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An Investigation of Agricultural Crisis Communications via Social Media

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An Investigation of Agricultural Crisis Communications via Social Media

Abstract

How an agricultural organization handles the way the media reports a crisis can have an impact on the public's perceptions of the organization, and sometimes the industry as a whole. The popularity of social media outlets as a venue for disseminating and gathering information and news makes the use of social media surrounding agricultural crises an important topic to investigate (Glynn, Huges, & Hoffman 2012; Hermida, 2010). A qualitative case study was conducted to investigate the use of social media tools during an agricultural crisis. The participants – communications directors, social media managers, and individuals with a close connection to the crisis under study – reported that social media was a major component of their communication efforts surrounding each crisis. Participants felt social media was very effective in these situations and had a major impact on their communication efforts. Although no participants reported using a structured social media strategy or crisis communication plan, they stated a need for such guidelines in the agricultural industry. From the data analyzed in this study, a model for using social media during a crisis situation, aimed specifically for use by those in the agricultural industry, was developed. This project was funded through the USDA's Beginning Farmers & Ranchers Project.

Keywords

crisis communications, social media, agricultural communications, grounded theory

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Abstract

How an agricultural organization handles the way the media reports a crisis can have an impact on the public's perceptions of the organization. The popularity of social media as a venue for disseminating and gathering information makes the use of social media surrounding agricultural crises an important topic to investigate (Glynn, Huges, & Hoffman 2012; Hermida, 2010). A qualitative case study was conducted to investigate the use of social media tools during an agricultural crisis. The participants – communications directors, social media managers, and individuals with a close connection to the crisis under study – reported that social media was a major component of their communication efforts surrounding each crisis. Participants felt social media was very effective in these situations and had a major impact on their communication efforts. Although no participants reported using a structured social media strategy or crisis communication plan, they stated a need for such guidelines in the agricultural industry. From the data analyzed in this study, a model for using social media during a crisis situation, aimed specifically for use by those in the agricultural industry, was developed. This project was funded through the USDA's Beginning Farmers & Ranchers Project.

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Introduction/Review of Literature

“No organization is immune to crises” (Coombs, 2019, p. 1), including agricultural organizations. Agricultural crises can have an impact on the public’s perceptions of the industry, and with social media being a major source of information for most Americans (Glynn, Huges, & Hoffman 2012; Hermida, 2010; Mitchell, Shearer, Gottfried, & Barthel, 2018), the use of social media surrounding agriculturally-related crises is an important topic to investigate in the field of agricultural communications.

Crisis communication can help fight a crisis, minimize damages, and protect the organization, stakeholders, and industry from harm (Coombs, 2019; Irlbeck, Jennings, Meyers, Gibson, & Chambers, 2013). Organizations that do not have a crisis communications plan often do nothing in response to a crisis. However, Coombs (2019) states that a crisis communications plan should be flexible and manageable, so that an organization can actually do something in the event of a crisis. Crises create the need for information, and effective crisis communication can provide that information to key stakeholders (Coombs & Holladay, 2012). “Technical advances are transforming how crisis management professionals and researchers view, interact with, and disseminate information to affected communities in a crisis situation” (Veil, Buehner, & Palenchar, 2011, p.1). Research on social media technologies as an aspect of crisis management is still emerging (Austin, Liu, & Jin, 2012). Much of the research conducted on this subject thus far has focused on the use of blogs or websites and found audiences seek immediate and in-depth crisis information from online sources (Austin et al., 2012). However, Akhgar, Staniforth, and Waddington (2017) found that social media can play a crucial role in a crisis, providing a platform to connect and collaborate, especially if the communicators are overwhelmed. As early as 2009, when social media was in its infancy, agricultural communications practitioners had realized the importance of incorporating social media into a crisis communications plan (Irlbeck et al., 2013). Further, social media can be used by organizations to identify warning signs that a crisis is developing, allowing them to inform the public and share news on a crisis before the media takes control (Coombs, 2008).

A Pew Research Internet Project study found that 74% of online adults are using some form of social media, which could be Facebook, YouTube, Twitter, Instagram, or other sites (Duggan, Ellison, Lampe, Lenhart, & Madden, 2015). Specific to agribusiness, most are regularly using the aforementioned social media sites, often through the platform’s mobile app (Casey, Meikle, Kerr, & Stevens, 2016). Social media has become “a cultural phenomenon that has changed how all organizations manage crises online” (Liu, Jin, Briones, & Kuch, 2012, p. 354), and “the time is fast approaching when ‘social’ media will simply become ‘media’” (Currie, 2009, p. 14).

According to Coombs (2008), social media has the potential to become a pivotal aspect of crisis communications, not only in identifying when and how a crisis is developing, but also in sending messages during a crisis. For example, Blue Bell Creameries heavily used Facebook to communicate with its customers through a *Listeria* outbreak, product recall, plant closure, reopening, and finally re-stocking of its products in stores (Opat, Magness, & Irlbeck, 2018). Through the crisis, Blue Bell was able to answer questions from consumers and send messages of appreciation. These messages were one way, or sent by organization to distribute information about the crisis, and two way, in response to comments and questions from the public. The interactive nature of social media allows the public to become part of the actual crisis response

and provides an avenue through which news can be shared with millions instantaneously and without the presence of journalists (Veil et al., 2011).

Irlbeck et al. (2013) found agricultural public relations practitioners believed it was necessary for their organizations to act immediately if a crisis struck, regardless of the presence or absence of a communications plan. Social media's ability to deliver instantaneous messages to a vast audience makes its use in crisis communications invaluable to organizations undergoing a crisis, foregoing the need for mass media. Palmer, Irlbeck, Meyers, and Chambers (2013) encouraged public relations practitioners in agriculture to use social media in the event of a crisis to provide consumers with their messages as quickly as possible.

