were selected for the study because they are the largest news media distributors in the area and are all located in the capital of Ohio, therefore reaching the largest audience.

Data Collection

The data for this study was collected from September 8, 2014 to October 6, 2014. The collection occurred during a major agricultural event in Ohio, the Farm Science Review. The time period was selected because the Farm Science Review often covers
topics that are also relevant to those outside of the agricultural industry, therefore making it into the news media. The researcher performed all of the data collection and analysis individually.

The instrument used in this study was a coding sheet designed to record the social media and news content for content analysis. Separate coding sheets were developed for the social media analysis (Appendix A) and news media analysis (Appendix B). The instructions for coding are also included in Appendix A and Appendix B.

The social media analysis coding sheet recorded the date, time, publisher, likes, and shares of the social media post. The text from the post and an image or video, if available, was also recorded in the coding sheet.

Social media coding was performed daily. The researcher visited each Ohio agricultural organization’s Facebook page, and posts created during the 24-hour period were captured via a screenshot and stored in a digital folder on the researcher’s laptop. After the coding sheet was complete, the coding sheet and screen shots were printed and stored. The social media analysis was performed after the data collection period.

The news media analysis-coding sheet recorded the date, media source, author, author type, article or story classification, tone of the article or story, and the type of article or story. The coding sheet was also used to record the text, images, and video if available to be evaluated through content analysis.
<table>
<thead>
<tr>
<th>Organization</th>
<th>Facebook Page Name</th>
<th>Mission/Purpose</th>
<th>Number of Likes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ohio Farm Bureau</td>
<td>Ohio Farm Bureau Federation</td>
<td>Create a partnership between farmers and consumers</td>
<td>9,010</td>
</tr>
<tr>
<td>Ohio Corn and Wheat Growers Association</td>
<td>Ohio Corn and Wheat Growers Association</td>
<td>An educational and political powerhouse for the regulation and advancement of domestic and international issues that affect the success of Ohio’s corn and wheat markets</td>
<td>720</td>
</tr>
<tr>
<td>Ohio Cattlemen’s Association</td>
<td>Ohio Cattlemen's Association</td>
<td>The state’s spokesperson &amp; issues manager for the beef cattle industry including cattle breeders, producers, &amp; feeders. It is the grassroots policy development organization for the beef business.</td>
<td>5,785</td>
</tr>
<tr>
<td>Ohio Beef Council</td>
<td>Ohio Beef Council</td>
<td>Supporting beef by investing Ohio’s checkoff funds in key areas such as promotion, research, consumer information, industry information, and foreign marketing</td>
<td>6,109</td>
</tr>
<tr>
<td>Ohio Soybean Association</td>
<td>Ohio Soybean Farmers</td>
<td>Support research, education, and promotion efforts that advance farming practices and build markets for our soybean products</td>
<td>1,435</td>
</tr>
<tr>
<td>Ohio Pork Producers</td>
<td>Ohio Hog Farmers</td>
<td>To provide consumers with nutritious and delicious pork by giving animals the best care while protecting the environment</td>
<td>176,258</td>
</tr>
<tr>
<td>Ohio Dairy Producers Association</td>
<td>Ohio Dairy Farmers</td>
<td>Grassroots legislative, research, and producer education organization, representing dairy farmers regardless of farm size, breed or production strategy, marketing preference, or political affiliation</td>
<td>27,453</td>
</tr>
</tbody>
</table>

Table 1. Characteristics of Ohio Agricultural Organization’s Facebook Pages
News story coding was performed daily. The data was collected from online subscriptions and the ‘news’ section of the central Ohio news media sources website. The subscriptions and websites were visited daily and stories were collected if they contained any mention of agricultural topics in the title, byline, or copy. The story was captured via a screenshot and stored in a digital file on the researcher’s laptop. After the coding sheet was complete, the coding sheet and screen shots were printed and stored. The news media analysis was performed after the data collection period.

Data Analysis

After the data was collected a quantitative and qualitative content analysis was performed. Emerging themes were determined for the social media and news media analysis via open coding. Open coding in content analysis is the act of examining the text and images collected from the data and then selecting identifiers, such a key words, to distinguish codes or themes (Hsieh & Shannon, 2005). The text, images, and videos from the posts and articles were used to determine the emerging themes.

A quantitative analysis was also performed to determine the means and frequencies of likes, shares, photos, links, and videos from the social media coding sheets. The quantitative data was organized and reported according to the qualitative themes. The means and frequencies of the sources used, agricultural organizations mentioned, links, images, and videos from the news media coding sheets were also determined.
After the emerging themes were established, common themes between the social media and news media analysis were further analyzed. The researcher examined the dates and themes to determine if a relationship was present between the social media and news media. The sources cited in the news articles was also analyzed and a direct impact by social media content would be indicated by citation of a social media profile or post.

Validity and Reliability

According to Colorado State University (n.d.), “the validity of categories… is achieved by utilizing multiple classifiers to arrive at an agreed upon definition of the category” (para. 3). To increase the validity of the categories for this study, the researcher used multiple keywords and visual identifiers. For example, in the news article analysis, key words such as “runoff,” “fertilizer,” “drinking water,” and “water quality” were used to develop the Water Quality theme. Validity was also augmented/increased by generalization of the categories. Although the data was only collected from Ohio agricultural commodity organizations and central Ohio news sources, the titles of the categories were simplified so that it could be applied to any similar population.

