PERCEPTIONS OF THE PORK INDUSTRY AND AGRICULTURE PRACTICES RELATED TO AGRICULTURAL CRISIS COMMUNICATION AND MEDIA USE

Thesis

Presented in Partial Fulfillment of the Requirements for the Degree Master of Science in the Graduate School of The Ohio State University

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2011

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Abstract

Food related crises continue to be prevalent both on and off the U.S. farm scene, therefore, it is important for agricultural communicators to be able to communicate with stakeholders about the economic and social value of agriculture. In addition, as media groups and outside informative organizations continue to improve and strengthen their public presence, it is critical that agricultural communicators make the public aware and informed of agricultural issues through increased use of mass media technologies and education efforts. This study sought to examine the agricultural knowledge of consumers in a predominantly urban market as well as to gain an understanding of consumers’ specific knowledge of pork products and the pork industry. This study was unique in that it also assessed crisis communication and risk situations in an agricultural context. Theories used to guide this study included social marketing, exchange theory, participatory theory, protection motivation theory, situational crisis communication theory, attribution theory, cognitive dissonance and media use.

To complete this study, 106 questionnaires were collected from voluntary participants at two public events in Columbus, OH. Basic descriptive quantitative statistics were completed on the data. In addition, open coding was used to analyze the qualitative portions of the study.
Results from the study showed that participants possessed some knowledge of agriculture, but often did not know much about pork products or the pork industry. Most survey participants held a high regard for how animals were cared for but were uninformed concerning general agricultural and livestock specific practices. Additionally, media portrayal and lack of exposure to agricultural news outlets and educational entities tend to limit or influence respondents perceptions and qualitative responses.
Dedicated to my family who provide unconditional love and support, and have instilled in me the values of hard work, dedication, and the importance of lifelong learning.
Acknowledgments

The completion of my thesis would not have been possible without the support I received from numerous individuals. First I would like to thank my committee, made up of my advisor, Dr. Emily Rhoades, and Dr. Robert J. Birkenholz for their assistance and support during the duration of my project. A special thanks also goes to Ms. Jill Tyson, Coordinator of Prospective Student Services in the College of Food, Agricultural, and Environmental Sciences. Jill’s encouragement, both as a friend and mentor, and her continued support of me through my academic and professional pursuits has made my time as an undergraduate student, graduate student, and my time working in my associateship role all the more pleasurable.

Without the support of the Ohio Pork Producers Council, my research would not have been possible. Specifically I would like to thank Jennifer Keller and Heather Hetterick for their assistance in the development of the research questionnaire. Additionally, I am grateful for their help in organizing the arrangements of the booth at the Kids-a-palooza event, subject incentives, and admission, parking passes, and food for those who assisted in administering the questionnaires.
Lastly, I would like to thank my family and friends for their love and support over the past two years. Their encouragement and words of confidence have made this process possible.
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Area of Emphasis: Agricultural Communication
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Chapter 1: Introduction

Throughout history, humans have relied on the industry of agriculture to supply their basic needs of food, fiber, and fuel. Generations of Americans had attachment to the concept of family farming, and thus showed continuous support for the producer behind the products on their plate. As the landscape of agriculture, on a worldwide setting, has changed over the past two decades, so has consumer support and general understanding of agriculture. With new technology evolving and being implemented into nearly every agricultural operation, including crops, chemicals, and animal agriculture, consumers have begun to question the producer, their practices, and even the food supply they once blindly trusted. As society’s concern with our food supply has increased, media attention and political pressure surrounding agriculture and food issues have also been heightened. Consumers have recently been reminded of past crisis communications involving the world food supply as they experience first hand a new agriculture crisis affecting the pork industry in 2009, H1N1.

Consumers in today’s market have been brainwashed to equate “eating right” with “eating light.” This fad had led to the banishing of the meat and potatoes diet – “once as American as the apple pie that followed it”—and spearheaded the American consumer to
change their attitudes about food and to be more conscious of their own food and diet
decisions (Linsen, 1984). This trend, combined with the new perceived risks and
consumer experienced malfunctions in the American food system, has led to a crisis
analysis of our consumer preferences surrounding agricultural products.

The state of the American food system and consumers perceived risks
The Center for Disease Control estimates that “nearly 76 million people are
affected by food-borne illnesses each year in the United States, with approximately 5,000
of those cases resulting in death” (Ten Eyck, 2000, p. 29). Consumers “regularly indicate
that food safety is a serious concern” (Whaley and Tucker, 2004, p. 9). When faced with
issues of food contamination, consumers in the United States and around the world have
become more cautious when it comes to the origin, content, and preparation of their food
(Ipsos-Reid, 2000).

As our global economy continues to grow in size and complexity, risk associated
with nearly every product and industry continues to grow as well. Globalization,
introduction of new technology, and economic growth have produced a time-space
compression that suggests that “as distances shrink, people and goods are moving faster
and farther, communication networks become more complex and indispensable, and
technological advances spill over from one domain into another almost effortlessly”
(‘t Hart, Heyse, and Boin, 2001, p. 182). These developments do not come without cost, and the ramifications of complexity within the agricultural domain over the past 50 years have caused many risk situations to arise in the industry and life of the consumer. These situations are worth noting in a historical look at crises related to agriculture and related sciences (‘t Hart, Heyse, and Boin, 2001).

**Agricultural risk situations that have impacted the industry**

With the mass media being the consumers’ main source of food safety information, it is inherently important that we understand the effects and communication of various agricultural risks regarding consumers and food products (Whaley and Tucker, 2004). The list of critical incidents related to agriculture continues to grow, including: occurrences of Salmonella, BSE, swine fever, Foot and Mouth Disease, production failures and/or product tampering in beer, baby food, frozen food and olive oil, and speculation about the harmful effects of genetically modified foods (‘t Hart, Heyse, and Boin, 2001). Three case study examples related to Mad Cow Disease, Foot and Mouth Disease, and E-coli in Spinach show the high impact and mass coverage of agricultural crises.
The United Kingdom (UK) was hit with “one of the biggest crises to ever affect the UK farming system” when Foot and Mouth Disease (FMD) was discovered in 2001 (Hagar and Haythornwaite, 2005, p. 1). FMD is a “highly infectious viral disease in which fever is followed by the development of vesicles or blisters, chiefly in the mouth or on the feet. It is probably the most infectious disease that can affect livestock…” (Hagar and Haythornwaite, 2005, p. 4). The Foot and Mouth outbreak cost the UK nearly eight billion dollars, led to the slaughter of over six million animals, and all but devastated the livelihoods of thousands of UK livestock farmers. The countryside went on lock down, communication channels were confusing and ineffective, and farmers were left to deal with the financial hardship and uncertainty of their future (Hagar and Haythornwaite, 2005).

The Spring of 2003 brought the initial outbreak of Mad Cow disease to North America (Ruth, Eubanks, and Telg, 2005). “Bovine spongiform encephalopathy (BSE) is a neurological disease transmitted through the consumption of BSE-contaminated meat and bone meal, which has the potential to contaminate the food supply” (The BSE Inquiry, 2000). BSE gained national attention not only for health reasons, but also for its social, economical, and geographic impacts. While Mad Cow had infected nearly 100,000 cows in Europe during the previous decade, 2003 was the first ear it was
detected within the United States. Mad Cow Disease, or BSE, was viewed as a serious threat to the American food supply and consumer confidence in meat products. While BSE never got out of control in the United States, the doubt it created in the mind of the consumer will not soon be forgotten.

Media highlights of E-colI (Escherichia coli) found in bags of prewashed spinach in 2006 also resulted in negative attention directed toward agriculture (Rowe and Alexander, 2009). Even though health officials had tracked the contamination to a lone supplier and a single agricultural field, many consumers chose to simply avoid spinach all-together, and some grocery chains even stopped selling the leafy vegetable (Rowe and Alexander, 2009). Risk communication research involving the spinach recall revealed that consumers had heard about the contamination, tended to avoid spinach products, were confused about which products to avoid, and some even reported stopping eating all bagged produce to avoid contamination (Rowe and Alexander, 2009).

These case studies reflect the significance of agricultural crises over the past 20 years. They document the impact of problems in our food system that affect the masses including producers, consumers, retailers, and political organizations. While these examples are of the past, the case of 2009 H1N1 and its implications to crisis management has yet to be explored in depth.
History of H1N1

“Pity the poor pig. The otherwise estimable mammal has never had a very good rep -- something about the mud, the snout, the oink. Now add the flu (Kluger, 2009, p.1).” The publicly titled “swine flu” outbreak that ignited widespread fear around the nation hit the United States in April 2009. The H1N1 scare—so severe that even Egypt ordered the slaughter of all the country’s 300,000 pigs—invoke turmoil on the U.S. pork industry and placed hardship on the U.S. hog farmer (Kluger, 2009).

In 2009, a new strand of the influenza virus, H1N1, began spreading across several countries around the world. Evidence that this specific influenza strand could pass from human to human quickly caused the World Health Organization to set its pandemic alert level to phase 5, representing “a strong signal that a pandemic is imminent and that the time to finalize the organization, communication, and implementation of the planned mitigation measures is short” (Rubin, Amlot, Page, Wessely, 2009, p.1).

Swine influenza viruses were first documented, and isolated, in the United States in 1930 (National Pork Board, 2004). As a human public health risk and as a cause of respiratory disease in pigs throughout the world, varying strands of swine influenza are
issues of both economical and political importance that affect groups of many affiliations. The symptoms of swine influenza in pigs and people are remarkably similar, with those infected having signs of “fever, lethargy, lack of appetite and coughing” (National Pork Board, 2004). These interspecies (human and pig) infections are most likely to occur when humans are in close contact with pigs, but these influenza viruses can be directly transmitted both from pigs to humans, and humans to pigs. Contamination sites are most commonly in swine production barns, livestock exhibits, and in slaughterhouses (National Pork Board, 2004).