Social media is now a crucial part of communications during natural disasters. Alexander (2014) found that social media can be used in emergency situations to listen to the public, monitor emerging situations, respond to calls for assistance, crowd source response teams, dispel rumors, and promote charitable donations. During the 2011 earthquake in Japan, emergency managers found they could spread information via Twitter up to 20 minutes faster than through mainstream media. Social media would frequently work in the hours following the earthquake, even though telephones and other communications services would not. Finally, social media was a key tool following the earthquake for survivors to let friends and family know they were safe (McSevny & Waddington, 2017).

Social media has the potential to both directly and indirectly impact audiences during a crisis situation, especially as journalists increasingly turn to social media for news generation (Austin et al., 2012; Bates & Sullivan, 2009). The emergence of social media as a major source for news and information gathering in recent years provides communicators with an opportunity to improve their communication with stakeholders surrounding a crisis. As one communication professional explained regarding the 2009 *Salmonella* outbreak in peanuts, "I look back and it wasn't that long ago, but you think about the difference of social media now and social media then, and its huge. The difference now is social media" (Irlbeck et al., 2013, p. 27).

Conceptual Framework

Models or theories focused on social media use during a crisis, particularly an agricultural crisis, are limited. "The practice of crisis communications is ahead of research in terms of social media... There is a need to elaborate and build greater knowledge about crisis communications and new media with an emphasis on social media" (Coombs, 2008, p. 1). By understanding how agricultural communicators use social media in crisis communication efforts, agricultural communications researchers can help improve communication with target audiences when the next crisis occurs.

Several models for crisis communications do exist, even though social media is not the specific focus. Aside from assessing risk areas, Coombs (2019) provides well-cited guidelines for developing a crisis communication plan. His plan guidelines include a rehearsal, incident commander designation, contact sheet (including the crisis management team, stakeholders, media, and others), risk assessment, incident report sheets, proprietary information, communication strategies, business continuity plan, and a post-crisis evaluation plan. Identifying and training spokespeople is another key planning element (Augustine, 2000). Horsley and Barker (2002) proposed a Synthesis Model that includes ongoing public relations efforts, identifying and preparation for crisis, training and rehearsal, the potential crisis, and evaluation of the communications efforts. The Irlbeck et al. (2013) study is closely related to Horsley and Barker's

(2002) model; however, it contains more detail and was developed specifically for agricultural communications practitioners (see Figure 1).

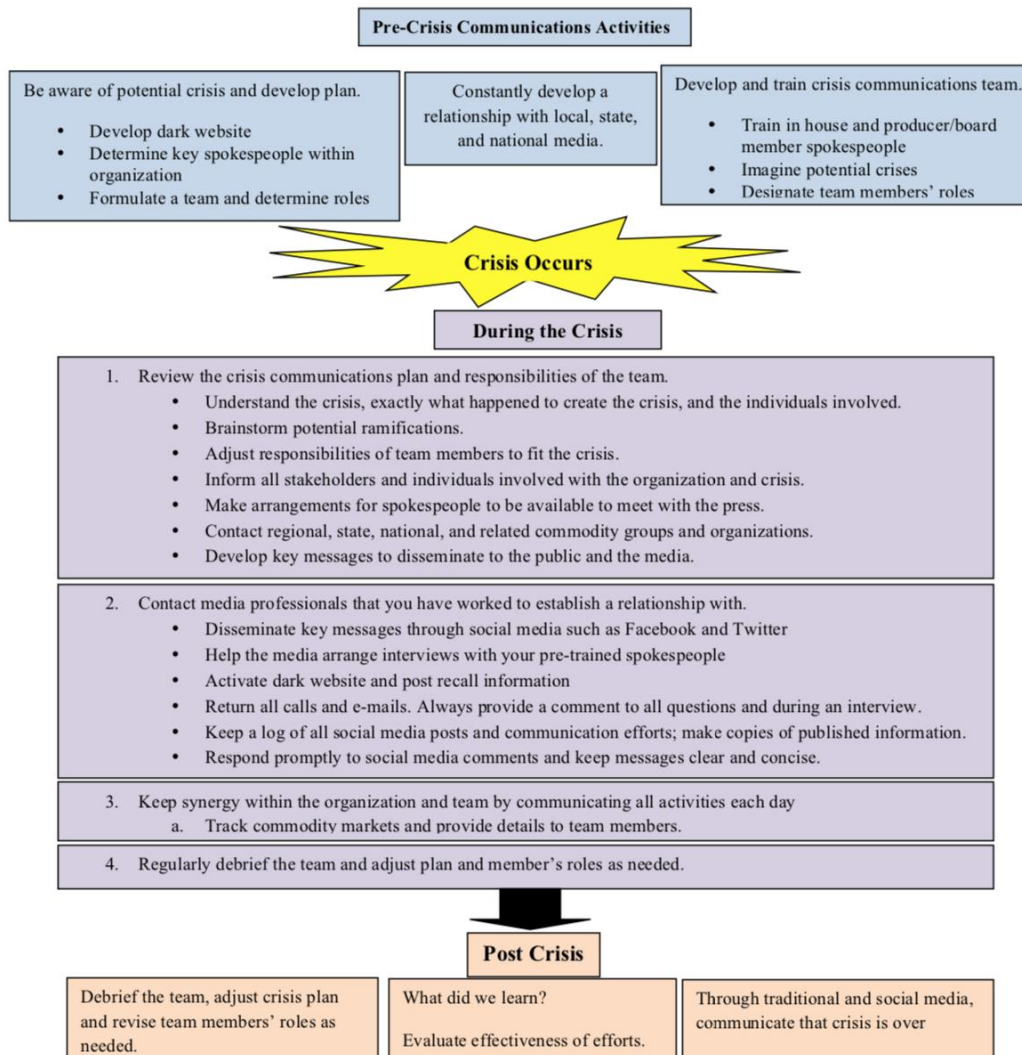


Figure 1. Pre-crisis, Crisis, and Post-Crisis Model for Agricultural Communications (Irlbeck et al., 2013, p. 29).