According to Drost (2011), “reliability is consistency of measurement” (p. 106). To measure the reliability of this study, two coders performed inter-coder reliability and Krippendorf’s Alpha was determined using a 10% sample of the social media and news media population. A 97.6 percent was calculated and deemed acceptable.
Limitations

The news story sample for this study was limited because the researcher was unable to retrieve television transcripts for the stories that were aired live. To encompass the best sample for the study, the television source’s websites were used and print and video stories were included in the sample.

The study was also limited in the examination of the use of Facebook by Ohio agricultural organizations because the content posted was all that was collected. No interviews or analysis was performed with the Facebook managers of the Ohio agricultural organizations. This only allowed for assumptions to be made from the content.

The data collection period also limited the study because a small timeframe was used for this study. An extension of the timeframe for the data collection would allow for more patterns of types of posts and potential impact to surface.

Summary:

This chapter described the methods used to conduct this study, which sought to understand content posted on Facebook by Ohio agricultural commodity organizations, the representation of agricultural issues in the central Ohio news media, and if the Facebook content had an impact on the content of the news articles. This was a mixed
methods study that used qualitative open coding content analysis to determine emerging
themes and quantitative calculations of means and frequencies.
Chapter 4: Results

The agricultural industry is an important industry in American society, but a disconnect continues to grow between the agricultural industry and the public. Along with a shrinking public knowledge base about agriculture, the media coverage of the agricultural industry is also declining. The introduction of the Internet and digital communication technologies has changed the way that organizations and the media communicate. Even though there is a shift from print communications to digital communications, the traditional media remains important to the agricultural industry because consumers and the public receive their agricultural information via traditional media sources, such as television and newspapers.

As Ohio’s largest industry, the agricultural industry needs to be able to effectively direct agricultural messages to a source that will disseminate the information to the public. Currently agriculturalists use agricultural media and print media as media relations channels, but they do not believe they are effectively reaching out to the news media. Digital communication technology, such as social media, has provided a new communication platform for organizations to use as a media relations tool. Agricultural organizations in Ohio have already adopted Facebook and use it to reach out to
consumers and the public. Due to the importance of the traditional media in disseminating agricultural information, there is a need to study the expansion of social media as a media relations tool by agricultural organizations. A study that examines how agricultural organizations are currently using social media as a media relations tool will benefit the agricultural industry as a whole because developing effective social media media relations practices can increase public and consumer knowledge of the agricultural industry, which in turn could lead to future support of the agricultural industry.

The purpose of this study was to examine how agricultural organizations in Ohio communicate via Facebook and how the messages communicated via Facebook impact central Ohio’s traditional media sources. The following research objectives were used for this study:

1.) Describe Ohio agricultural organizations’ use of Facebook to promote current agricultural issues.

2.) Describe central Ohio’s media coverage of agricultural issues through newspapers and television content.

3.) Determine the impact of Ohio agricultural organizations’ social media messages on central Ohio media sources including newspapers and television content.

The study was guided with a theoretical foundation including the agenda-setting theory, uses and gratifications theory, and previous studies examining social media and as media relations tool.
This mixed methods study collected data from seven Ohio agricultural organizations Facebook pages and four central Ohio news sources. The Ohio agricultural organizations included: Ohio Beef Council, Ohio Cattlemen’s Association, Ohio Corn and Wheat Growers Association, Ohio Dairy Farmers, Ohio Farm Bureau, Ohio Pork Producers, and Ohio Soybean Association. The central Ohio news sources were the *Columbus Dispatch* and the websites of WBNS 10 TV, WCMH-TV NBC 4, and WSYX ABC 6.

The collection occurred over a one-month period of time, and data was collected via screen shots. The data was then coded and analyzed via content analysis. This chapter reports the themes that were found for each research objective.

**Objective 1: Describe Ohio’s agricultural organization’s use of Facebook to promote current agricultural issues.**

Seven Ohio agricultural organizations Facebook pages were monitored for a one-month period and 140 Facebook posts were collected via a screen shot. The data was extracted from the screen shot and recorded into a coding sheet. The coding sheet was evaluated, and major themes were determined. The emerging themes of the Facebook posts included a) *Recipes and Food*; b) *Farm and Agricultural Stories*; c) *Events*; d) *Education and Programs*; e) *General Agricultural Promotion*; f) *Leadership and Professional Development*; g) *Awards and Recognition*; h) *Job and Internship Posting*; i)
Political; and j) Water Quality. The means analysis data of each emerging theme can be found in Table 2.

Recipes and Food

The most common theme from the Facebook posts was Recipes and Food. A post was categorized under this theme if it contained text or images that were affiliated with recipes, food knowledge and education, or other general food promotion. The Recipes and Food theme had 31 Facebook posts. Ohio Pork Producers were the top contributor with 14 posts and Ohio Beef Council was the second with seven posts. Images were common on food and recipe posts where 30 of 31 posts included images. There were four types of images that emerged: pictures of food, food events, text and image combinations, and images without food. Examples of these images can be found in Figure 1. The text that accompanied the images were closely associated with the images. For example, social media post number 23 from the Ohio Beef Council states, “Looking to add a little variety to the traditional beef burger?” The text was accompanied by an image of a burger with non-traditional toppings. Links and videos were also included in the Facebook posts where 22 of 31 posts included an external link and one of 31 posts included a video. The links connected the post to an external website that contained full recipes, information about food related events, or other food information. Recipes and Food related posts averaged 556.3 likes (range: 0-4,140) and 429.8 shares (range: 0-
Organizations shared content from another Facebook page or website 10 out of 30 times.