The Center for Disease Control (2010) report estimated that between 43 and 89 million cases of 2009 H1N1 occurred between April 2009 and April 2010 and that between 195,000 and 403,000 H1N1-related hospitalizations occurred between April 2009 and April 2010. The CDC (2010) also estimated that between 8,870 and 18,300 deaths related to 2009 H1N1 occurred between April 2009 and April 2010. These estimates were calculated by the CDC using data collected from flu-associated hospitalizations through their own Emerging Infections program.

Upon initial infection in Mexico in 2009, the phrase “swine flu” leapt into the headlines (Truitt, 2009). Despite efforts of governmental and public health officials, the media continued to use the term “swine flu” for months, even after the idea of H1N1 was
hammered into the minds of consumers as not being directly related to pork consumption (Truitt, 2009). The term not only created false linkages between the pork industry and H1N1 deaths, but it also added to the sensationalism and negative visual portrayal of American agriculture.

Agricultural organizations and national application

Whether referring to H1N1 and the pork industry, Mad Cow Disease and the beef industry, or spinach contamination with vegetable producers, recent food safety issues have created a problem for the many farmers, producers, companies and organizations they represent. In many of these incidents, “there appears to be a serious disconnect between what risk communicators express and what consumers understand” (Rowe and Alexander, 2009, p.260). While written and delivered with good intentions, something does not seem to be getting through to the public as intended.

In past risk communication situations, the communicators have placed the blame for ineffective campaigns or messages on consumer confusion (Rowe and Alexander, 2009). In addition to the knowledge gap and confusion of consumers, the effect of a shrinking news cycle, availability of instant news access online, and the presence of
dialogue and commentary via social media outlets has added barriers to successful and simplistic risk communication (Rowe and Alexander, 2009).

While some agricultural crises lead to recall, redesign, or communication overhauls of individual companies, others—such as Mad Cow and H1N1—can lead to the compromise of an entire industry (Pennings, Wansink, and Meulenberg, 2001). Still, the behavior of the public in a risk situation “is not always consistent with the true level of risk they face” (Pennings, Wansink, and Meulenberg, 2001, p. 91). The media can influence this elevated, and sometimes unnecessary, risk.

Considering media’s influence and consumer demand for information in risk situations, livestock and commodity organizations must respond. Food and related safety crises illustrate the need for strategic marketing plans to predict how consumers will respond in a crisis situation (Pennings, Wansink, and Meulenberg, 2001). Agricultural journalists can, and should, be a part of this strategy. When hit with a crisis, whether local, national, or global, agricultural communicators from across industries should unite to work for the many people they represent—producers, processors, and many others within the agricultural sector (Evans, 2005). Collaboration among agriculturalists on crisis communication issues is crucial to advancement in crisis communication research, and to learn from case studies of actual crises to create a better position for the future.
Significance

The pork industry in the state of Ohio contributes $542.7 million annually to gross state product. Providing 8,765 jobs and over $71 million in exports annually, hogs are certainly a valuable commodity in the state (National Pork Producers Council, 2007). Ohio pork producers had nearly 2 million hogs on farms as of March, 2009 (Farm and Dairy, 2009). Farm statistics also indicate that nearly 65 million total head of hogs can be found on farms all across the United States (Farm and Dairy, 2009).

Pork production on a national level is also a vital contributor to the economy. In 2007, there were “nearly 35,000 direct, full-time equivalent pork producing jobs” (National Pork Producers Council, 2007, p. 1). In addition, 515,200 indirectly related jobs can be attributed to the pork industry. The pork industry produced “…nearly $21.8 billion in personal income from total sales of more than $97 billion and added $34.5 billion to the country’s gross national product…” (National Pork Producers Council, 2007).

While contributions to the economy made by the pork industry on the state and national level are certainly recognized, many Americans do not know that the number of actual pork operations has declined from 3 million in the 1950’s down to ~67,000 today (National Pork Producers Council, 2007). The presence of the pork industry not only in
Ohio, but across the nation, and its national and global impacts add to the relevance and significance of this study.

This research study can be applied to both environmental, agricultural, and communication studies. Results of this study can help the pork industry examine specific gaps, respond in potential solutions, and serve as a model for their livestock industry counterparts. Livestock and cooperative trade organizations throughout our country, and worldwide, will be able to use different sections of the current study to enhance their respective businesses through use of specific models, data, or findings. Studying this topic will also aid in marketing campaigns and continued efforts of consumer education by pork leaders. The current study will also allow for further research in the area of crisis management and livestock groups, crisis management and the larger field of agriculture, and how consumer buying and food preferences influence these industries.

**Problem Statement**

Therefore, the problem is that a current assessment of consumer preferences, knowledge of and attitudes toward pork products and producers, and how crisis management issues affect the larger industry, is needed in order for livestock organization representatives and related educators to educate consumers and develop internal advertising accordingly.
Purpose and Objectives

The purpose of this study was to describe consumer preferences regarding pork producers, pork products, and perceptions of crisis management issues within the pork industry. Furthermore, this study sought to determine factors by which consumers evaluate these issues and how these considerations will help future development of pork advertising and market positioning. The following research objectives guided the study:

1. Describe consumer knowledge of pork availability, pork products, and general agricultural knowledge
2. Identify consumer preferences in pork labeling.
3. Describe consumer attitudes toward animal welfare and crisis management issues

Limitations

Limitations of this study begin with the generalizability of the study. The survey portion of this study included a sample of individuals visiting targeted public events in the Columbus, OH area. Therefore, the results of this study are not generalizable beyond the participants that provided responses to the survey. It is important to note that the results of this study may have been influenced by individuals’ ability to recall knowledge,
personal bias of the participants and/or survey administrator, other participants at the survey site, and the participants hurrying to finish the instrument. Affiliation with the Ohio Pork Producer Council through coupon promotion or booth set-up, as well as the general nature of the two collection events, may also have influenced participant response. A facilitator bias in administering the survey must also be acknowledged.

**Definition of Terms**

Pork Labeling

Pork labeling, as referred to in question 13 of the instrument, and again in the literature is the word combination used to categorize and describe specific pork products in the marketplace. There are several methods and options for labeling pork products to differentiate place of origin, type/place of farm, organic vs. non-organic, etc..
Chapter 2: Review of Literature

This chapter presents the theories of social marketing, exchange theory, participatory theory, protection motivation theory, situational crisis communication theory, attribution theory, cognitive dissonance and media use as the theoretical foundation for this study.

Social Marketing

Initially introduced by Kotler and Zaltman (1971), and later ratified by Lefebvre and Flora (1988) and Kotler, Roberto, and Lee (2002) social marketing theory looks at how to use marketing principles and techniques to influence a target audience. The theory expands to include how to get an audience to voluntarily accept, reject, modify, or abandon a behavior that may have an effect upon an individual, a particular product, or an industry as a whole (Kotler and Zaltman, 1971).

Although marketing scholars wrote and conducted research on topics that would now be considered social marketing, the origins of the term did not come about until Kotler and Zaltman came out with their classic piece on social marketing in 1971. Kotler and Zaltman’s article first appeared in the Journal of Marketing and helped define the concept of social marketing as an area of study. Kotler and Zaltman proposed that social
marketing was a promising framework for planning and implementing social change (Kotler and Zaltman, 1971).

Social marketing is the design, implementation, and control of programs calculated to influence the acceptability of social ideas and involves considerations of product planning, pricing, communication, distribution, and marketing research (Kotler and Zaltman, 1971). In other words, social marketing explicitly uses an array of marketing skills to help translate present social action into more effectively designed and communicated programs that elicit desired audience responses (Kotler and Zaltman, 1971).

A more timely (Lefebvre and Flora, 1988) definition includes the notion that social marketing involves increasing the acceptability of ideas or practices within a target group and that social marketing is a problem solving process. This definition also posits that social marketing utilizes marketing strategies in the introduction and dissemination of ideas and issues and that it is a strategy for translating scientific knowledge into effective education programs (Lefebvre and Flora, 1988).

The core concepts of social marketing borrow heavily from the traditional marketing literature. However, social marketing, specifically, is able to be distinguished by the focus on so called non-tangible products – ideas, attitudes, lifestyles—as opposed
to a traditional business sector marketing focus on tangible products and services (Lefebvre and Flora, 1988). Social marketing principles are especially well-suited for the task of translating usually complex educational messages and behavior change techniques into concepts and products that will be well perceived and accepted by large segments of the population (Lefebvre and Flora, 1988). While brief social marketing campaigns can be expected to produce significant results over the short term, their successful implementation in an strategic and continuous manner are deemed to be necessary for effective public health interventions.

Differentiation between the areas of social marketing and social advertising must be drawn. Authors Lazarsfeld and Merton (1949) attempt to do so in their writings on mass communication and social action. The authors suggest that the effectiveness of mass media and marketing depends upon three conditions, one or more of which is lacking in many propaganda settings (Lazardsfeld and Merton, 1949). The three conditions include: monopolization by the media, marked by the absence of counterpropaganda; canalization, or the presence of an existing attitudinal base for the feelings the social communicators are trying to shape; and supplementation, defined as the extent to which mass communication efforts are follow up by face-to-face contacts (Lazarsfeld and Merton, 1949).
The further understanding of social campaigns also lends information to social marketing. Five factors, including the force, direction, mechanism, adequacy and compatibility, and distance, contribute to the effectiveness of social marketing campaigns (Wiebe, 1951). To show how these factors operate, Wiebe analyzed the Kate Smith Campaign to sell bonds during World War II. This campaign was eminently successful, based upon Wiebe’s five factors, because of the presence of force (patriotism), direction (buy bonds), mechanism (banks, post offices, telephone orders), adequacy and compatibility (so many centers to purchase the bonds), and distance (ease of purchase) (Wiebe, 1951).

Similar reasoning is noted as also being required by those attempting to market altruistic causes (charity giving, blood donation), personal health causes (nonsmoking, vaccinations), and social betterment causes (civil right, better environment). In each of these cases, social marketers must define the change to be sought, which may be a change in values, beliefs, affects, behavior, or some mixture of components (Kotler and Zaltman, 1971). The social marketer must design social products for each market that are buyable, and which instrumentally then serve the social cause.