The model in Figure 1, however, does not include much on social media in a crisis. Palenchar and Freberg (2012) recommended including social media in a crisis plan; however, individuals posting messages must be well-trained understand the technology, and policies and expected behaviors need to be established in advance. Stephens and Malone (2009) researched social media's use in crises and found it should be included in a plan, just like any traditional communications strategy.

Background

Three agricultural crises were chosen to be investigated in this study. The reasons for selection are as follows: 1) social media was used to communicate with the target audience; 2) the scope of the crises was similar in that they received some national attention, but had more of a regional impact; 3) the locations of the crises were in the Great Plains region of the United States; 4) the crises occurred within a three year window; and 5) the crises were selected based on their varying crisis typologies (Coombs, 2015; Ulmer, Sellnow, & Seeger, 2007; Seeger, Sellnow, & Ulmer, 2003).

The first crisis occurred in 2011 when a *Listeria* outbreak was discovered in cantaloupes originating from a Colorado-based farm, resulting in a nationwide Food and Drug Administration recall. In total, 147 people were infected across 28 states resulting in 33 deaths and one miscarriage (Centers for Disease Control and Prevention [CDC], 2012). Cantaloupe farmers from Colorado responded to national media coverage, sales of all cantaloupes were affected following the outbreak, and the CDC recommended not eating cantaloupe if its source could not be determined (Chan, 2011). The farm where the crisis originated, as well as many others, used their social media outlets and website in a variety of ways to communicate about the crisis. Additionally, farmers and Colorado state officials formed an association for cantaloupe growers and hired a public relations firm to help handle the situation and rebuild the local industry. Based on crisis typologies from Coombs (2015), Ulmer et al. (2007), and Seeger et al. (2003), this crisis was categorized as a traditional, unintentional, product crisis. This crisis was chosen because it was national and food based.

The second crisis in this study occurred in 2012 when a Texas-based agricultural museum experienced backlash after its plan to add two mules, preserved by taxidermy, to an exhibit displaying a 19th century reaper. The museum was attacked on social media by animal rights activists. The addition of the mules was suggested by an exhibit design firm contracted by the museum to enhance a featured exhibit. The museum's board of directors conducted a search for animals that would fit their need and learned of a pair of elderly mules that were due to be sent to a slaughter plant in Mexico. The mules were purchased by the museum with plans of humane euthanasia by a veterinarian, then preserved by an expert taxidermist. Local animal rights activists learned of the museum's plan and began posting harassing messages to its Facebook page. The story was picked up by local, state, and national news outlets resulting in negative feedback from the public. The museum's Facebook page received an overwhelming amount of traffic and comments during the crisis, to the point that the museum's director shut the page down. The crisis is categorized as either an unintentional or intentional, social media, public perception crisis (Coombs, 2015; Ulmer et al., 2007; and Seeger et al., 2003). Researchers chose this crisis because it was regional, involved animal rights organizations, and had a large social media presence.

The third crisis occurred in October 2013 when an unusually early, severe winter blizzard hit South Dakota, killing thousands of cattle in the region. Following a period of overly warm temperatures, cattle in the area had not yet grown their winter coats and were grazing in unprotected summer pastures (Zhorov, 2013). With warning coming only 24 hours before the storm struck, ranchers were unable to move hundreds of cattle to winter pastures and shelter (Zhorov, 2013). It was estimated that 15-20% of the region's 3.85 million head of cattle were killed, with some ranchers losing more than half of their herds and suffering tens of thousands of dollars in losses (Walsh, 2013). Several social media outlets, including many blogs, were used to spread word nationwide about the devastating situation, particularly to those within the agricultural industry. Fundraising efforts were also undertaken via blogs and social media to aid ranchers

affected and to raise awareness of the crisis. According to Coombs (2015), Ulmer et al. (2007), and Seeger et al. (2003), this crisis is categorized as an unintentional, traditional, natural disaster. This crisis was chosen because it was an act of nature and involved livestock.

Purpose & Objectives

This study investigated social media use during three very different agriculturally-related crises to understand how social media played a role in the communication efforts of those involved with each crisis. The intended purpose of this research was to develop a model for social media use during a crisis situation aimed specifically for use by those in the agricultural industry. The model can be utilized to help communications directors in the agricultural industry develop and adopt a crisis communications plan that utilizes social media. This study was guided by the following research objectives:

1. Describe how agricultural organizations and their communications managers used social media tools during identified crisis situations.
2. Examine social media communication strategies used by the agricultural organizations during identified crisis situations.
3. Examine the crisis communication plans used by agricultural organizations.
4. Identify how agricultural organizations perceived the effectiveness of their social media use during a crisis situation.
5. Describe lessons learned by participants in regard to their social media communication during a crisis situation.

Methodology

This study was developed and conducted within the constructivist paradigm, which recognizes that each person has his or her own method of making sense of the world (Crotty, 2004). This approach led to a qualitative research design utilizing case study methodology to investigate the research objectives. A case is a bounded system, selected because it is of interest to the research objectives (Smith, 1978). Creswell and Poth (2018) state that a case can be defined with parameters such as the timeframe to be studied and the place where the case occurred. For this study, the system was three agricultural crises, bound by time (2011-2013) and location (High Plains region). “Your case study is defined not so much by the methods that you are using to do the study, but the edges you put around the case” (Thomas, 2015, p. 21). To study a case, there is no specific form of data collection methodology (Merriam, 1998).

Purposive and snowball sampling were used to select a total of six individuals as participants for this study. This sample size was sufficient for a qualitative study of this nature as in-depth information from a small number of people can yield the data needed, especially if the cases are information-rich (Gall, Gall, & Borg, 2007; Erlandson, Harris, Skipper, & Allen, 1993). Also, having varied perspectives on each crisis, which differed in magnitude, typology, and nature, helped the researchers establish a maximum variation sample in which cases are selected to illustrate the broadest range of information possible (Lincoln & Guba, 1985).