<table>
<thead>
<tr>
<th></th>
<th>Total Number of Posts</th>
<th>Average Likes</th>
<th>Average Shares</th>
<th>Average # of Photos</th>
<th>Average # of Videos</th>
<th>Average # of Links</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recipes and Food</td>
<td>31</td>
<td>556</td>
<td>430</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Farm and Agricultural Stories</td>
<td>30</td>
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</table>

Table 2. Facebook Post Means Analysis (Rounded to the Nearest Whole)
The second most common theme of Facebook posts was *Farm and Agricultural Stories*. A post was categorized under this theme if it contained text or images that were affiliated with farmers sharing their stories or personal experiences and general agricultural stories that did not fall under another major theme.

The *Farm and Agricultural Stories* theme contained 30 Facebook posts. The Ohio Dairy Farmers were the top contributor with 10 posts and Ohio Pork Producers second with six posts. Images were included in 19 of 30 posts. Examples of images included farmers, families, farms, and animals. (See Figure 2 for image examples.) Videos were
also included in 11 of 30 posts. Most of the videos were embedded in the post and were uploaded via YouTube. The videos were of farmers, families, and individuals from the agricultural industry telling their stories. External links were included in 25 of 30 posts. The Facebook posts in this theme averaged 83.4 likes (range: 2-523), 9.6 shares (range: 0-60), and five of 30 posts were share from another Facebook page or website.

Figure 2. Images from *Farm and Agricultural Stories* Facebook Posts

**Events**

A Facebook post qualified under the *Events* theme if it contained text or images that promoted an event, was posted from an event, or contained information about an event.
The *Events* theme had 21 Facebook posts. Ohio Farm Bureau was the top contributor with 9 posts and Ohio Corn and Wheat Growers Association was second with 4 posts. Images were common as 19 of 21 posts included images. (See Figure 3 for examples.) No videos were included, eight of 21 posts had external links and two of 21 posts were shared from another Facebook page or external website. The events posts averaged 18 likes (range: 0-100) and 4.3 shares (range: 0-55).

Figure 3 Images from *Events* Facebook Posts
Education and Programs

A Facebook post qualified under the *Education and Programs* theme if it contained text or images that were affiliated with the education of farmers or individuals, disseminating new knowledge, or promotion of an education program offered through the organization.

The *Education and Programs* theme had 13 Facebook posts. Ohio Farm Bureau was the most common contributor with five posts and Ohio Beef Council was second with three posts. Images were common with 11 of 13 posts containing images. The most common images were farming images or educational events images. One of 13 posts included a video and nine of 13 posts included an external link. (See Figure 4 for example images.) The average number of likes was 10.8 (range: 1-57) and the average number of shares was 0.8 (range: 0-6). There were 4 of 13 posts shared from another Facebook page or external website.

Leadership and Professional Development

A Facebook post qualified under the *Leadership and Professional Development* theme if it contained text or images that were affiliated with leadership or professional development events and programs.
The *Leadership and Professional Development* theme had 11 Facebook posts. Ohio Farm Bureau was the most common contributor with 9 posts and Ohio Cattlemen’s Association and Ohio Corn and Wheat Association were second one post each. All of the posts included one or more images of professional development meetings, groups, or advertisements. (See Figure 5 for leadership and professional development images.) None of the posts included videos and 10 of 11 posts included external links. The most common type of external link was to a story about a professional development event or group on the organization’s website. The average number of likes was 11.5 (range: 1-34)
and the average number of shares was 0.6 (range: 0-2). None of the posts in this category were shared from another Facebook page or external website.

Figure 5. Images from *Leadership and Professional Development* Facebook Posts
Awards and Recognition

A Facebook post qualified under the *Awards and Recognition* theme if it contained text or images that were affiliated with recognizing an individual or group for an award or service.

The *Awards and Recognition* theme had seven Facebook posts. Ohio Beef Council was the top contributor to this theme with 3 posts, none of the posts included videos, and five of seven posts included an external link. The average number of likes in this theme was 14.4 (range: 2-26) and the average number of shares was 0.9 (range: 0-3). None of the posts were shared from other Facebook pages or external websites. All of the posts included one or more images of the individuals or groups receiving the award or recognition. See figure 6 for examples of images.

![Figure 6. Images from Awards and Recognition Facebook Posts](image_url)
Job and Internship Postings

A Facebook post qualified under the Job and Internship Postings postings theme if it contained text or images that were affiliated with a job or internship position communicated via Facebook.

The Job and Internship Posting theme had six posts. Ohio Cattlemen’s Association was the biggest contributor with five posts and Ohio Corn and Wheat Growers Association was second with one post. These posts emphasized textual communication over visual communication where one of six posts included an image, none of the posts included a video, and four of six posts included a link. An example of the textual communication is from social media number 97 that states, “The application deadline for the Ohio Cattlemen’s Association spring internships is approaching quickly! Apply by October 1st for this great opportunity!” The average number of likes for this theme was 2.5 (range: 1-6) and the average number of shares was 0.8 (range: 0-4). Only one post out of six was shared from an external source.

Political

A Facebook post qualified under the Political theme if it contained text or images that were affiliated with political discussions, issues, or visits.

The Political theme had five Facebook posts. The Ohio Farm Bureau was the only contributor to this category. Images were found in three of five posts, one of five posts included a video, and four of five posts included an external link. The most common type
of image was of individuals speaking at a political-related event. (Examples of images can be found in Figure 7.) The average number of likes in this theme was 11.6 (range: 3-31), there were no posts shared, and two of five posts included an external link to another Facebook page or external website.

Figure 7. Images from Political Facebook Posts

Water Quality

A Facebook post qualified under the Water Quality theme if it contained text or images that were affiliated with information about current water quality issues.