Past studies and application in social marketing have been conducted in the area of health marketing. Health marketing refers to health promotion programming that is
developed and implemented to satisfy consumer needs. Health marketing is designed to reach a broad audience and thereby enhance the organization’s ability to effect population-wide changes in targeted risk behaviors (Lefebvre and Flora, 1988). As opposed to be product-driven, this marketing philosophy underscores the necessity for health agencies to be aware of and responsive to consumer needs. While more specific health initiatives may be put into play by public health representatives in response to data or conditions of which the general populace may not be sufficiently aware, these efforts should be articulated in response to audience needs, implemented to meet those needs, effective in satisfying the needs, and monitored to both ensure that they continue to meet these needs and to alert the agency to new or changing needs in target populations.

**Social Marketing and Exchange Theory**

The foundation for Exchange Theory came primarily from psychology and economics, and assumes that people have needs along with a natural inclination to try and improve what we have (Hastings and Saren, 2003). Exchange requires that “at least two parties are involved, that each party have something that might be of value to the other party, that each party is capable of communication and delivery, that each party is free to
accept or reject the offer, and that each party believes it is appropriate or desirable to deal with the other party” (Hastings and Saren, 2003).

Exchange Theory proposes that individuals, groups, or organizations have resources that they want to exchange, or might conceivably exchange, for perceived benefits (Lefebvre and Flora, 1988). These transactions can take place in many situations, however, to be considered transactions related to social marketing, ideas, products, or services must be deliberately introduced to the equation with a buy-and-sell intention. Examples of such transactions include dissemination of information, public relations efforts, lobbying, and diverse advocacy efforts (Lefebvre and Flora, 1988).

Exchanges can also take place on a number of levels. In a given situation people can be threatened to exchange (“Do something or die”), can be coerced to exchange (“Just this time-please”), can be commanded to change (“Uncle Sam wants you!”), or can voluntarily choose to exchange (Lefebvre and Flora, 1988). Marketing, or social marketing in particular, focuses the approach on facilitating and recording observations on the voluntary exchange.

Exchange theory is often integrated into health communication, as it describes the resources available to people during the time of exchange. Most notable resources available for exchange in health communication are money, time, physical and cognitive
effort (such as is needed to maintain exercise program or quit smoking), lifestyle, psychological factors (for example, coping ability, self-esteem), and social contacts (Lefebvre and Flora, 1988). Resources of money, technical expertise, and a variety of ideas, products/services, are also available within health agencies. While one can easily acknowledge the resources present in developing a marketing plan to all parties, they must also consider the benefits to all involved. For example, those active in health communication campaigns have reported such benefits “as a better quality of life, higher self-esteem, a general feeling of well-being, better self-image, and more social contacts” (Lefebvre and Flora, 1988, p. 303). Agencies that promote health issues also benefit from organizing and offering such programs in that they are able to meet organizational goals, increase funding through societal awareness of their work, and conduct more market research within the field. However, the analysis of costs and benefits concerning health communication are rarely acknowledged in relation and application to the exchange process (Lefebvre and Flora, 1988).

**Participatory Theory**

Authors John Stuart Mill (1962) and Jean-Jacques Rousseau (1968) outline participatory theory as one that suggests that political participation should not be
restricted to voting, but rather a more active involvement by citizens in a community for different decision making processes (Eksterowicz, Roberts, & Clark, 1998). Participatory democracy is a process of collective decision-making that combines elements from both direct and representative democracy (Aragones and Sanchez-Pages, 2008). Under the participatory system, the extent to which citizens can affect policy and determine social priorities is directly correlated with the degree to which they choose to involve themselves in the process.

Ideas of participatory theory and participatory democracy have been applied to many local levels, including budget setting, political elections, and general issue awareness and community involvement (Aragones and Sanchez-Pages, 2008).

**Protection Motivation Theory**

Rogers initially introduced protection motivation theory in 1975. Protection motivation theory (PMT) was widely accepted as a framework for the prediction and intervention of health related behavior (Milne, Sheeran, and Orbell, 2000). As an original approach to explain fear appeals, PMT aimed at understanding the threat, the communication of the threat, and the response to the threat in fear related messaging appeals (Milne, Sheeran, & Orbell, 2000). PMT, today, specifies that certain cognitive
messages and informational factors affect an individual’s response when making
decisions about persuasive messages (Beck, 1984). Rogers, as cited in Beck (1984),
provides that in its original form PMT is

“…a basic postulate is that protection motivation arises from the cognitive
appraisal of a depicted event as noxious and likely to occur, along with the belief
that a recommended coping response can effectively prevent the occurrence of the
aversive event” (Rogers, 1975, p. 99).

Persuasive messages and their content are said to be directly related to the level of action
taken by individuals representing PMT. Specifically, the magnitude of the message and
the severity of consequences of the noxious event directly affect the corresponding
cognitions of individuals appraised severity (Beck, 1984).

Rogers adopted three components of Hovland, Janis, and Kelley’s (1953)
expectancy-value theory to help for the basis of protection motivation theory. These three
components suggest that there are three main stimulus variables in a fear appeal: (a) the
magnitude of noxiousness of a given event, (b) the probability that the given event will
occur if no protective behavior is adopted or existing behavior modified, and (c) the
availability and effectiveness of a coping response to reduce or eliminate the noxious
stimulus (Rogers, 1975). Rogers added a fourth construct component to that mix in 1983,
saying that (d) perceived self-efficacy also added value and explanatory power to PMT. Rogers proposed that each of these components made up a cognitive meditational process: The magnitude of noxiousness initiates perceived severity; the probability of occurrence initiates perceived vulnerability; and the efficacy of the recommended response initiates perceived response efficacy (Milne, Sheeran, & Orbell, 2000).

Although PMT was originally applied to fear-appeal research, it has since been adopted as a more overarching model of decision making in relation to risk decision-making (Beck, 1984). Beck suggested that the size of the problem and probability of occurrence could easily turn a traditional PMT case into a more risk management and crisis decision-making situation. PMT, in this case, can be particularly helpful in studying health behaviors, as fear of contracting a health-related danger might lead people to adopt a precautionary behavior if the behavior is believed to be effective in reducing the risk (Weinstein, 1993). PMT has been applied to a number of health related threats in order to help understand and predict protective health behavior. Studies have been conducted related to antinuclear behaviors, water conservation, and coping with technological and environmental hazards (Milne, Sheeran, & Orbell, 2000).

An element of historical context is often related to protection motivation and trust perception in the literature. Trust becomes a multidimensional and complex construct in
crisis situations (Preisendorfer, 1995). The significance of trust in any exchange or context is widely acknowledged, and regardless of its dimensions, trust is a basic element necessary for food product safety under conditions where consumers can choose. Consumers must have a base-line level of trust developed in order to try, buy, and continually consume any product, and it becomes crucial to identify any perceived risk or danger associated with the product to maintain that trust (Richardson et al., 1993, 1994).

Prentice-Dunn, McMath, and Cramer (2000) show application of PMT in their study on stages of change in sun behavior. Authors in this example maintain the protection motivation theory ideas that when individuals are confronted with health information they engage in two different cognitive processes: coping appraisal or threat appraisal (Prentice-Hall, McMath, and Cramer, 2000). The concepts of perceived vulnerability and perceived severity (how damaging and/or life-threatening is skin cancer) affects threat appraisal. These two components increase the likelihood that a person will have an adaptive response (reducing sunbathing or using sunscreen). Any rewards associated with continuing the unprotected sun behavior will decrease this likelihood.

The idea of coping appraisal, or the individuals assessment of response efficacy of the recommended behavior, is illustrated in this example by a person’s perceived
effectiveness of sunscreen in preventing premature aging or preventing other skin problems caused by sun. Coping appraisal as described by Prentice-Hall, McMath and Cramer (2010) also includes the concept of a person’s perceived self-efficacy in carrying out the recommended action (confidence that they can use sunscreen consistently). Likelihood that the adaptive behavior will be enacted increases with higher levels of efficacy variables (Prentice-Hall, McMath, and Cramer, 2000).

Cognitive Dissonance

Leon Festinger developed the theory of cognitive dissonance in 1957. Festinger concluded that cognitive dissonance was present when cognitive information was inconsistent with ones perceived personal attributes (as cited in Hunt, 2004). The idea of dissonance is defined as the state when conflict exists in an individual’s mind between two cognitions (Aronson, 1969). Cognitive dissonance theory is based upon the premise of three underlying assumptions about human cognition. These three assumptions include; “(1) people have a need for cognitive consistency; (2) when cognitive inconsistency exists, people experience psychological discomfort; and (3) psychological discomfort motivates people to resolve the inconsistency and restore cognitive balance” (Hunt, 2004, p. 146).
Oshikawa (1969) identified three ways in which dissonance is developed by an individual; these include “(1) after making an important and difficult decision, (2) after being coerced to say or do something which is contrary to private attitudes opinions or beliefs, and (3) after being expose to discrepant information” (Oshikawa, 1969, p. 44). Taking into account these three methods, instances of dissonance can cause a person to change one or both of the conflicting cognitive thoughts in order to restore or boost consonance, allowing the cognitions to come in line with one another and restore cognitive balance (Aronson, 1969).

The idea of dissonance becomes very prevalent in decision-making, especially decisions that are difficult or complex in nature. If considerable conflict occurs before a decision, the dissonance that follows the decision is also expected to be significant (Festinger, 1964). The dissonance causes one to only validate their decision rather quickly, as to reduce dissonance as quickly as possible (Festinger, 1964). However, cognitive dissonance theory does not imply that the correct decision will be made by the individual, it only suggests that one would rationalize their decision in order to feel confident and secure with themselves as well as appear rational in the eyes of others (Aronson, 1969).
Crisis Communication and Situational Crisis Communication Theory

Coombs (2007) defined a crisis as “a sudden and unexpected event that threatens to disrupt an organization’s operations and poses a financial and a reputational threat” (p. 164). Hale, Dulke, and Hale (2005) provide further clarification, stating that a crisis event is defined by the four overarching characteristics high consequence, low probability, ambiguity, and decision-making time pressure. Gilpen, et al. (2009) added to the broader definition of crisis by narrowing the definition of an agricultural emergency as “any type of event, regardless of intent, that jeopardizes the economic stability of any sector (farm level to national level) of the U.S. agricultural/agribusiness industry” (p. 188).