One-on-one, semi-structured interviews were conducted with each participant selected for this study. A researcher-developed interview guide consisting of 17 open-ended questions was used to guide the interviews. Each interview was audio-recorded to aid in transcription and data analysis. Researchers also took field notes during each interview.

Interviews were transcribed verbatim, and data were analyzed using a constant comparative method with open, axial, and selective coding. Following an initial review of all interviews, the

researcher used NVivo 10 software for Windows in which key concepts, phrases, or terms were organized into broad preliminary categories through open coding. From these initial codes, data were further divided into several axial codes. Interview transcripts were evaluated several times as the researcher continued to select additional information to include. Preliminary codes and corresponding axial codes were then refined into a more cohesive system through several phases of comparing, combining, and refining the codes until finally major themes were created. To form a model, memoing, in which the researcher wrote down thoughts, feelings, insights, and ideas about the research project, was used (Birk & Mills, 2011).

Trustworthiness and rigor were established through ensuring credibility, transferability, dependability, and confirmability. Researchers used triangulation of multiple sources of data, peer debriefing, and member checking to establish credibility. Transferability was established through a maximum variation sample and thick, rich descriptions of the data. Dependability was ensured through the use of an audit trail of all data collected, and confirmability was established through the use of a researcher's journal in which researchers were reflexive and acknowledged their own experiences may have affected their view of the research (Lincoln & Guba, 1985).

The nature of this study resulted in several limitations. Some potential participants were unwilling or unable to participate which narrowed the number of possible participants. The limited number of participants may make it easy to identify some of the individuals in this study, though efforts were made to disguise their identities. Further, the location of the researcher compared to that of the participants led to the use of telephone interviews for the majority of the participants. According to Charmaz (2006), face-to-face interviews are preferred, but telephone interviews are more practical and allow greater uniformity in interview delivery making them an acceptable form of data collection. Finally, data collection was limited to what participants were willing and able to provide and what was accessible to the researchers online.

Findings

Objective 1 - Describe how agricultural organizations used social media during crises.

The social media tools utilized by each of the participants varied greatly (see Table 1). All participants used Facebook and Twitter in some capacity during their respective crises. The majority also used some form of blog platform, with most citing blogs as the main social media outlet they utilized to discuss or share information regarding their crisis.

Table 1

Social media outlets utilized by each participant.

Beth	Rick	Shane	Andrea	Maggie	Lori
Writer, blogger & photographer	Writer, social media manager	PR practitioner	Writer, photographer & rancher	Freelance writer & rancher	Museum director
Facebook	Facebook	Facebook	Facebook	Facebook	Facebook
Twitter	Twitter	Twitter	Twitter	Twitter	Twitter
Blog	Blog	Pinterest	Blog	Blog	Flickr
Instagram	Pinterest	YouTube			
Tumblr	Instagram				
Flickr	YouTube				
LinkedIn	Tumblr				
Google +					

Note. Participants hosted blogs on a variety of platforms that were not identified in this study.

Participants reported using social media in a variety of ways to communicate with stakeholders and the public during their specific crisis. Some participants used social media outlets as a means of monitoring news, information, and updates in the world, their industry, and specifically, surrounding the crisis situation they were facing. According to Maggie, “One of my main duties was to keep a pulse on what consumers were saying and trying to put together blogs that could help producers explain to consumers.” Rick added, “I’ve used my blog as, one, a great way to share my experiences on a daily, day-to-day basis, but also as a resource for people who are looking for information.”

Participants also commented on the types of responses they gave via social media. All participants said they felt giving some type of initial response about the crisis via social media was important. Maggie said “Right away, it was just anything you heard you had to post it on Facebook and get the word out there.” Once an initial response was provided, participants stated they tried to find ways to share news, information, and updates with the public, whether that content was created by them or simply shared from other sources.

Objective 2 – Examine social media communication strategies used by the agricultural organizations during identified crisis situation.

Most participants responded they had no specific social media strategy or policy they followed on a day-to-day basis, as well as no specific strategy or policy in mind when they responded via social media outlets to the crisis situation. Although no participants stated having a written strategy or policy they followed or used as a guideline, some suggested that they had informal strategies and policies in place for dealing with different aspects of social media use. In regard to dealing with inappropriate or vulgar comments, Lori said “If they made threats or if they used any foul language, I did remove them. I blocked them.” Maggie agreed and added, “We don’t tolerate negative or personal attacks on our writers.”

Other participants mentioned they had informal policies about how to respond to comments. According to Rick, “A lot of the time that negativity is not worth responding to because you’re just fueling the fire and drawing attention to that negativity.” However, Maggie felt that responding to negative comments was necessary. She said, “Our main policy is don’t let those comments go unanswered...take a minute to further expand on your side of the story and bring it back to that main message you’re trying to get across.” Participants also discussed ways they tried to encourage dialogue with the public via social media. Rick said, “Responding to positive comments is really good for fostering and building relationships. People want to follow and engage with you...if there’s potential for dialogue or conversations then I’ll kind of carry it along.”

In terms of strategy, some participants mentioned they tried to informally plan for certain day-to-day aspects of social media use when they could. According to Beth, “I have a plan for when things are going to release; I schedule posts and do all that.” Participants also mentioned having plans for integrating all of their various social media outlets. Lori, for example, stated, “I had it released on Twitter and Facebook. I had it set where if it posted on one it posted on the other [during the crisis].”

Objective 3 - Examine the crisis communication plans used by agricultural organizations.

None of the participants utilized a formal crisis communications plan in place prior to their specific crisis. However, participants’ responses indicated that some informal crisis communications strategies were implemented, and all agreed that the need for a crisis

communication plan existed. According to Beth, “I think if there was something like that, I think that would be exceptionally helpful. I think that anything that can guide you is good.”