The Water Quality theme had four Facebook posts. Ohio Farm Bureau was the top contributor to this theme with three posts and Ohio Cattlemen’s Association with one post. Images varied from events to graphic illustrations to water images (See Figure 8). All of the posts included external links, three of four posts included an image, and one of
four included a video. The video was a speech about water quality at the 2014 Farm Science Review. The average number of likes for this theme was 9.3 (range: 3-20) and the average number of shares was 4.0 (range: 1-11). Only one post was shared from another website.

Figure 8. Images from Water Quality Facebook Posts

General Agricultural Promotion

A Facebook post qualified under the General Agricultural Promotion theme if it did not qualify under another major theme. Examples of posts include participation with community/national events, industry promotion of swine, and activities of the organization’s members.

The General Agricultural Promotion theme had 12 Facebook posts. Ohio Pork Producers were the most common contributor with eight posts and Ohio Beef Council was the second most common contributor with three posts. All 12 posts included an
image, none of them included a video, and three of 12 posts included an external link. The average number of likes for the category was 646.3 (range: 2-1,480) and the average number of shares was 132.7 (range: 0-695). Of the twelve posts three were shared from another Facebook page or external website. (Examples of images can be found in figure 9.)

Figure 9. Images from General Agricultural Promotion Facebook Posts
Objective 2: Describe central Ohio’s media coverage of agricultural issues through newspapers and television content.

Four central Ohio news media sources were monitored for a one-month period of time and 18 articles were collected via screen shot. The data was collected from The Columbus Dispatch, WBNS 10 TV website news page, WCMH-TV NBC 4 website news page, and WSYX ABC 6 website news page. The information from the screen shots was coded and themes were determined from open coding content analysis. The emerging themes from the news sources included: a) Water Quality, b) Organic Food and Food Products, c) Animal Welfare and Animal Safety, d) Agriculture and Science, e) Disaster and Tragedy, and f) Non-Direct Mention of Agriculture. The specific findings are discussed below according to each theme.

Water Quality

If the content was affiliated with water quality issues, or policy, it was categorized under the Water Quality theme. Seven articles were collected and the Columbus Dispatch contributed five articles, NBC 4 contributed one article, and ABC 6 contributed one article. The distribution of articles according to theme can be found in Table 3. An average of three sources was used per article (range: 1-7) and an average number of agricultural organizations mentioned was 1.28 (range: 0-3). None of the articles provided external links, five of the seven articles provided an image, and two of seven provided a video.
The common images among the *Water Quality* posts included maps and farm images (See Figure 10). Examples of article titles include: “EPA: Officials Must Target Algae Triggers” from the *Columbus Dispatch*; “Farm Science Review Tackles Algae Threat” from the Columbus Dispatch; and “New Reservoir Will Help Protect Columbus’ Water Supply” from ABC 6. Key words used to describe this theme include “water,” “algae,” “agriculture,” “drinking water,” and “EPA.”

Figure 10. Images from *Water Quality* News Articles

*Organic Food and Food Products*

Articles affiliated with organic food, food issues, or food safety were categorized under *Organic Food and Food Products* theme. Three articles were identified with WBNS 10 TV, ABC 6, and NBC 4 each contributing one article. The distribution of
articles according to theme can be found in Table 3. The average number of sources used in the articles was 2.33 (range: 1-4). The average number of agricultural organizations mentioned was 0.66 (range: 1-4). There was one of three articles that provided an external link, two of three provided an image, and two of three provided a video.

The common images used in the news articles were pictures of food or food products. An example of an article title is “Buying Organic? How to Find Best Prices in Central Ohio” from the *Columbus Dispatch*.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Columbus Dispatch</th>
<th>WBNS 10 TV</th>
<th>ABC 6</th>
<th>NBC 4</th>
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<td>3</td>
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<td>Agriculture &amp; Science</td>
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<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Disaster/Tragedy</td>
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<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Non-direct mention of agriculture</td>
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<td><strong>5</strong></td>
<td><strong>5</strong></td>
<td><strong>2</strong></td>
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</tr>
</tbody>
</table>

Table 3. Distribution of News Media Articles According to Theme
Animal Welfare and Animal Safety

Articles affiliated with animal welfare issues, animal abuse, or other agricultural animal concerns were categorized under the Animal Welfare and Animal Safety theme. Three articles were collected; WBNS 10 TV contributed two articles and ABC 6 contributed one article. The distribution of article source according to themes can be found in Table 3. The average number of sources cited in the articles was 1.66. (range: 1-2). There were no agricultural organizations mentioned in the articles collected. None of the articles provided external links, all of the articles provided one or more images, and one of three articles provided a video.

The common images used in the articles were of farm animals and farm images (See Figure 11). Most of the articles were negative coverage of the agricultural industry in a reaction to an animal abuse issue. Examples of article titles include “Phoenix Cow Dies After Being Pelted With Softballs” from ABC 6 and “Four People Arrested in Slaughter at California Chicken Ranch” from 10 TV News.

Figure 11. Images from Animal Welfare and Animal Safety News Articles
Agriculture and Science

Articles affiliated with the application of science to agriculture and the use of agriculture in a scientific context was categorized under the Agriculture and Science theme. A total of two articles were collected; ABC 6 contributed one article and WBNS 10 TV contributed one article. There were no sources cited and no agricultural organizations mentioned in the articles collected. None of the articles provided links or images. Only one provided a video. The title of the article from NBC 4 was “Corn, Soybeans and Weather Folklore” and was a video story. The title of the article from 10 TV News was “Using Pork to Stop Nosebleeds A Winning Discovery” and was only a textual article.