Communication has long been recognized as a key element of effective crisis management (Hale, et al., 2005). According to González-Herrero and Smith (2008, p. 150), “people want companies to take part in conversation as human beings with names, points of view, and an ability to listen.” These concepts can be applied across all types of businesses, organizations and industries, including agriculture. Taylor and Perry (2005, p.210) state that “…communication during and after a crisis is one of the most important factors in determining the long-term effects of a crisis.” At the time of crisis occurrence, both stakeholders and the general public attribute responsibility for the crisis to either entities directly involved in the situation or to external factors (Coombs, 2004, 2007).
While most agricultural emergencies and crises are inevitable, enhancing awareness of possible issues and methods of handling a crisis can help to build a foundation for “successfully preventing, preparing for, and responding to” an agricultural crisis (Gilpen, Carabin, Regens, & Burden, 2009, p. 195).

“Crisis response strategies (with mention to communication specifically) include what an organization says and does – its words and actions” (Coombs, 2000, p. 37). When a crisis event occurs, related organizations must issue a message that provides crisis related information and expresses compassion for the victims (Coombs, 2000). The situational crisis communication theory is one available method to determine appropriate communication strategies for various crisis situations (Coombs, 2004, 2007).

**Situational Crisis Communication and Attribution Theory**

Situational Crisis Communication Theory (SCCT) “provides an evidence based framework for understanding how to maximize the reputational protection afforded by post-crisis communication” (Coombs, 2007, p. 163). Situational crisis communication theory was developed as a guide for selecting response strategies during a crisis and aimed at using communicative resources to protect or maintain an organization’s reputation during crisis times (Coombs, 2006). Coombs (2006) argues that SCCT is
composed of three main elements; “(1) the crisis situation, (2) the crisis response strategies, and (3) a system for matching the crisis situation and crisis response strategies (p.243).” While these three elements are fundamental to SCCT, Coombs (2006) posits that the crisis situation itself is of utmost importance. The crisis situation, mainly its reputational effects and the degree of potential damage upon an organization, because the amount of damage a crisis situation can inflict determines the selection of the crisis response strategy (Coombs, 2006).

Attribution theory has an underlying influence on the founding concepts of SCCT (Coombs, 2004, 2007). Attribution theory states that individuals will attribute “observable events to their underlying causes on the basis of covariation or cause and effect” (Settle and Golden, 1974, p. 181) In that case, an event will be attributed to a cause that is present when the event is observed, and absent when the event is not observed. Much historical research on attribution theory took place in the field of social psychology by Weiner, with his major work coming in 1986, but the theory appears to be applicable to studies of consumer behavior. An example of attribution theory and advertiser credibility is reported by Settle and Golden (1974) follows:

“If a consumer is exposed to an advertisement, the message can be regarded as an observable event which can be attributed to any underlying cause such as (1) the
desire of the advertiser to sell his particular brand, or (2) the actual characteristics of the brand being advertised. The consumer’s behavior toward the brand may be dependent in part on this attribution (p. 181).”

In this example, if the consumer attributes the message as one of desire to sell by the advertiser, he or she would not have enough information about the actual product characteristics or know many details about the brand itself, thus the probability of purchasing the product would decrease along with the uncertainty. Conversely, if a consumer attributes the message as one of informing brand or product characteristics, certainty and probability of purchase would increase (Settle and Golden, 1974).

Attribution theory suggests that people will identify the causes of events and, when the event is associated with negative outcomes, attribute blame to either the individual or organization involved or an external force (Coombs, 2004, 2007). Crisis responsibility is defined in Coombs (2006) as “how much stakeholders attribute the cause of the crisis to the organization (p. 243).” The concept of crisis responsibility is also a function of the crisis type and severity of crisis damage (Coombs, 2006).

According to SCCT, the degree to which stakeholders attribute responsibility for a crisis to the organization involved is a function of initial crisis responsibility, historic elements related to the crisis, and prior perceived reputation of the company (Coombs,
Coombs also suggested that a crisis can fall into one of three crisis clusters: (a) the victim cluster – with weak attribution of crisis responsibility, (b) the accidental cluster – with minimal attribution of crisis responsibility, or (c) the intentional cluster – with strong attributions of crisis responsibility (Coombs, 2004, 2007). The degree of attribution, using this scale, will help to inform the company as to which crisis response and communication strategy is most appropriate. The three possible responses to a crisis, after considering attribution possibilities according to Coombs, include (a) denial, or attempting to remove association with the crisis; (b) diminish, convincing stakeholders that the crisis is not as serious as presumed or that the organization had little control over the crisis situation; or (c) rebuild, in which the organization seeks to improve its reputation by offering aid to stakeholders and victims of the crisis (Coombs, 2007).

A study by Laczniak, DeCarlo, and Ramaswami shows reference to word-of-mouth communication and how attribution theory is applied to its context. Laczniak, DeCarlo, and Ramaswami’s (2001) study looks at how negative word-of-mouth communication affects consumer brand evaluations. Results show that consumers “causal attributions mediate the negative word-of-mouth communication brand evaluations” (p. 57) and that brand names of several products used in the study also affected attribution.
Crisis Communication and Media Use

Crisis communication is a field of study that involves unpredictable incidents that suddenly arise to threaten the stability of organizations (Whiting, Tucker, & Whaley, 2004). The dialog between these organizations and the consumers they wish to serve is very important in a risk situation. This dialog includes messages from an organization to its audience “prior to, during, and after the negative occurrence” (Fearn-Banks, 2002, p. 2). These messages are often found within mass media outlets. Outlets of highest popularity include television and radio.

Due to their potential to cause widespread harm, crisis situations receive the utmost attention from the media (Piotrowski and Armstrong, 1998). Despite their normal grouping with other natural disasters like earthquakes, tornadoes, or floods, hurricanes provide a unique crisis event in that the community is usually “forewarned, either hours or days in advance, to the impending impact of mass emergency” (Baker, 1986). Consumers look to mass communication outlets during hurricane disasters for up-to-date news and information regarding their safety. For this reason, hurricanes, especially in the state of Florida, provide a real-life case study example for crisis management, media and public preparedness and response, and the efficiency and impact of media messages (Piotrowski and Armstrong, 1998).
In a study by Piotrowski and Armstrong (1998), mass media preferences of Florida residents were examined in reference to Hurricane Danny. Results of Piotrowski and Armstrong’s (1998) study indicated that receiving information “about the nature, extent, and duration of the hazard, as well as official warnings and emergency services, are of critical important to both local governments and residents” (p. 341). Conclusions of the study also indicated that the media and other related informational resources were channels of much responsibility and influence over community perception and response in a natural disaster situation (Piotrowski and Armstrong, 1998, p. 341). Responses from study participants showed that “local television coverage and local radio reports/bulletins” were selected as the primary sources for news.

**Summary**

Throughout this chapter many theoretical and research studies have demonstrated the use of social marketing, exchange theory, participatory theory, protection motivation theory, cognitive dissonance theory, crisis communication and situational crisis communication theory, and media use.
Chapter 3: Methodology

Problem Statement

A current assessment of consumer preferences, knowledge of and attitudes toward Ohio pork products and producers, and how crisis management issues affect the larger industry, is needed in order for livestock organization representatives and related educators to educate consumers and develop internal advertising accordingly.

Purpose and Objectives

The purpose of this descriptive survey study was to examine consumer preferences regarding pork producers, pork products, and perceptions of crisis management issues within the pork industry. Furthermore, the study sought to determine factors by which consumers evaluate these issues, including issues of animal welfare and familiarity with livestock production, and how these considerations will help future development of pork advertising and market positioning. The following research objectives guided the study:
1. Describe consumer knowledge of pork availability, pork products, and general agricultural knowledge

2. Identify consumer preferences in pork labeling.

3. Describe consumer attitudes toward animal welfare and crisis management issues.

**Research Design**

The research design for this descriptive study included the use of a directly administered questionnaire to determine the knowledge and perceptions of Ohio residents regarding agriculture and the pork industry. Directly administered questionnaires are a research tool that enable researchers to obtain information from an array of individuals who have gathered at a common place for a common purpose (Ary et.al., 2006). One benefit of directly administered questionnaires is that researchers are able to guide participants through the questionnaire (Ary et. al., 2006). The basic research design for the current study incorporated descriptive and quantitative characteristics as well as qualitative justifications.
Population and Sample

The target population for the study was women ages 25-54 who do most of the grocery shopping for their household. The target population was made up of residents of Columbus, Ohio, and surrounding suburbs. A random sampling of attendees to Columbus area public events was used for the study. Permission was granted from each collection site manager to collect from individuals at the Kidz-a-palooza event at the Veterans Memorial and at the North Market Farmer’s Market.

Kidz-a-palooza

Kidz-a-palooza was a one-day event held at the Veterans Memorial Convention Center each year and is sponsored by WCOL and affiliated radio stations. The event features games and interactive events for children of all ages, as well as information booths on children’s health, nutrition, and educational materials for parents to browse.

North Market Farmer’s Market

The North Market is an incubator for small business and fresh food production and marketing in Columbus, OH. North Market guests can shop for ingredients, eat at a local eatery, or mingle with farmers and independent merchants. The North Market
Farmer’s Market is a specific venue of the North Market that is held during the spring, summer, and early fall. The North Market Farmer’s Market features nearly 25 local Ohio farmers and products available range from apples to herbs, and cheese to pumpkins.

Approval from the Ohio State University Institutional Review Board (IRB) was obtained (approval protocol number 2010E0047). Being that the study is not experimental and the target population is of adult age, an exempt research form was filed with the Institutional Review Board (IRB). Research was initiated after receiving IRB approval (see appendix A). Verbal consent procedures were administered before participation. No discrimination based on age, ethnicity, or other factors was evident in administering of survey. Consentino survey participants received a five-dollar incentive coupon off of any fresh pork product in any grocery chain. Participants were made aware of a participatory incentive, but not that the incentive was for pork purchase or that it was sponsored by the Ohio Pork Producers Council in order to eliminate bias.