Additionally, participants provided suggestions for what they felt should be included in a crisis communication plan including social media. Beth suggested having a clear purpose for crisis communication: “I think you have to have a clear grasp of what’s gone on and what your message is, because you might have someone who challenges you, so you’re going to need to be able to defend that position.” Similarly, many participants mentioned having one clear message to convey to stakeholders and the public. Shane said “You need to have one singular message that you want to communicate with talking points that support that message. And that’s gotta go out everywhere, including social media.”

Participants also responded there was a need to establish a presence on social media well before a crisis situation developed. Maggie commented, “I guess the biggest thing of using social media to report the news is you’ve gotta have a presence.” Rick added, “I think blogging before the crisis happens, being involved in the conversations, and building those relationships before you need them and being proactive in that manner, it’s critically important.” Some participants also felt that having relevant, usable, and trustworthy information and resources on hand was important when handling communication surrounding a crisis and would allow them to share information more quickly and efficiently.

Objective 4 – Identify how agricultural organizations perceived the effectiveness of their social media use during a crisis situation.

A majority of the participants said social media played a major, positive role to effectively communicate with stakeholders and the public surrounding the crisis situation they were undergoing. Andrea said “I think they [social media sites] were the most effective means of communication used following the crisis.” Rick added, “It’s critically important in an age where news and information can go like a wildfire online...we see so many news stories broken and covered on social media before the broadcast networks even get on the air.” Beth agreed that social media had an impact on the communication efforts surrounding the crisis she was involved in: “Oh, that [social media] was it! If there hadn’t been social media, there would still be plenty of people that had no idea what has gone on.”

Objective 5 - Describe lessons learned by participants in regard to their social media communication during a crisis situation.

Participants’ responses varied greatly on the lessons they learned from their experience handling crisis communications via social media. Andrea stated:

This is no longer a world where people assume that as a farmer or rancher that you do the right thing. This is a world where people question everything...You can no longer just clean up the physical results of a crisis in agriculture today. You have to also clean up the social results of a crisis.

Several participants agreed that people expect answers during a crisis situation. According to Andrea, “If somebody has enough of a personal interest to contact you asking you a question...I think taking the time to respond to them...does a lot in these instances.” Participants also stated asking for help or advice during a crisis was acceptable, and even encouraged, so the best communication possible could be provided to stakeholders and the public. Maggie said, “Rely on those groups or networks that have a large outreach and don’t feel like you have to recreate the wheel.”

Some participants also said they learned truthful, accurate, and honest information was vital when communicating during a crisis and transparency should be encouraged. According to Rick, “Transparency is the answer. The only way to address all the misinformation out there is with honesty and transparency.” Participants also learned the public wanted true depictions of the crises and often responded better to raw, emotional, and truthful posts. Andrea stated, “I learned that what affected me the most and...those moments that I thought were the hardest or the bright spots that I shared were the most well-received by people.”

Finally, participants commented they learned people involved with the agricultural industry may not be the most willing to stand up and speak out on issues surrounding their livelihood. According to Rick, “We [the agricultural industry] haven’t been taking advantage of social media for communication, and a lot of people have been telling their versions of the stories of food production, agriculture, farming, and ranching that are not always true.” Lori added, “I kind of feel like sometimes in agriculture we’re educated and we know what’s right and wrong, but we’re not the first ones to speak up.”

Additionally, participants offered some advice to others in the agricultural industry in terms of using social media when handling a crisis situation. Andrea advised to always be prepared and stated, “Specific to the agriculture industry, if you’re in it long enough, you’re going to go through something like this, and, we all know that.” Rick agreed and added, “Just be prepared to engage in conversations. Be prepared to take the criticism that you’ll find out there, don’t look defensive, and be transparent.” He also commented that agricultural organizations should simply start somewhere in terms of social media. “I think it’s important to recognize what you can do and can do well, and to take advantage of those and take it step-by-step as you try to get into social media and join in conversations.” Finally, Andrea said that agriculturalists should be prepared to continue engaging in conversations pertaining to the crisis well after the crisis itself has ended. She stated, “You need to not just expect this to be something that is over when the initial crisis is over.”

Conclusions/Recommendations/Implications

Although no participants responded they used, or even had, a formal crisis communication plan, they recognized there was a need to have one. Organizations can be considered negligent if they have not assessed risks and created a response plan (Coombs, 2019); an organization without a crisis plan is vulnerable to a multitude of serious consequences during and after a crisis (Sandman, 1993).

Participants suggested that a crisis communication plan should focus on establishing a presence on social media outlets prior to a crisis event. According to Veil et al. (2011), social media can be used for establishing, fostering, and maintaining customer relationships. Effective social media prior to a crisis has been noted to help in crisis situations. One participant noted that he used his blog prior to the crisis to share his experiences in agriculture, which later helped in dealing with the crisis. Blue Bell Creameries had established an active and strong social media presence prior to its 2015 *Listeria* outbreak, which possibly contributed to the overwhelming messages of support and loyalty on its Facebook page during the crisis (Opat et al., 2018).

During a *Salmonella* outbreak in peanuts, a practitioner shared that social media would have made a noticeable difference in their crisis communications plan (Irlbeck et al., 2013). Most participants in this study agreed their social media efforts were highly effective in helping disseminate crisis news and information and had a major impact on the communication they underwent during the crisis. Liu et al. (2012) stated that social media has become “a cultural phenomenon that has changed how all organizations manage crises online” (p. 354). Social media

has the potential to have both a direct or indirect impact on audiences during a crisis situation, especially as journalists increasingly turn to social media for news generation (Austin et al., 2012; Bates & Sullivan, 2009). In natural disaster crises, social media has been a crucial piece of the communications strategy as it can help with emergency response, crowd-sourcing assistance, and charitable donations (Alexander, 2014). Further, sometimes social media is operational in a natural disaster, even if traditional media outlets are not (McSeveny & Waddington, 2017).