Disaster and Tragedy

The articles affiliates with disasters or tragedies that had an indirect relation to the agricultural industry was categorized under the Disaster and Tragedy theme. Two articles were collected; ABC 6 contributed one article and WBNS 10 TV contributed one article. The average number of sources used was 1.5 (range: 0-3). There were no agricultural organizations mentioned. None of the articles provided links, one of two provided an image, and one of two provided a video.
Non-Direct Mention of Agriculture

If the content contained text or images that could be related to the agricultural industry, but was not used in an agricultural context, it was categorized under the non-direct mention of agriculture theme. One article was collected from the *Columbus Dispatch*. There were no sources used or agricultural organizations mentioned. There were no external links or videos, but one image was provided. The image was the only piece of the article that related it to the agricultural industry because it was a calf (figure 12).

![Image](image_url)

Figure 12. Image from *Non-Direct Mention of Agriculture* News Article
Objective 3: Determine the impact of Ohio agricultural organizations’ social media messages on central Ohio media sources including newspapers and television content.

One common theme emerged from the Ohio agricultural organization’s Facebook posts and the central Ohio news articles. The common theme was “water quality.” There were seven news articles discussing water quality, five from the Columbus Dispatch, one from ABC 6, and one from NBC 4. There were four social media posts that pertained to water quality, three from Ohio Farm Bureau and one from Ohio Cattlemen’s Association. Common keywords among the posts and articles included “water quality,” “farmland,” “agriculture,” runoff,” “farming,” and “algae blooms.” Common sources among the posts and articles included Ohio EPA, EPA, Ohio Farm Bureau, and The Ohio State University Department of Food, Agricultural, and Environmental Sciences.

The Facebook posts and news articles were both reactive to current water quality issues in Ohio and throughout the U.S. The Facebook posts were positive by showing how the agricultural industry was responding to water quality concerns and ensuring future safe agricultural practices. An example of the Facebook post is from social media number 28 when it states, “Ohio farmers will take measureable steps toward improving Ohio’s water resources…More than 350 farmers and others are participating [in] the fertilizer certification training program.” The news media was a mixture of positive and negative reactive messages. An example of negative coverage by the news media was
from news media number 2 from the *Columbus Dispatch*. The story discussed how poor water quality was causing health problems among citizens.

Citing social media posts or profiles was used to determine if the social media content had an impact on the news media articles. No evident direct relationship between the Facebook posts and the news articles was able to be determined, but one story occurred in both the social media and news media analysis. The topic was the luncheon speech at Farm Science Review on September 16, 2014. The Ohio Farm Bureau covered the story on Facebook on Sept. 19, 2014. The post included text stating “OFBF President Steve Hirsch talked about water quality during Ohio State VP Bruce McPheron’s annual lunch event at Farm Science Review” along with an embedded video of the speech. The post had seven likes and one share. The *Columbus Dispatch* covered the story on Sept. 18, 2014. The title of the story was “Seeds of ideas may stem runoff.” The story covered the speech that occurred at Farm Science Review. Common sources used among the Facebook post and news story include Bruce McPheron, dean of OSU’s College of Food, Agricultural, and Environmental Science, and Steve Hirsch, president of Ohio Farm Bureau Federation. Both were presented in a positive frame and showed how the agricultural industry is making positive steps to improve Ohio’s water quality issues.
Summary

Through the analysis of Ohio organization’s Facebook posts and central Ohio’s news media articles, numerous themes emerged. The themes, averages, and number of occurrences of likes, shares, shared from, images, videos, links, sources, and mention of agricultural organizations were coded. The themes were reported by objectives and then details were discussed according to each theme. The common types of images, videos, text, and titles were also analyzed and reported.

Themes found in describing the use of social media by Ohio agricultural organizations included: Recipes and Food, Farm and Agricultural Stories, Events, Education and Programs, General Agricultural Promotion, Leadership and Professional Development, Awards and Recognition, Job and Internship Postings, Political, and Water Quality.

The major themes found among central Ohio’s organizations included: Water Quality, Organic Food and Food Products, Animal Welfare and Animal Safety, Agriculture and Science, Disaster and Tragedy, and Non-direct mention of agriculture.

There was one theme that emerged from both Ohio agricultural organizations Facebook and central Ohio’s new sources. The theme was Water Quality. There were common sources and keywords among the posts and articles. One article and post discussed the same event. There was no direct relationship found between the Facebook posts and the news articles.
Chapter 5: Discussion and Conclusion

The agricultural industry is important to the American society, but there continues to be a growing disconnect between the industry and public. Along with a shrinking public knowledge base about agriculture, media coverage of the agricultural industry is also declining. The introduction of the Internet and digital communication technologies has changed the way that organizations and media communicate. Even though there is a shift from print communications to digital communications, the traditional media remains important to the agricultural industry because consumers and the public receive their agricultural information via traditional media sources, such as television and newspapers. (Tweeten, 2014).

As Ohio’s largest industry, the agricultural industry needs to be able to effectively direct agricultural messages to a source that will disseminate the information to consumers and the public. Currently agriculturalists use agricultural media and print media as media relations channels, but do not believe they are effectively reaching out to the news media. Digital communication technology, such as social media, has provided a new communication platform for organizations to use as a media relations tool. Agricultural organizations in Ohio are adopting Facebook and use it to reach out to
consumers and the public. Due to the importance of the traditional media in disseminating agricultural information, there is a need to study the expansion of social media as a media relations tool by agricultural organizations. A study that examines how agricultural organizations are currently using social media as a media relations tool will benefit the agricultural industry as a whole because developing effective social media relations practices can increase public and consumer knowledge of the agricultural industry, which in turn may lead to future support of the agricultural industry.