A total of 113 surveys were collected over two days of collection. Of these surveys, 106 were deemed usable and were included in the data analysis. A total of seven questionnaires were eliminated from the research. All seven eliminated questionnaires were deemed unusable due to lack of complete responses. In addition to the 99 subjects
who participated in the study, 14 other individuals inquired about the study and then declined participation.

**Instrumentation**

The instrument used in this study included a directly administered questionnaire (see Appendix B). The questionnaire was developed on the basis of the research objectives outlined for this study. The researcher collected data based upon the four research objectives through the use of closed-ended and open-ended questions. Closed-ended questions were used when all possible answers were known or limited (Ary et.al., 2006). The format of closed-ended questions in this study included scaled item responses.

Open-ended questions were used when there are numerous possible answers or when the answer is unknown, such as an opinion or justification (Ary et. al., 2006). The questionnaire was three pages in length and was printed in paper format for use in the study. Paper questionnaires were used in this study because the research location at the two events limited the use of electronic data collection.

Ary et.al. (2006) recommended that questionnaires should be ordered in a way that is most appealing to the research subjects. Questions that were easiest to answer and that were expected to be of interest to the participants were placed at the beginning of the
questionnaire, while questions that were more difficult or uncomfortable and additional demographic questions were placed toward the end (Ary et al., 2006). Based on Ary et al. guidelines, the researcher organized the questions in this study into five sections.

The first section of the instrument asked participants to identify buying preferences and recipe information. Here, participants identified their meat purchasing habits, pork specific purchases, reasons for purchasing or not purchasing meat, and where they find new recipes and important factors in trying new recipes. The second section of the instrument had participants provide their three favorite radio stations and asked them to rate the influence of broadcaster’s promotions on their product purchases. The radio element of the study was implemented in response to a specific request from the sponsor of the study, the Ohio Pork Producers Council, directly following the beginning of a Columbus area radio campaign promoting pork.

Section three of the instrument addressed pork industry and pork product knowledge allowing participants to rate a series of five questions about their experiences with agriculture, knowledge of the pork industry, knowledge of the pork products available at their local grocery store, importance of knowing who produced your food, and importance of knowing how animals are cared for on farms. Section three also included an element that allowed participants to indicate if they trusted farmers, what
type of label wording they would prefer, and provided space for explanations of their answers. Examples of questions found in section three are below.

| On a scale from 1 to 5, 1 being the lowest and 5 being the highest, how well would you rank your knowledge of pork products available in your local grocery? |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| Why? | | | | |

| On a scale of 1 to 5, 1 being the lowest and 5 being the highest; how would you rank your knowledge the pork industry in general? |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| Why? | | | | |

The fourth section of the instrument asked participants to respond to questions regarding media affects related to crisis management. Questions in this section asked respondents yes and no questions about their perception of the industry and pork purchasing habits changing with the threat of H1N1, and whether or not they thought they could get H1N1 from eating pork. The fifth section of the survey captured demographic information about the participants. Examples of section 4 and 5 questions are below.
Has your perception of the safety of pork products changed with the threat of H1N1?

| YES | NO |

Have your purchasing of pork products changed since with the threat of H1N1?

| YES | NO |

What is your age? ____________________________

What ethnic background do you identify with? ________________

The instrument as a whole was comprised of 24 questions and a sample is given in Appendix B. Uniform response scales were used for appropriate questions. The response scales ranged from 1-5 (1 being the least or lowest option, 3 being neutral, and 5 indicating the highest or most). Numerical ratings were anchored with keyword descriptors for each question to add clarity. Two examples of Likert type items in the instrument are found below.

On a scale of 1 to 5, 1 being the least important, 3 being neutral, and 5 being very important; how important is it for you to know who produced your food?

| 1 | 2 | 3 | 4 | 5 |

On a scale of 1 to 5, 1 being the least important, 3 being neutral, and 5 being very important; how important is it for you to know how animals are cared for on farms?

| 1 | 2 | 3 | 4 | 5 |
The validity of the questionnaire was assessed by a panel of experts. The experts included researchers from The Ohio State University and members of the Ohio Pork Producers staff who were experienced with the content area as well as the crisis management issues addressed in the questionnaire. The population targeted in this research was selected based upon the expert’s recommendations. The past demographic attendance at the two collection events deemed them valid in targeting this population.

The creation of the instrument used in this study was modeled from an instrument used by Goodwin (2010), allowing reliability to be established. The scale on pork knowledge has an alpha of 0.5. Since the instrument use is researcher developed and needs further testing, this was considered to be an adequate measure of reliability.

**Data Collection**

Data collection in this study was completed in February and March of 2010. Five individuals administered questionnaires over a period of two days, with the two collection days being over a month apart. The administrators were both male and female and all were from an agricultural background. All questionnaire administrators received training prior to data collection. The training allowed the administrators to learn how to properly obtain verbal consent, practice and become familiar with the questions, learn
how to listen carefully and pick out important details, as well as eliminate personal bias when talking with participants.

A Kidz-a-palooza event held at the Veterans Memorial Convention Center and the North Markets Farmer’s Market were the two collection locations. These two locations were chosen because of the demographic of common attendees and their willingness to cooperate with the study. Participants at each location were solicited randomly and approached by survey administrators. Participants completed the survey voluntary and could opt out at any time.

**Data Analysis**

All instruments were stored in a locked file cabinet inside the researcher’s office. Upon conclusion of the study, data was analyzed initially through an Excel format and further analyzed using SPSS 17 and descriptive statistics were calculated. Qualitative measurements were evaluated through the use of open-coding and were further explored to identify common themes within the data.

**Summary**

This chapter sought to describe the methods employed in conducting this research study. This study utilized a directly administered questionnaire. A sample of 106
participants voluntarily completed questionnaires. The research sample was obtained during February and March, 2010 during public events in Columbus, Ohio. Data collected for this study were analyzed using quantitative descriptive statistics as well as open-coding for qualitative data.
Chapter 4: Results

The purpose of this descriptive survey study was to examine consumer preferences regarding pork producers, pork products, and perceptions of crisis management issues within the pork industry. Furthermore, this study sought to determine factors by which consumers evaluate these issues and how these considerations will help future development of pork advertising and market positioning. Theories that provided the foundation for this study included social marketing, exchange theory, participatory theory, protection motivation theory, cognitive dissonance, situational crisis communication theory, and attribution theory. The study included a directly administered questionnaire distributed to voluntary participants at two public events in Columbus, Ohio. Data gleaned from 106 questionnaires were analyzed for this study. In addition, open coding was used to analyze the qualitative portions of the study. This chapter will present the findings of the study.

Demographics

To assess the objectives of this study it was important to understand the demographics of the individuals who provided data for this study. The researcher
collected demographic information of participants. Demographics collected included: age, ethnicity, gender, and income level.

The age of participants ranged from 21 to 74. The mean age was 38.12, with a median of 36.5, and a mode of 33. When divided into age groups of 20-29, 30-39, 40-49, 50-59, 60-69, and 70-79, the 30-39 age group had the most participants with 49 (46.66%). Three participants declined to answer this question.

Various ethnicities were represented among the participants. Caucasian was the most prevalent ethnicity with 92 (87.6%) of participants. African American ethnicity representation comprised of 5 (4.8%) individuals. Ethnicity was not reported by 2 (1.9%) respondents. Responses were not reported in instances when the subject did not understand the question being asked and in an effort not to offend the participants or misinterpret an ethnicity the questionnaire administers left the question blank.

Gender was not asked, but was identified by the researchers. A gender was not specified for two of the questionnaires due to forgetting to fill in that question. Females comprised 86.7% (n= 91) of the sample, while males comprised 11.4% (n= 12) of the sample. (See Table 4.1)

Various income levels were represented among the participants. Participants selected income level from a given selection. Options provided were: Less than $25,000;
$25,000-$50,000; $50,000-$75,000; $75,000-$100,000; and More than $100,000. Income levels reported represented total household income. The income level of $25,000-$50,000 had the most respondents with 38 (36.2%). The income level of $50,000-$75,000 was selected by 28 survey participants (26.7%). Five respondents did not answer the income question (4.8%).
<table>
<thead>
<tr>
<th>Demographic</th>
<th>( f )</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30-39</td>
<td>49</td>
<td>46.67</td>
</tr>
<tr>
<td>20-29</td>
<td>20</td>
<td>19.1</td>
</tr>
<tr>
<td>40-49</td>
<td>17</td>
<td>16.2</td>
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<tr>
<td>50-59</td>
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<td>9.5</td>
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<tr>
<td>60-69</td>
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<td>4.8</td>
</tr>
<tr>
<td>70-79</td>
<td>1</td>
<td>.96</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>92</td>
<td>87.6</td>
</tr>
<tr>
<td>African American</td>
<td>5</td>
<td>4.8</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>3.8</td>
</tr>
<tr>
<td>Indian</td>
<td>1</td>
<td>.95</td>
</tr>
<tr>
<td>Italian</td>
<td>1</td>
<td>.95</td>
</tr>
<tr>
<td><strong>Income Level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$25,000-$50,000</td>
<td>38</td>
<td>36.2</td>
</tr>
<tr>
<td>$50,000-$75,000</td>
<td>28</td>
<td>26.67</td>
</tr>
<tr>
<td>More than $100,000</td>
<td>15</td>
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</tr>
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<td>$75,000-$100,000</td>
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<td>9.5</td>
</tr>
<tr>
<td>Less than $25,000</td>
<td>9</td>
<td>8.6</td>
</tr>
</tbody>
</table>

Table 4.1 – Demographics of participants
**Objective 1: Describe consumer knowledge of pork availability, pork products, and general agricultural knowledge**

To gain a better understanding of participants’ knowledge of the pork industry, researchers asked the participants to rate their experience with agriculture, pork availability in their local grocery store, and general knowledge of pork products. A scale of 1 to 5 was used for each question, with 1 being little to no knowledge, 3 being neutral, and 5 being the most knowledge. Each scaled question was followed with a why question that allowed participants to explain their rating and provide qualitative reasoning behind their rating.