From existing literature and the data that emerged from this study, a model for incorporating social media into a crisis communications plan was developed. The model incorporates the guidelines proposed by Coombs (2019), Irlbeck et al. (2013), Horsley and Barker, (2002), and Augustine, (2000). In short, these authors propose pre-crisis activities, such as risk-assessment, spokesperson training, relationship development, and crisis team identification. During a crisis, responsibilities include team activation, media monitoring, communication with internal and external stakeholders, and adjustments to strategy as needed. Following a crisis, the team should evaluate, learn from the experience, adjust the crisis plan as needed, and move back into the pre-crisis stage. However, the aforementioned literature provides little focus on social media. With the general crisis communications activities in mind, the authors developed a different model and incorporated social media into the three main areas of pre-crisis, in crisis, and post crisis (see Figure 2). Each stage of crisis communications requires some specific actions on behalf of the organization on social media.

In the pre-crisis stage, where organizations will spend the majority of their time – some will never leave – organizations should use social media to establish a presence, connect with stakeholders and the public, provide transparency, build relationships with key audiences, and gather relevant and related resources that can be referenced or shared (top left of Figure 2).

In the event that a crisis occurs, organizations would then move into the in-crisis stage (top right of Figure 2). During this time, organizations implement their crisis communication plan and put their training into action. During a crisis event, organizations should provide an immediate initial response on social media; respond to issues and comments surrounding the crisis; develop and provide a clear, unified message on behalf of the organization; and strive to provide accurate and personal accounts of the crisis situation. Most of the participants in this study said they did not have a formal plan; however, all risk and crisis communications literature cited stresses the importance of an official plan.

Once the crisis is resolved, organizations transition into post-crisis (bottom of Figure 2) and revise and refine the plan based on its effectiveness during the crisis. All of the participants spent time discussing the lessons they learned during their experience. Organizations should also be prepared to continue participating in conversations about the crisis and its affects even though it has been resolved. Also, continual engagement with stakeholders to foster and maintain relationships is key. Finally, organizations will transition back to the pre-crisis stage and begin the process over again.

Recommendations for Practice

Organizations should implement social media as part of overall communications. As a majority of the public is actively using social media to find, share, and comment on news and information, using these tools regularly and consistently will allow organizations to be a source of information that is trustworthy and reliable. It is also recommended that organizations engage with their followers early and often so relationships can be established well before a crisis event occurs.

A well-established crisis communication plan that features social media allows organizations to respond accordingly and swiftly during a crisis rather than hesitating to respond or not responding at all. Having a plan of action provides immediate contact with consumers, media, and other stakeholders.

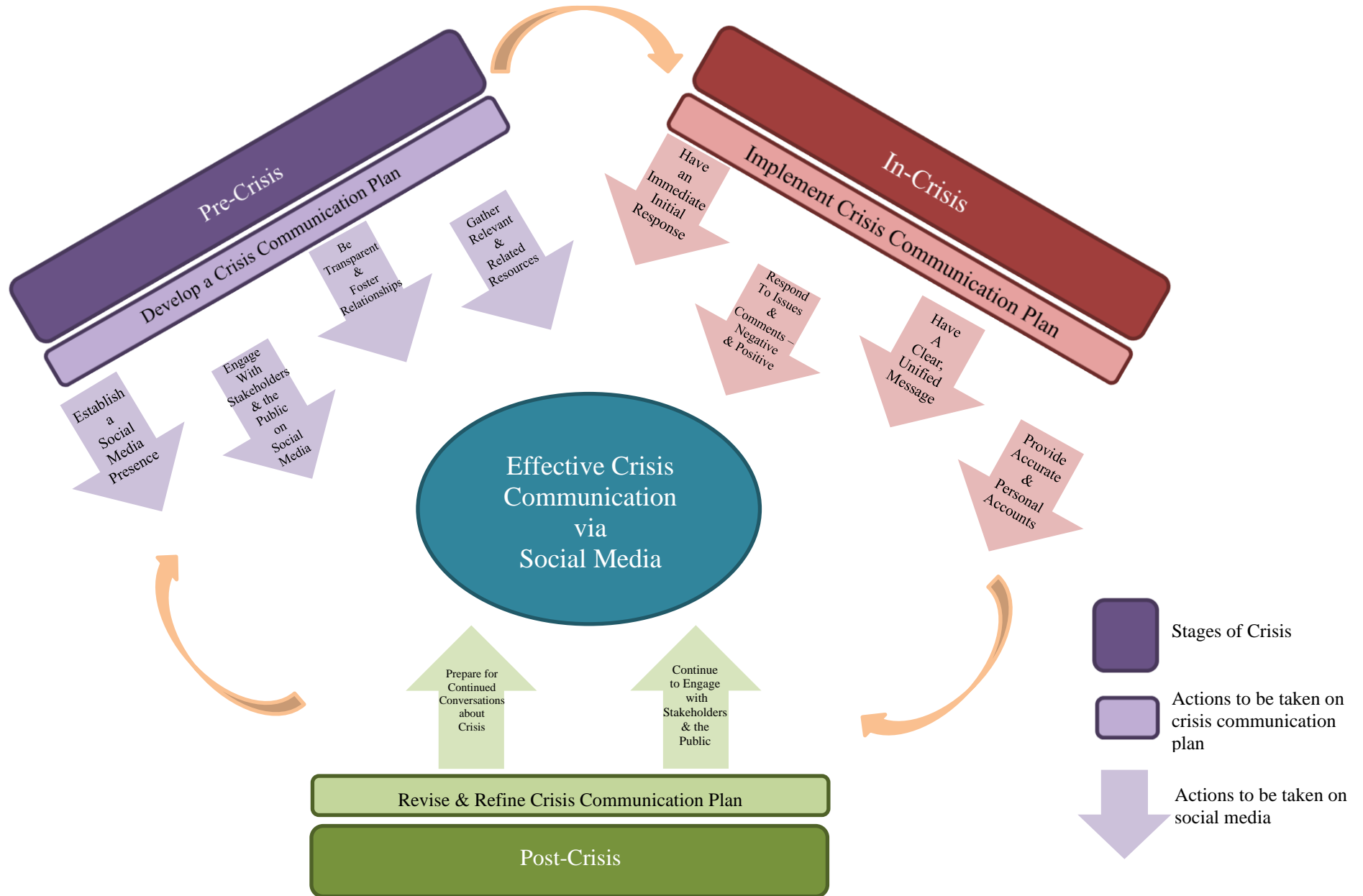


Figure 2. Model of the Social Media in Agricultural Crisis Communication Theory.