The purpose of this study is to examine how agricultural organizations in Ohio communicate via Facebook and how the messages communicated via Facebook impact central Ohio’s traditional media sources. The following research objectives were used for this study:

1.) Describe Ohio agricultural organizations’ use of Facebook to promote current agricultural issues.

2.) Describe central Ohio’s media coverage of agricultural issues through newspapers and television content.

3.) Determine the impact of Ohio agricultural organizations’ social media messages on central Ohio media sources including newspapers and television content.

This mixed methods study collected data from seven Ohio agricultural organizations Facebook pages and four central Ohio news sources. The collection period occurred over a one-month period of time and was collected via screen shots. The data
was then coded and analyzed via content analysis. Qualitative descriptions were recorded and major themes were determined from open coding methods. The theoretical foundation for this study included the agenda-setting theory, uses and gratifications theory, and previous studies examining social media as a media relations tool inside and outside of the agricultural industry. This chapter will discuss the findings of this study, implications for future research, and implications for agricultural communicators.

**Objective 1: Describe Ohio Agricultural Organizations’ Use of Facebook to Promote Current Agricultural Issues**

Facebook posts were collected from seven Ohio agricultural organizations’ Facebook pages over a one-month period of time. The organizations include: Ohio Beef Council, Ohio Cattlemen’s Association, Ohio Corn and Wheat Growers Association, Ohio Dairy Farmers, Ohio Farm Bureau, Ohio Pork Producers, and Ohio Soybean Association. The posts were collected via screen shot and then analyzed via a mixed methods approach including open coding analysis.

Several themes emerged from the open coding analysis. Themes were determined by grouping together common key words and similar image content throughout the Facebook posts. The themes included: (1) Recipes and Food; (2) Farm and Agricultural Stories; (3) Events; (4) Education and Programs; (5) General Agricultural Promotion; (6) Leadership and Professional Development; (7) Awards and Recognition; (8) Job and
Internship Postings; (9) Political; and (10) Water Quality. Each theme is discussed below.

The most common theme among the Ohio agricultural organizations’ Facebook posts was Recipes and Food. Almost all of the posts included images and the images included pictures of food, food events, text and image combinations, and images without food. The major assumption that can be inferred from Recipes and Food posts is that Ohio agricultural organizations are encouraging individuals to eat the food product that is being promoted. The posts overall objectives are to encourage the consumption of a food product, attend a food event, or educate about food products.

The second most common theme was Farm and Agricultural Stories. Images and videos of families helping around the farm and farming communities were used to in the Facebook posts to help the agricultural organization share or tell their agricultural stories. According to Cline (2011), “agvocating,” advocating on behalf of agriculture, is one of the most popular reasons agriculturalists have chosen to adopt and continue to use social media. The findings of this study, Farm and Agricultural Stories being the second most popular Facebook post theme, support the previous literature on how and why agriculturalists are adopting and using social media. The previous literature also stated that agriculturalists believe that effective social media practices include employing multiple social media platforms to promote interconnectivity (Meyers, Irlbeck, Graybill-Leonard, & Doerfert, 2011). YouTube, a video-sharing social media platform, was used
throughout the posts in this theme; therefore exhibiting the supported social media best practice of interconnectivity

According to the Public Relations Society of America (2015), “public relations is a strategic communication process that builds mutually beneficial relationships between organizations and their publics” (para. 3). In this study, five of the Facebook post themes were tailored to public relations practices by the agricultural organizations. The themes included Events, Education and Programs, Leadership and Professional Development, Awards and Recognition, Political, and Water Quality. The posts within this theme were directed toward informing the individuals who liked the organization’s Facebook page about events, information, programs, and current news. The coverage of this information occurred before and during events and focused on presenting the agricultural industry in a positive, progressive manner. The study did not examine who the followers of the Facebook pages were, but it can be inferred from the data collected that the public relations nature of the posts were focusing on establishing a positive repertoire with the individuals, organizations, or others who had liked the Facebook page before the post was distributed. Due to the limitation of not examining followers of the Facebook pages, it cannot be determined from this data set if traditional media personnel were receiving or exposed to the messages distributed via Facebook from the Ohio agricultural commodity organizations. The preceding assumption should be applied to all themes that were established from the Facebook post analysis.
The theory of Uses and Gratifications was used as a foundation for this study. The findings of the Ohio agricultural organizations’ Facebook pages support the previous research that “communicators traditionally group their activities around their preferred medium” (Academy for Educational Development, 1985, p. 6). The Ohio agricultural commodity organizations that were used as the population for this study had all possessed Facebook pages at the time of the data collection. Since the Facebook pages had already been in existence and had a significant number of likes per page (Minimum: 795; Maximum 186,544), it can be inferred that the Facebook managers choose to continue to use Facebook as their chosen social media medium because it had provided a previous or desired future gratification.

Overall, the Facebook post analysis of Ohio’s agricultural commodity organizations did not yield any new information about the uses or practices of social media by agriculturalists. The themes that were determined provides a general overview of the topics that are important to the various agricultural organizations, Due to the limited scope of data collected, minimal findings were able to be confirmed and further discussion of those findings had to be accompanied by an explanation of the limitation or lack of supporting data.
Objective 2: Describe Central Ohio’s Media Coverage of Agricultural Issues Through Newspapers and Television Content

News stories were collected via screen shot over a one-month period of time from four central Ohio new sources websites. The news sources included The Columbus Dispatch, WBNS 10 TV, WCMH-TV NBC 4, and WSYX ABC 6. The information from the screen shots were coded and themes were determined from open coding content analysis. The emerging themes from the news sources included: (1) Water Quality; (2) Organic Food and Food Products; (3) Animal Welfare and Animal Safety; (4) Agriculture and Science; (5) Disaster and Tragedy; and (6) Non-Direct Mention of Agriculture.