When asked about their experience with agriculture, 38 (36.2%) participants rated their experience as a 1 (little to no experience with agriculture). Participants rating their experience with agriculture as neutral or less (rating of 3, 2, or 1) totaled 73.3% (n=77) of all participants. The mean rating was a 2.48, with a standard deviation of 1.44.

In asking why respondents selected their respective rating of level of experience with agriculture, common themes included: living in the country/rural community, experiences with gardening or farmers markets, work relations, family or friends, or direct engagement in agriculture.
Experience With Agriculture- Table 4.2

<table>
<thead>
<tr>
<th>Rating</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (little to no knowledge)</td>
<td>38</td>
<td>36.2</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
<td>19.05</td>
</tr>
<tr>
<td>3 (neutral)</td>
<td>19</td>
<td>18.1</td>
</tr>
<tr>
<td>4</td>
<td>12</td>
<td>11.4</td>
</tr>
<tr>
<td>5 (highest/most knowledge)</td>
<td>15</td>
<td>14.3</td>
</tr>
</tbody>
</table>

Table 4.2: On a scale of 1 to 5, 1 indicating no experience and 5 indicating that you have lived on a farm; what is your experience with agriculture?

Of participants responding to a question rating their knowledge of pork product availability in their grocery store, 36.2% (n=28) rated themselves as neutral. Participants rating their knowledge of pork products available in their grocery store as having low knowledge level (2) or little to no knowledge (1) totaled 39 participants (37.1%). The mean rating was 2.97, with a standard deviation of 1.27.

A follow-up why question was asked of respondents. Common themes as to why they rated their pork product availability knowledge included: not informed consumer/lack of research on consumer behalf, lack of information and programming available, background in the food industry, or [pork] not a regular choice for participant. Specific responses included, “never done my own homework,” and “talk with butcher on a regular basis.”
Table 4.3: On a scale from 1 to 5, 1 being the lowest and 5 being the highest, how well would you rank your knowledge of pork products available in your local grocery?

<table>
<thead>
<tr>
<th>Rating</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (little to no knowledge)</td>
<td>16</td>
<td>15.24</td>
</tr>
<tr>
<td>2</td>
<td>23</td>
<td>21.90</td>
</tr>
<tr>
<td>3 (neutral)</td>
<td>28</td>
<td>36.20</td>
</tr>
<tr>
<td>4</td>
<td>24</td>
<td>22.90</td>
</tr>
<tr>
<td>5 (highest/most knowledge)</td>
<td>14</td>
<td>13.33</td>
</tr>
</tbody>
</table>

Nearly 42.9% of all respondents (n=45) selected little to no knowledge (1) when asked about their general knowledge about the pork industry. Respondents rating their knowledge as a 3 (neutral) or less on the scale from 1-5 comprised 84.8% of the total sample. Of the participants, 3 respondents (2.86%) rated themselves at a high level of knowledge for the pork industry. The mean rating was 2.01, with a standard deviation of 1.13.

Qualitative measures of this component in the form of a “why” question following the rating yielded common themes of: lack of exposure, involvement in organization [4-H/FFA], seeking out their own information, and a relationship/partnership with someone
in the industry. Specific examples of responses are; “family members show hogs in 4-H” and “Not [pork] usually exposed or focused on by the media and public.”

**Pork Industry Knowledge – Table 4.4**

<table>
<thead>
<tr>
<th>Rating</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (little to no knowledge)</td>
<td>45</td>
<td>42.9</td>
</tr>
<tr>
<td>2</td>
<td>29</td>
<td>27.6</td>
</tr>
<tr>
<td>3 (neutral)</td>
<td>15</td>
<td>14.3</td>
</tr>
<tr>
<td>4</td>
<td>11</td>
<td>10.48</td>
</tr>
<tr>
<td>5 (highest/most knowledge)</td>
<td>13</td>
<td>2.86</td>
</tr>
</tbody>
</table>

Table 4.4: On a scale of 1 to 5, 1 being the lowest and 5 being the highest; how would you rank your knowledge the pork industry in general?

**Objective 2: Identify consumer preferences in pork labeling**

Part of creating an effective agriculture advertising and promotion plan includes understanding how consumers perceive labeling of agriculture products. If consumers perceive a label or title of agriculture product poorly then that image should not be part of a campaign. In addition, consumer perceptions can also provide insight to the knowledge they have concerning livestock practices, thus indicating if education needs to be part of a campaign to produce effectiveness. To gain an understanding of how consumers perceive labeling of the agricultural products, the researchers asked participants to indicate which titled pork product they would be most likely to purchase.
Respondents were given the options of: Local pork; Ohio-raised pork; responsibly farmed pork; humanely farmed pork; and organic pork. Of those participating, 41% of respondents (n=43) selected Ohio-raised pork as the product they would be most likely to purchase. Local pork and organic pork were chosen 18 times each by respondents (17.1%, respectively). Ten participants chose not to answer this question (Table 4.5).

**Pork Labeling Preferences – Table 4.5**

<table>
<thead>
<tr>
<th>Label</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ohio-raised pork</td>
<td>43</td>
<td>41</td>
</tr>
<tr>
<td>Local pork</td>
<td>18</td>
<td>17.1</td>
</tr>
<tr>
<td>Organic pork</td>
<td>18</td>
<td>17.1</td>
</tr>
<tr>
<td>Humanely farmed pork</td>
<td>9</td>
<td>8.6</td>
</tr>
<tr>
<td>Responsibly farmed pork</td>
<td>7</td>
<td>6.66</td>
</tr>
</tbody>
</table>

Table 4.5: Which pork product described below are you most likely to purchase?

**Objective 3: Describe consumer attitudes toward animal welfare and crisis management issues**

In order to better understand consumers’ perceptions of agricultural crises, consumers’ level of trust of agricultural producers, and media involvement in crisis situations, researchers asked participants to respond to questions regarding media effects related to crisis management. Questions in this section asked respondents yes and no
questions about their perceptions of the industry and pork purchasing habits changing with the threat of H1N1, and whether or not they thought they could get H1N1 from eating pork.

Participants began this series of questions by answering whether or not they trusted farmers. The majority of survey respondents indicated that they trusted farmers 95.23% (n=100). From the sample, 4 participants (3.8%) indicated they did not trust farmers and 1 individual chose not to answer the question.

Respondents also responded with qualitative measures of this component in the form of a “why” question following the rating. These responses yielded common themes of: hardworking, honesty, trustworthy, USDA/other agricultural source information, dedication, and personal relationships and encounters. Specific examples of participant responses included: “backbone of our country” and “no reason not to.”

After thinking about whether or not they trusted farmers, participants were then asked how important it was for them to know who produced their food. They were asked to rate the importance on a scale of 1-5, with 1 representing the least important, 3 being neutral, and 5 very important. Of the participants, 34 (32.4%) indicated that they felt neutral on the importance of knowing who produced their food. The mean rating was 3.26, with a standard deviation of 1.23 (Table 4.6).
**Importance of Knowing who Produced Food – Table 4.6**

<table>
<thead>
<tr>
<th>Rating</th>
<th>$f$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 (very important)</td>
<td>19</td>
<td>18.1</td>
</tr>
<tr>
<td>4</td>
<td>26</td>
<td>24.8</td>
</tr>
<tr>
<td>3 (neutral)</td>
<td>34</td>
<td>32.4</td>
</tr>
<tr>
<td>2</td>
<td>13</td>
<td>12.4</td>
</tr>
<tr>
<td>1 (not important)</td>
<td>12</td>
<td>11.4</td>
</tr>
</tbody>
</table>

Table 4.6: On a scale of 1 to 5, 1 being the least important, 3 being neutral, and 5 being very important; how important is it for you to know who produced your food?

When participants were asked to rate how important it is for them to know how animals are cared for on farms, 40% of respondents (n=42) said it was very important for them to know how animals are cared for on farms. 93 survey respondents (88.6%) rated this question as neutral or higher (rating of 3, 4, or 5) on scale of importance. The mean rating was 3.91, with a standard deviation of 1.12. One participant chose not to respond to this question (Table 4.7).

**Importance of Knowing how Animals are Cared For- Table 4.7**

<table>
<thead>
<tr>
<th>Rate</th>
<th>$f$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 (very important)</td>
<td>42</td>
<td>40</td>
</tr>
<tr>
<td>4</td>
<td>26</td>
<td>24.8</td>
</tr>
<tr>
<td>3 (neutral)</td>
<td>25</td>
<td>23.8</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>6.66</td>
</tr>
<tr>
<td>1 (not important)</td>
<td>4</td>
<td>3.8</td>
</tr>
</tbody>
</table>

Table 4.7: On a scale of 1 to 5, 1 being the least important, 3 being neutral, and 5 being very important; how important is it for you to know how animals are cared for on farms?
The series of questions on animal welfare and trust of agricultural producers led directly into the group of questions on crisis management and media use. The majority of survey participants’ perceptions of the safety of pork products (n=91, 86.66%) and pork purchasing decisions (n=97, 92.4%) did not change with the threat of H1N1. Of those willingly participating, 3 participants chose not to answer the question on perceived safety of pork products, and 2 participants chose not to answer the question on pork purchasing decisions post H1N1.

When participants were asked about the positive or negative impact of H1N1 on the pork industry, 80% (n=84) indicated they believed H1N1 had a negative impact on the swine industry. In the study, 17 participants (16.2%) chose not to answer this question. The majority of participants (n=99, 94.3%) agreed that you cannot contract H1N1 from eating pork.

Participants were also surveyed on their media use and their preference on media outlet for information on topics such as H1N1. TV was identified as the preferred media source by 54 participants (51.4%). A total of 12 respondents (11.4%) chose other and provided additional preferred media sources outside the given options. Other sources included: word of mouth, currently engaged in a health related profession, and
magazines. There were four participants who chose not to respond to this question (Table 4.8).