It is also recommended that organizations undergo crisis communication training or provide such training for the crisis team. Many of the participants in this study indicated they had little or no experience with crisis communication. Providing some form of training may help organizations be better equipped to handle crisis situations in the future.

Recommendations for Future Research

Future studies could be conducted to continue this line of research, including expanding the scope of this study to include more national or regional agriculture crises. The perspectives of consumers and/or other stakeholders on social media communications could be explored. This may also provide valuable insight into why audiences sought out those communication channels during a crisis and how organizations can improve their efforts to provide information. Analyzing posts and subsequent comments, both to social and main stream media could yield helpful results.

Several participants said they did not have a crisis communications plan nor training. Why an organization is unprepared continues to baffle crisis communications experts, yet it is an area that needs explored.

Finally, future research should also focus on testing and further establishing the model presented in this study. The model presented in this research only provides the groundwork for the model and should be further tested to truly establish its status as a theory. Further research should be conducted on expanding and exploring the elements of this phenomenon.

Implications

Through conducting this research, the researchers have realized the value that should be placed on social media tools as an aspect of crisis communications. Research has suggested that agriculturalists continue to expand upon their use of social media tools and are encouraging the use of social media in crisis communication (Baumgarten, 2012; Graybill-Leonard, Meyers, Doerfert, & Irlbeck, 2011; Meyers, Irlbeck, Graybill-Leonard, & Doerfert, 2011). Participants in this study also largely agreed that their use of social media greatly impacted the effectiveness of their communication efforts surrounding each crisis situation. As the popularity of social media continues to grow and more people turn to these sources for news and information, the researchers feel it is becoming increasingly important for those in the agricultural industry to implement social media in their communication efforts. Additionally, they must find ways to communicate even more effectively and efficiently as the communication needs of the public continue to change. As Currie (2009) stated, “The time is fast approaching when ‘social’ media will simply become ‘media’” (p. 14).

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References

- Alexander, D. E. (2014). Social media in disaster risk reduction and crisis management. *Science and engineering ethics*, 20(3), 717-733.
- Akhgar, B., Staniforth, A., and Waddington, D. (2017). *Application of social media in crisis management: Advanced sciences and technologies for security applications*. Cham, Switzerland: Springer International Publishing.
- Augustine, N. (2000). *Managing the crisis you tried to prevent*. Harvard Business Review on Crisis Management. Boxton, MA: Harvard Business School Publishing.
- Austin, L., Liu, B. F., & Jin, Y. (2012). How audiences seek out crisis information: Exploring the social-mediated crisis communication model. *Journal of Applied Communication Research*, 40(2), 188-207. doi: 10.1080/00909882.2012.654498.
- Bates, D., & Sullivan, H. (2009, December). *2009 social media & online usage study*. Retrieved from http://www2.gwu.edu/~newsctr/10/pdfs/gw_cision_sm_study_09.PDF
- Baumgarten, C. (2012, August 31). The Agriculture Industry Goes Social. *Mashable*. Retrieved from <http://mashable.com/2012/08/31/agriculture-industry-social-media/>
- Birk, M., & Mills, J. (2011). *Grounded theory: A practical guide*. Thousand Oaks, CA: SAGE Publications.
- Casey, M. J., Meikle, A., Kerr, G. A., & Stevens, D. R. (2016). Social media—a disruptive opportunity for science and extension in agriculture. In *Hill Country Symposium. Grassland Research and Practice Series* (Vol. 16, p. 53-60).
- Centers for Disease Control and Prevention. (2012, August 27). *Multistate outbreak of Listeriosis linked to whole cantaloupes from Jensen Farms, Colorado*. Retrieved from <http://www.cdc.gov/listeria/outbreaks/cantaloupes-jensen-farms/082712/index.html>
- Chan, A. (2011, September 29). *Listeria outbreak in cantaloupes: What are the symptoms and dangers?* Retrieved from http://www.huffingtonpost.com/2011/09/29/listeria-symptoms-cantaloupe-recall_n_987125.html
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide though qualitative research*. Thousand Oaks, CA: SAGE Publications.
- Coombs, W. T. (2008). Crisis communication and social media. *Essential Knowledge Project, Institute for Public Relations*. Retrieved from www.instituteforpr.org/topics/crisis-communication-and-social-media/
- Coombs, W. T. (2015). *Ongoing crisis communications: Planning, managing, and responding* (4th ed.). Thousand Oaks, CA: SAGE Publications.