The data was collected over a 30-day period and only 18 stories were collected as an agricultural themed article. The limited coverage of agricultural topics by the central Ohio news sources supports the previous literature of shrinking agricultural media coverage (Stringer & Thomson, 1999).

Although the articles collected were classified under an agricultural topic, more often than not, the theme of the article was not directly related to agriculture. For example, the most common theme among the news articles was Water Quality. These articles were collected and the theme was determined because the articles contained keywords, such as “runoff” and “fertilizer” that are often associated with the agricultural and farming communities by the public. The sources within the articles were also used to determine the themes. Many of the articles cited organizations, such as the state and
national EPA, that are not directly related to the agricultural industry, but again are often associated with the agricultural industry by the public.

The findings of this study also support the previous literature that news reports surrounding the agricultural industry are of a sensational nature, where the issue receives a high level of attention and then it fades quickly (Nelkin, 1995). The data supports this because the different themes that were established occurred around the same 2-3 day period during the data collection. For example, a story about a farm fire produced three articles that occurred on the same day, but from different sources (The articles were classified under Disaster and Tragedy theme). After articles from the news sources covered a topic, it was not repeated in later articles collected. This finding of sensational reporting on the agricultural industry by the news media highlights a problem for the agricultural industry in that the agricultural industry is not receiving consistent and frequent coverage by the media. As mentioned earlier in this study, the public and consumers receive most of their agricultural information from traditional media sources, implying that current consumer and public knowledge of the agricultural industry is not increasing due to the limited coverage by the central Ohio news media.

When discussing traditional news media, the agenda-setting theory is often applied. The agenda-setting theory examines and explains the relationship between the mass media and public opinion and “how issues reported in the media can become important among the public” (Meriliainen & Vos, 2011, p. 296) As new communication
technology, such as social media, has been introduced agenda-setting researchers have also determined that agenda-setting can be audience-driven (Uscinski, 2009).

The timing upon which the articles were released can be attributed to an audience-driven agenda. For example, in Toledo, Ohio (northern Ohio), there was a restriction on drinking the local water for 3 days, August 2-4, 2014. This event, even though it occurred in northern Ohio, influenced the water quality articles produced by central Ohio’s news sources. This large-scale event produced concern among the public, which in turn the news media provided stories covering water quality safety and localized the issue to help meet the publics’ need to be reassured of clean and safe water sources.

Overall, the analysis of articles distributed by the central Ohio news sources used as the population for this study did not produce new information, but supported the previous literature about limited coverage of agricultural issues in the news media. As previously mentioned in this study, the news media has expressed interest in breaking news, as opposed to reporting on less urgent agricultural issues and topics (New Agriculturalists, 2009). The findings of this study support the news media’s interest in breaking news, but it should increase alertness of agricultural communicators to increase effective media relations strategies and be proactive to avoid negative media coverage.
Objective 3: Determine the Impact of Ohio Agricultural Organizations’ Social Media Messages on Central Ohio Media Sources Including Newspapers and Television Content

A direct impact of Ohio agricultural commodity organization’s Facebook posts on central Ohio’s news media sources could not be determined. A single common theme was found between the Facebook posts and news articles, *Water Quality*. *Water Quality* is not always directly associated with the agricultural industry, but in this study was classified as an agricultural topic because the news articles used key words such as “runoff,” “fertilizer,” and “farm fields.” The keywords are usually associated with the agricultural industry by non-agriculturally knowledgeable consumers and individuals.

The messages from the Facebook posts and news articles were reactive toward current water quality issues in Ohio. Mentioned under Objective 2, a water quality incident occurred in Toledo, Ohio which prohibited the residents from drinking the water for three days. The articles that were collected and coded for this study were released approximately one month after the incident occurred. Some of the articles collected also referred to the incident directly. Once again, the articles distributed surrounding the water quality issue can be identified as an audience-driven agenda setting news topic.

Although the Facebook posts and news articles were both reactive, the articles and posts were framed differently. According to Schuelfele and Tewksbury (2007) framing is a subset of the agenda-setting theory where the media highlights particular aspects of an issue over other aspects.
The agricultural organizations’ Facebook posts were framed positively by displaying how farmers, organizations, and individuals in the agricultural industry were working toward safer water quality for everyone through education, certification, and information distribution. For example, one post included an image of fertilizer training and a link to connect the post to an external website providing a date, time, and more information about the event. Even though the agricultural industry is positively framing, the water quality issue, the reach of the message is unable to be determined due to limitations on data collected in this study.

There was no data collected or analyzed on the Facebook user profiles who ‘liked’ the Ohio agricultural organizations page, but understanding the ‘likes’ can provide potential insights into the audience the post is reaching. According to Chaney (2011), Facebook users who have used or clicked the ‘like’ button are more engaged Facebook users than those who do not click the ‘like’ button. He also suggests that Facebook users who use the ‘like’ button are more likely to already have an interest in the organization or product (Chaney, 2011). Therefore, it can be inferred that Facebook users who are receiving and viewing the positive messages about agriculture and water quality already have an interest in the agricultural industry, but the messages could be reaching further than the initial Facebook user due to the potential increased level of activity by users who have used the ‘like’ button. Although the specific reach of the message is unable to be determined, to potentially improve the reach of the Facebook message, the Ohio agricultural organizations need to reach out and encourage individuals who do not
already have a connection with the agricultural industry to ‘like’ and connect with their Facebook pages.