Preferred Media Source – Table 4.8

<table>
<thead>
<tr>
<th>Media Source</th>
<th>$f$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV</td>
<td>54</td>
<td>51.4</td>
</tr>
<tr>
<td>Web</td>
<td>22</td>
<td>21</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
<td>11.4</td>
</tr>
<tr>
<td>Newspaper</td>
<td>10</td>
<td>9.5</td>
</tr>
<tr>
<td>Radio</td>
<td>3</td>
<td>2.9</td>
</tr>
</tbody>
</table>

Table 4.8: What is your main media resource on topics such as H1N1?

Excluded data

A section of collected data was excluded from this results chapter. Specific questions excluded were on topics of recipe finding, amount and regularity of pork purchases, and reasons for families to choose pork. These questions were included in data collection procedures to fulfill the needs of the sponsoring organization, the Ohio Pork Producers Council. A revised copy of results were provided to the organization, including both their requested data and additional findings of this study.
Summary

In this chapter descriptive statistics and qualitative themes have described the demographics of individuals who participated in a directly administered questionnaire. In addition, the public’s knowledge and perceptions of producer trust and knowledge and perceptions of pork product availability and general knowledge of the pork industry were measured and reported. Crisis management and participants’ perception of importance of animal care and knowledge of who produced your food were also reported.

Many participants indicated that they trusted farmers and that they found it important to know how animals were cared for on farms. Respondents indicated that their knowledge of pork product availability at the grocery store and their general knowledge of the pork industry in general were low to neutral. The majority of participants answered that they felt H1N1 had a negative effect on the swine industry and believed that they could not contract H1N1 from eating pork.
Chapter 5: Discussion and Conclusions

With consumers becoming increasingly cognizant of the types of food they are consuming and the manner in which their food was produced, issues of ethical consideration, and consumer perceptions of agriculture also increased. Despite efforts to improve consumer education efforts, health advertisements and government food warnings in times of crisis tend to be emotionally driven and deeply impact the consumer. This emotional base has become an increasing concern among the agriculture community as many of the campaigns’ figureheads lack basic agricultural knowledge and display agriculturalists in a negative light. In an effort to improve the ability of the agriculture industry to campaign effectively, as well as understand consumer’s perceptions and knowledge of agriculture and food purchases, this study sought to explore these items. With the guiding theoretical framework of protection motivation theory, participatory theory, situational crisis communication theory, attribution theory, cognitive dissonance theory, social marketing, and exchange theory, a sample of 106 Ohio consumers voluntarily participated in a directly administered questionnaire in which they were asked questions about their perceptions and knowledge of agriculture. Descriptive statistics were used to analyze data gathered from the research.
Conclusions

Demographic Conclusions

Data collected in this research are not generalizable beyond those who participated in the directly administered questionnaire. While this information is not generalizable beyond this population, it’s insights and findings shed light on important information for communicators. The demographic portion of the study found that the majority of the people who participated in this research were in their 20s or 30s. It may be assumed that these age groups are likely to pay more attention to health-conscious topics than others, or this age group might be the individuals most willing and interested in participating in the survey on this topic. In his book on functional foods, author Israel Goldberg alludes to the idea of the younger generation being more conscious of foods and their effect on health. Goldberg suggests that “as consumers become more health conscious, the promotion of certain nutritional attributes can be very effective for selling certain products” (Goldberg, 1994, p. 6).

Therefore, due to the prevalence and level of health interest, agriculturalists should consider targeting their communication and campaigns toward persons in this age group. Mostly women comprised the sample of the study, as they were given as a part of the target audience profile. The abundance of women participants over men could be
attributed to the fact that several of the women may have had children with them who were participating in the kids events at Kidz-a-palooza or they were the primary grocery shopper present at the farmers market.

Income level and ethnicity were also demographics collected for this study. The majority of respondents were Caucasian and reported income levels in the $25,000-$50,000 and $50,000-$75,000 range. It may be assumed that participants with higher incomes and fewer cultural restrictions were more likely to incorporate meat into their diet on a regular basis and answer grocery and pork knowledge questions with greater confidence. In a study by Valerie Zeithaml, families and individuals with higher incomes reportedly spent more time planning their grocery trip, put more effort into using sources of information to make informed grocery choices, and spend more money on more frequent trips to their local store (Zeithaml, 1985).

It is also important to note that results relating to demographics would be expected based on the types of venues the data was collected. Kidz-a-palooza is targeted to young families (with parents in their twenties and thirties) who have expendable income.

**Objective 1: Describe consumer knowledge of pork availability, pork products, and general agricultural knowledge**
Based on this study, and through additional works on agricultural literacy and gauging consumer knowledge (Goodwin, 2010), the number of consumers with no connection to agriculture is growing. This is represented in this study, as a majority of participants had low level of agricultural experience and pork product knowledge. Many individuals attributed their low knowledge level to a lack of interest and exposure to the topic areas. Explanations offered by participants referenced the role of the media and the lack of attention to pork products in general. By making reference to the media and basing their answer on what they observed through media, one could conclude that participants gained their perception based upon the mass media, thus revealing the impact of media outlets on agricultural issues (Goodwin, 2010). To compare these results with that of Goodwin’s study (2010) one can observe that the largest groups of respondents in her study fell at either end of the spectrum—132 reporting that they had lived on a farm (26.3%), and 128 saying that they had no experience with agriculture (25.5%) (Goodwin, 2010). The number of respondents who acknowledged living on a farm, in this case, was much higher than this study. One can look to this difference to allow for recommendations for further research, by looking at the environmental context and other factors that may have influenced this data set.
This study also shed light on the lack of pork product and pork industry knowledge available to, and readily targeted to, consumers to increase awareness. This result is bothering, as our national, state, and local organizations representing pork products and pork farmers need to market their industry effectively to consumers. Looking ahead at the recommendations for further research and at the discussion on pork labeling; pork-affiliated organizations could engage in future projects to identify the most effective means of reaching consumers and educating them on the pork industry and available products.

A tie-back to the section on social marketing in the literature review can be mentioned in concluding this objective. Agricultural organizations can utilize social marketing theory as a more effective means to reach consumers, identify terminology they would understand and respond to, and to more accurately articulate future advertisements.

**Objective 2: Identify consumer preferences in pork labeling**

Consumer preferences in pork labeling, while limited and broad in this survey context, could greatly benefit the future packaging and marketing of pork products on a national scale. Survey respondents indicated that they would be most likely to purchase a product with “Ohio-raised”, “local”, or “organic” in the title. Using this information to
best phrase both product labeling as well as press releases, educational materials, and future advertising campaigns would serve to cater to the consumers’ interest.

While the “Ohio-raised”, “local”, and “organic” terms were the most popular among survey participants, it is interesting to connect this question with that of the animal welfare section. In a later question, the same respondents were asked to indicate the level of importance they placed on source of food knowledge and care for animals was to them. While in this later question they indicated a strong level of importance for knowing how animals were cared for on farms, many did not select the “humanely farmed” or “responsibly-farmed” options for the labeling question.

A comparison to pork product knowledge and pork labeling preferences would be a topic of interest in future research. While consumers indicated they would be most likely to purchase a product with the words “Ohio”, “local”, or “organic”, does that necessarily mean they will buy more pork if careful consideration of these words is incorporated into the marketing mix? The relationship between advertising and marketing plan construction with actual outcomes with specific mention to types of pork products marketed, types of pork products actually shelved at grocery stores, and types of pork products most often purchased is important to recognize. This relationship could
yield a great deal of information for both pork producers and organizations as well as grocer associations and other food marketers.

Topics of social marketing theory and participatory theory can also be referenced for this objective. Consumer’s choice in labeling only reinforced the idea that targeting consumer preferences in marketing strategy is important. Participatory theory also ties in here, in that consumers take an active role in shaping the policy and decision making of their community, including opinions on health and food topics.

**Objective 3: Describe consumer attitudes toward animal welfare and crisis management issues**

Survey respondents overwhelmingly agreed that they trusted farmers. This result provides good insight for the agricultural industry, as it confirms that consumers still have positive perceptions of agricultural production. This result could also imply that consumers still hold a sense of trust for farmers. By using consumer’s positive experiences as a foundation, agriculturalists should be able to produce effective agriculture campaigns (Goodwin, 2010).

The majority of survey respondents also acknowledged that it was important for them to know how animals were cared for on farms. Consumer’s are concerned with food safety and want to ensure that their family, as well as themselves, are receiving the best
product available. The best product available, in many consumers’ eyes, means a well-cared for, well-kept, and well-fed animal. By demonstrating that farmers treat their animals well and are just as concerned with food safety as the average consumer, consumers will be able to connect with farmers and continue to trust them. While these results seem consistent with similar studies, the idea that consumers find it important to know who produced their food and how it was cared for, yet don’t put the time in to learn and educate themselves on the actual end products is disheartening.

Differing from the trust level and concern for how animals are treated on farms, consumers did not seem to feel as strongly about the importance of knowing who produced their food. This may be attributed to the fact that survey respondents indicated they trusted farmers, thus eliminating the need for details on who produced their food.

These three questions only illustrated the continued importance of interactive and creative approaches to sharing the story of agricultural producers. Working to maintain trust levels, increase confidence in animal and food production, and understanding the connection between farm operations and the end product on your plate, will fall onto agricultural communicators.

Crisis management issues represented in this study also yielded fruitful results. While respondents did not indicate a high level of pork product or pork industry
knowledge, they were confident that pork products would not cause you to contract H1N1 and that pork products remained safe for the consumer. A majority of respondents indicated that they felt H1N1 had a negative impact on the pork industry as well. In looking at these results it is important to speculate as to how consumers drew these conclusions without having knowledge of pork products and the pork industry. One could attribute a feeling of safety and low threat level of contracting H1N1 to a consumers’ attention to health issues without knowledge of their agricultural connection. Additional hypotheses suggest that participants drew their conclusions from their media exposure without much personal knowledge, chose their answer solely based on the options given, or other sources of information that led them to choose such an answer. Regardless of the results, how participants came to their answers is extremely important. Attribution leads us back to our review of literature and also gives us definition focus for future area of research on this topic.