- Coombs, W. T. (2019). *Ongoing crisis communications: Planning, managing, and responding* (5th ed.). Thousand Oaks, CA: SAGE Publications.
- Coombs, W. T., & Holladay, S. J. (2012). *The handbook of crisis communications*. Chichester, UK: Wiley-Blackwell.
- Creswell, J.W., & Poth, C.N. (2018). *Qualitative inquiry & research design: Choosing among five approaches* (4th ed.). Thousand Oaks, CA: SAGE Publications.
- Crotty, M. (2004). *The foundations of social research*. Thousand Oaks, CA: SAGE Publications.
- Currie, D. (2009, July 23). *Social media and risk communications during times of crisis*. Booz Allen Hamilton. Retrieved from http://www.boozallen.com/media/file/Risk_Communications_Times_of_Crisis.pdf
- Doerfert, D. L. (Ed.) (2011). *National research agenda: American Association of Agricultural Education's research priority areas for 2011-2015*. Lubbock, TX: Texas Tech University, Department of Education and Communications.
- Duggan, M., Ellison, N. B., Lampe, C., Lenhart, A., & Madden, M. (2015, January 9). *Social media update 2014*. Pew Internet and American Life Project. Retrieved from <http://www.pewinternet.org/fact-sheets/social-networking-fact-sheet/>
- Erlandson, D. A., Harris, E. L., Skipper, B. L., & Allen, S. D. (1993). *Doing naturalistic inquiry: A guide to methods*. Thousand Oaks, CA: SAGE Publications.
- Gall, M. D., Gall, J. P., & Borg, W. R. (2007) *Educational research: An introduction*. Boston, MA: Pearson Education, Inc.
- Glynn, C. J., Huge, M. E., & Hoffman, L. H. (2012). All the news that's fit to post: A profile of news use on social networking sites. *Computers in Human Behavior*, 28(1), 113-119. doi:10.1016/j.chb.2011.08.017
- Graybill-Leonard, M., Meyers, C., Doerfert, D., & Irlbeck, E. (2011). Using Facebook as a communication tool in agricultural-related social movements. *Journal of Applied Communications*, 95(3), 45-56.
- Hermida, A. (2010). Twittering the news: The emergence of ambient journalism. *Journalism Practice*, 4(3), 297-308. doi: 10.1080/17512781003640703.
- Horsley, J. S., & Barker, R. T. (2002). Toward a synthesis model for crisis communication in the public sector: An Initial Investigation. *Journal of Business and Technical Communication*, 16(4), 406-440. <https://doi.org/10.1177/105065102236525>

- Irlbeck, E. G., Jennings, J. F., Meyers, C. A., Gibson, C. D., & Chambers, T. (2013). A case study of the risk and crisis communications used in the 2009 Salmonella outbreak in peanut products. *Journal of Applied Communications*, 97(4), 19-32.
- Liu, B. F., Jin, Y., Briones, R., & Kuch, B. (2012). Managing turbulence in the blogosphere: Evaluating the blog-mediated crisis communication model with the American Red Cross. *Journal of Public Relations Research*, 24, 353-370. doi: 10.1080/1062726X.2012.689901.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic Inquiry*. Beverly Hills, CA: SAGE Publications.
- McSeveny, K., & Waddington, D. (2017). Case studies in crisis communication: Som pointers to best practice In B. Akhgar, A. Staniforth, & D. Waddington (Ed.). *Application of social media in crisis management: Advanced sciences and technologies for security applications* (pp. 68-98). Cham, Switzerland: Springer International Publishing.
- Merriam, S.B. (1998). *Qualitative research and case study applications education*. San Francisco: Jossey-Bass.
- Meyers, C., Irlbeck, E., Graybill-Leonard, M., & Doerfert, D. (2011). Advocacy in agricultural social movements: Exploring Facebook as a public relations communication tool. *Journal of Applied Communications*, 95(3), 68-81.
- Mitchell, A., Shearer, E., Gottfried, J., & Barthel, M. (2016). *Pathways to news*. Retrieved from Pew Research Center – Journalism & Media <http://www.journalism.org/2016/07/07/pathways-to-news/>.
- Opat, K., Magness, H., & Irlbeck, E.G. (2018). Blue Bell's Facebook posts and responses during the 2015 Listeria crisis: A case study. *Journal of Applied Communications*, 102(4). <https://doi.org/10.4148/1051-0834.2232>
- Palenchar, M.J., & Freberg, K. (2012). Emergency management planning: Risk, crises, issues, and social media. In B.A. Olaniran, D.E. Williams, & W.T. Coombs (Eds.), *Pre-crisis planning, communication, & management: Preparing for the inevitable* (pp. 147-169). New York: Peter Lang Publishing, Inc.
- Palmer, A. L., Irlbeck, E. G., Meyers, C. A., & Chambers, L. T., (2013). A case study of the risk and crisis communications used in the 2008 *Salmonella* outbreak. *Journal of Applied Communications*, 97(1), 38-49.
- Sandman, P. M. (1993). *Responding to community outrage: Strategies for effective risk communication*. Fairfax, VA: American Industrial Hygiene Association.
- Seeger, M. W., Sellnow, T. L., & Ulmer, R. R. (2003). *Communication and organizational crisis*. Westport, CT: Praeger Publishers.

- Smith, L.M., (1978). An evolving logic of participant observation, educational ethnography and other case studies. In L. Shulman (ed.), *Review of research in education*. Itasca, IL: Peacock.
- Stephens, K.K., & Malone, P.C. (2009). If the organizations won't give us information...: The use of multiple new media for crisis technical translation and dialogue. *Journal of Public Relations Research*, 21(2), 229-239.
- Thomas, G. (2015). *How to do your case study* (2nd ed.). Thousand Oaks, CA: Sage.
- Ulmer, R. R., Sellnow, T. L., & Seeger, M. W. (2007). *Effective crisis communication: Moving from crisis to opportunity*. Thousand Oaks, CA: SAGE Publications.
- Veil, S. R., Buehner, T., & Palenchar, M. J. (2011). A work in-process literature review: Incorporating social media in risk and crisis communication. *Journal of Contingencies and Crisis Management*, 19(2), 110-122. doi:10.1111/j.1468-5973.2011.00639.x
- Walsh, B. (2013, October 16). Freak blizzard kills tens of thousands of South Dakota cattle – and Washington does nothing. *Time*. Retrieved from <http://science.time.com/2013/10/16/freak-blizzard-kills-tens-of-thousands-of-south-dakota-cattle-and-washington-does-nothing/>
- Zhorov, I. (2013, October 22). Why did South Dakota snowstorm kill so many cattle? *National Geographic*. Retrieved from <http://news.nationalgeographic.com/news/2013/10/131022-cattle-blizzard-south-dakota-winter-storm-atlas/>