The news articles were framed neutrally or negatively toward the agricultural industry, which could be attributed to the lack of agricultural knowledge by reporters or the decreasing number of individuals involved or aware of the agricultural industry (Ruth-McSwain, 2008). The negative frame was determined by the reference to fertilizer runoff and improper farm field management as the cause for water quality issues. The majority of the sources used for the articles were non-agriculturally strong sources, such as the EPA. This negative frame on the agricultural industry surrounding water quality has a potential impact on the public’s perception of the agricultural industry because the news media is reaching a larger, ag-illiterate audience.

There was one common story about the Farm Science Review luncheon among the Facebook posts and the news articles. The news article presented a positive frame on how the agricultural industry is taking steps to ensure a severe water quality incident does not occur again. It can then be inferred that when news media personnel are provided the proper information and access to agriculturally knowledge sources, an unbiased, pro-agriculture story may be reported. The previous inference is once again limited by the data collected. This finding of a common story between the Facebook posts and articles does support the purpose for this study, that there is a need for effective agricultural media relations practices, but it is unable be determined whether or not social media impacted the news media as a media relations tool.
Implications for Researchers

This study provides a foundation for researchers to continue to examine how agricultural organizations are using Facebook and what steps need to be taken to improve the agricultural industry’s media relations practices. According to Ruth-McSwain (2008), more media coverage of the agricultural industry can be achieved through effective media relations strategies. The common news article and Facebook post suggest that if the proper information is distributed to news media personnel, then the agricultural industry may be more likely to receive positive media coverage. Therefore researchers need to continue to examine and research cases where media relations in the agricultural industry have been effective in order to replicate that same results in the future.

Future research on media relations practices need to continue to be examined from the agricultural communicators perspective, but also include the journalists perspective. Qualitative methods should be used to determine how and where journalists are retrieving their agricultural information from. Since the agricultural industry is receiving limited coverage by the news media, understanding how and where journalists retrieve agriculture information can help agricultural communicators tailor their future practices and behaviors to effectively reach out to journalists, in turn increasing news media coverage of the agricultural industry.

Researchers will also be able to use this study for replication with other social networking sites and expand upon this research by implementing different methods of
analysis for similar research objectives. For example, the study could be approached from a more qualitative perspective and conduct interviews and focus groups to further explain the uses and practices of social media as a media relations tool in the agricultural industry. Similar research could also be pursued to further examine the traditional media and how they are seeking out agricultural information. Interviews, focus groups, and network analysis would be effective research strategies to continue to expand upon understanding the traditional media’s perspective toward the agricultural industry.

Finally, an expansion of research on social networking sites regarding likes and followers could provide more insight into the audience that the messages are reaching and if news media personnel were being exposed to the messages. Analyzing social networking will also be able to focus on the theory of Uses and Gratifications by exploring what gratifications Facebook or other social media users experience by liking or following a page. Gratifications of the news media personnel can also be examined to understand how and why they are using certain mediums or sources to seek out agricultural information. Overall, this study built a strong foundation on the literature surrounding social media as a public relations tool in the agricultural industry. The literature, findings, and implications can facilitate the development of future research questions and guide the development of media relations practices in the agricultural industry.
Implications for Practitioners

The implications for practitioners from this study include awareness of current social media messages and knowledge of the news media’s reporting on the agricultural industry. When viewed from an inside, single post perspective, practitioners may feel their messages are effective, even if they are not. The compilation and description of themes will help practitioners to recognize whether or not they are sending the intended messages to their audience. The data collected on the news media will also help practitioners understand how the news media is reporting on the agricultural industry. This study will guide the future message development and media relations practices of agricultural practitioners.

Using the results of this study and continuing future research on the topic will also help agricultural communicators tailor their future behavior and practices to increase news media coverage of the agricultural industry. If future research explores how journalists retrieve their agricultural information, then agricultural communicators can drive their stories and information to those sources. Even though it is valuable to understand media relations practices from the agricultural perspective, there is a need for behavioral changes by agricultural communicators to meet the needs of the changing news media environment.

In order to provide more information for practitioners, more research is needed to further develop effective media relations strategies for the agricultural industry.


Conclusion

This study sought to understand the types of messages posted on Facebook by Ohio agricultural organizations, how agricultural issues are reported by the central Ohio news media, and if agricultural organizations are using social media as a media relations tool. The findings of the Facebook post analysis did not generate any new knowledge about Facebook use by agricultural organizations and supported the previous literature. The news media analysis also supported the previous literature and did not produce new knowledge about how the news media reports of the agricultural industry. It was determined that the Facebook posts by Ohio agricultural organizations did not have a direct impact on the central Ohio’s news media coverage of the agricultural industry. The findings and results of this study call for more research to be able to further discuss and establish current and future media relations practices by agricultural organizations.
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Appendix A: Social Media Coding Sheet

SOCIAL MEDIA ANALYSIS

Posted By: ______________________________________________________________

Date Posted: ____________________

Text From Post:

Image/Video Accompanying Post (if applicable):

Link: ________________________________________________________________

Number of Likes: _________________

Number of Shares: _________________

Reposted or Shared From: ________________________________________________

(if applicable)
Appendix B: News Media Coding Sheet

**NEWS MEDIA ANALYSIS**

Publication/Source: _______________________________________________________

Article Title: _____________________________________________________________

Date of Publication __________________  Author: _____________________________

Article Type:  Article Tone:
__ News  __ Positive
__ Feature  __ Negative
__ Neutral

Overarching Agricultural Topic: _____________________________________________

Sources Used: ___________________________________________________________

Agricultural Organizations Mentioned (if applicable):

Links to other sources or media (if applicable):

Image/ Video from article/ story (if applicable):

**Full text printed article/story attached to coding analysis sheet**