Data collected in objective 3 lends itself to the literature on Exchange theory and Protection Motivation theory. Exchange theory suggests that as humans we try to do our best to improve our lives. In improving our lives we make a series of decisions, some which can pertain to our health and lifestyle. As we consider our knowledge and perceptions of animal care, crisis management, and agricultural production, we can see
the connection between these issues and making decisions to better our lives and food choices. Protection Motivation theory is also connected to this section of data, as one’s nature to protect themselves and take necessary action to avoid risky situations is certainly present in agricultural crisis situations.

**Recommendations for researchers**

It is recommended that the directly administered questionnaire be replicated at a different venue and through more random sampling methods to increase the validity and reliability of the instrument and get a broader selection from the population. Further replication should also include sampling in a rural venue as well as an urban venue, as well as including and targeting different age groups to compare results. A chi-square analysis of these geographical samples with the elements indicated, as part of this questionnaire, would provide valuable results in regards to the relationship between geographical region and knowledge and perceptions of agriculture and food products. In addition, further analysis should be completed to establish if those participants with an agricultural or rural background answered differently than those from other backgrounds. Ethnicity should also play a role in future replication. Further analysis should be
completed to see if ethnicity and ethnic guidelines influence participants’ perceptions and buying decisions.

Additional research studies should also be designed to expand on the findings of this study. The specific data on lack of pork product knowledge lends itself to further research, as researchers could look at the term “pork product” in association with popular pork products like bacon and sausage. A study designed to measure the level of association consumers have between the term pork and the common foods they eat (sausage or bacon) could potentially yield great educational results and allow for an increased focus on labeling and word connection in our marketing strategies. The overall effectiveness of the term pork, versus swine or more particular terms of bacon, ham, sausage, etc., could also be studied.

A focus group concentrated on food labeling would provide insight to the perceptions consumers associate with each term as well as the connections they make to images and products they are familiar with and the dissonance that may be present surrounding differing terminology, as well. Furthermore, a study assessing how consumers emotionally associate with agricultural crises would be beneficial. This study would provide further information concerning attitudinal beliefs toward agricultural producers and how consumer attitudes in a crisis may influence their perceptions and
buying behavior. Further research should also be conducted on the use of agriculture images in mass media, how consumers perceive given images, and how media use of images during news in a crisis situation impacts viewers’ perceptions and attitudes. This should include an assessment of the cultural ideologies, as mentioned in the demographic ethnicity component, that consumers relate to when viewing agricultural images.

**Recommendations for agricultural communicators and educators**

Educators must prepare students in the communication and agricultural education classrooms, teaching them how to communicate better with consumers and how to clearly articulate news information about agriculture to make their own buying decisions and form their own attitudes toward crisis issues. This may be accomplished in the agricultural science, agricultural business, or core science curriculum. Stressing the world’s connection to and reliance on agriculture is increasingly important, and teaching students about issues in agriculture and their relation to the core science curriculum could be a tremendous outlet for producing more ag-literate consumers. Agricultural science, agricultural business, and core science courses could also provide students with insight to how agricultural crisis situations differ from the typical crisis situation and create connections to the importance of the food, fuel, and fiber industries.
Agricultural communicators should use this information to produce effective advertising campaigns for agriculture as well as to effectively educate consumers about agriculture in order to close the farm-to-plate knowledge gap (Goodwin, 2010). This information should also be shared with other agricultural organizations so they can learn from the research and use its findings to help design future studies and align their own marketing and advertising campaigns in consumer outreach.

This study should also be used in meat and produce associations’ conversations with their respective grocer outlets. Examining consumers knowledge of product availability in the grocery store, their preferred labeling, and overall perception of the products being offered could be analyzed by both the grocer and representing group. Using information from this study would only strengthen their relationship and offer a more united front for the grocery customer.

Agriculturalists should use the information in this study to help guide future crisis communication campaigns in agricultural risk situations. The study findings suggest that many participants are not familiar with pork production or agriculture in general, therefore, communicators should become active in shaping an educational campaign to inform consumers about production methods and precautions to increase their trust in the food supply and food producer.
Summary

Looking at this research and its implications on agricultural education and communication with a broader lens allows us to more carefully articulate the purpose for the study. This purpose is one of recognizing general consumer behavior and buying decisions with a more narrowed focus on pork products. Researchers intentions are to gather consumer’s perceptions of their knowledge about food, agriculture, and related issues. As we observed in the results chapter, and with added narrative in the conclusions chapter, as specificity of question or topic increases, perception of knowledge decreases. In other words, consumer’s perceptions of their knowledge are higher when broader, general questions are asked or used, and perceptions of knowledge are lower when specific questions are used.

It is important here to also relate back to other industries. As we did within other segments of this study, showing connection outside of the pork industry is important to the relevance and replication of this research. With this specific example of knowledge and specificity we can also relate to other industries, as it only makes sense that the specificity up, knowledge down model could apply to the automotive or technology industries as well.
With those closing comments in mind, specific conclusions pertaining to each research objective have been discussed in this chapter. It has been determined based on the results that those who participated in the questionnaire possessed some knowledge of agriculture, but often did not know much about pork products or the pork industry. Most survey participants held a high regard for how animals are cared for but are uninformed concerning general agricultural and livestock specific practices. Additionally, media portrayal and lack of exposure to agricultural news outlets and educational entities tend to limit or influence respondents perceptions and qualitative responses. It is extremely important that agricultural communicators and educators value this research, as well as others related to the field, so that work can begin toward improving agriculture campaigns, increasing awareness in agriculture, and continuing to share the idea that the food, fuel, and fiber industry – including livestock production—is an endeavor that is vital to sustaining our country and our world. Continued research in this field should be conducted to strengthen the arguments made in this chapter as well as to aide in the continuous improvement of the industry’s ability to communicate the agricultural message effectively with consumers.
List of References


February 2, 2010

Protocol Number: 2010E0047
Protocol Title: PORK INDUSTRY MEDIA STUDY, EMILY RHODAE, STACIE WENIG, HUMAN AND COMMUNITY RESOURCE DEVELOPMENT
Type of Review: Request for Exempt Determination
ORRP Staff Contact: Phone: 614-688-0389
Email: pettey.6@osu.edu

Dear Dr. Rhoade,

The Office of Responsible Research Practices has determined the above referenced protocol exempt from IRB review.

Date of Exempt Determination: 1/28/2010
Qualifying Exemption Category: 2

Please note the following:

- Only OSU employees and students who have completed CITI training and are named on the signature page of the application are approved as OSU Investigators in conducting this study.
- No procedural changes may be made in exempt research (e.g., recruitment procedures, advertisements, instruments, enrollment numbers, etc.).
- Per university requirements, all research-related records (including signed consent forms) must be retained and available for audit for a period of at least three years after the research has ended.
- It is the responsibility of the Investigator to promptly report events that may represent unanticipated problems involving risks to subjects or others.

This determination is issued under The Ohio State University’s OHRP Federalwide Assurance #00006378.

All forms and procedures can be found on the ORRP website – www.orrp.osu.edu. Please feel free to contact the ORRP staff contact listed above with any questions or concerns.

Cheri Pettey, MA, Certified IRB Professional
Senior Protocol Analyst—Exempt Research
Interview Questions

Buying Preferences and Recipe info

1. Are you the individual that typically purchases groceries for your household?

   YES       NO

2. Is meat a typical purchase for your household?

   YES       NO

3. How much pork would you say you buy a week? A month?

   ______ lbs/week  ________ lbs/month

4. What are three reasons that make you more likely to buy meat or if you don’t purchase meat, what are the three reasons you are less likely purchase meat at the grocery?

   1. __________________________

   2. __________________________

   3. __________________________
5. Where do you generally get new recipes that you try? (circle one)

Online          from a friend or relative          cookbooks          magazines
TV

6. What is the most important factor for you in deciding to try a new recipe? (circle one)

# of ingredients         preparation time        availability of ingredients
variety in diet/menu     price of ingredients     family preferences     ability to reheat

Radio Listening and radio campaigns

7. Do you listen to radio programming? If so, what are the top 3 stations you listen to.

1. _______________________
2. _______________________
3. _______________________

8. On a scale from 1 to 5, with 1 being the least influential and 5 being the most influential, how do radio broadcaster’s promotions affect your product purchases?

1  2  3  4  5
Pork Industry and Pork Product Knowledge

9. On a scale of 1 to 5, 1 indicating no experience and 5 indicating that you have lived on a farm; what is your experience with agriculture?

1  2  3  4  5

Why did you rank your experience with agriculture this way?

__________________________________________________________________________

10. On a scale from 1 to 5, 1 being the lowest and 5 being the highest, how well would you rank your knowledge of pork products available in your local grocery?

1  2  3  4  5

Why? ________________________________________________________________

11. On a scale of 1 to 5, 1 being the lowest and 5 being the highest; how would you rank your knowledge the pork industry in general?

1  2  3  4  5

Why? ________________________________________________________________

12. Do you trust farmers?

YES      NO

What qualities of farmers make you respond this way?

__________________________________________________________________________
13. Which pork product described below are you most likely to purchase?

   a. Local pork
   b. Ohio-raised pork
   c. Responsibly farmed pork
   d. Humanely farmed pork
   e. Organic pork

14. On a scale of 1 to 5, 1 being the least important, 3 being neutral, and 5 being very important; how important is it for you to know who produced your food?

   1   2   3   4   5

15. On a scale of 1 to 5, 1 being the least important, 3 being neutral, and 5 being very important; how important is it for you to know how animals are cared for on farms?

   1   2   3   4   5

Media affects related to crisis management

16. Has your perception of the safety of pork products changed with the threat of H1N1?

   YES       NO

17. Have your purchasing of pork products changed since with the threat of H1N1?

   YES       NO

18. Do you think H1N1 has had a positive or negative impact on the swine industry?

   POSITIVE     NEGATIVE

   88
19. Do you think eating pork can give you H1N1?

YES  NO

20. What is your main media resource on topics such as H1N1?

TV  Newspaper  Radio  Web  Other _______

21. What is your age? ________________

22. What ethnic background do you identify with? ________________

23. What best represents your annual income?

   Less than $25,000  $25,000-$50,000  $50,000-$75,000  $75,000-$100,000

   More than $100,000

24. Gender (don’t ask) ________