

CONSUMERS' PERCEPTIONS ABOUT
AGRICULTURE BEFORE AND AFTER
WATCHING THE FILM *FOOD, INC.*

By

JESSICA ANN HOLT

Bachelor's of Science in Agricultural Education,

Communications and Leadership

University of Florida

Gainesville, Florida

2007

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
MASTER OF SCIENCE
May, 2010

CONSUMERS' PERCEPTIONS ABOUT
AGRICULTURE BEFORE AND AFTER
WATCHING THE FILM *FOOD, INC.*

Thesis Approved:

Dr. Dwayne Cartmell

Thesis Adviser

Dr. Cindy Blackwell

Dr. Tanner Robertson

Dr. A. Gordon Emslie

Dean of the Graduate College

ACKNOWLEDGEMENTS

First, I would like to thank Dr. Dwayne Cartmell, Dr. Cindy Blackwell and Dr. Tanner Robertson for their knowledge and support throughout this process; without your guidance this would not have been possible.

To my parents, Tom and Mary Rothering, for their continued love and support throughout the years; I thank you so much for encouraging me to pursue my dreams. You are the best parents anyone could ever have, and I am eternally grateful for your love.

Finally, I would like to thank my best friend and husband, Darren Holt, for his never-ending supply of love and patience during this endeavor. Without you I would have been lost. Thank you for all that you are.

TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION	1
Background and Setting	1
Statement of Problem	5
Significance of Study	6
Purpose	7
Research Questions	7
Scope of Study	7
Assumptions	8
Limitations	8
Definition of Terms	9
Chapter Summary	9
II. LITERATURE REVIEW	11
Introduction	11
Theoretical Framework: Agenda Setting Theory	11
Individual Media-System Dependency	13
Origins of Individuals' Media-System Dependencies	14
Influence and Persuasion of the Media	15
Perceptions of Consumers	16
Media Perceptions and Attitudes of Consumers	18
Consumer Perceptions and Attitudes of the Agricultural Industry	20
Agriculture in the Media	21
Chapter Summary	23
III. METHODOLOGY	25
Introduction	25
Purpose	25
Research Questions	26
Institutional Review Board	27
Population	27
Research Design	27

Instrument Design	28
Data Collection	29
Validity	30
Reliability.....	31
Data Analysis	31
 Chapter	 Page
IV. FINDINGS.....	33
Purpose.....	34
Research Questions	34
Population	35
Findings Related to Research Question 1	35
Findings Related to Research Question 2	43
Findings Related to Research Question 3	47
Findings Related to Research Question 4	50
Findings Related to Research Question 5	52
V. DISCUSSION AND RECOMMENDATIONS.....	57
Purpose.....	58
Research Questions	58
Population	59
Summary of Findings.....	59
Conclusions.....	64
Recommendations.....	71
Discussion/Implications	72
REFERENCES	74
APPENDICES	78
Appendix A – Institutional Review Board.....	79
Appendix B – Panel of Experts.....	81
Appendix C – Script.....	83
Appendix D – Participant Information Sheet.....	85
Appendix E – Pretest Instrument	87
Appendix F – Posttest Instrument.....	97

LIST OF TABLES

Table	Page
1: <i>Oklahoma State University college enrollment, fall 2009</i>	5
2: <i>Age of respondents</i>	36
3: <i>Respondents' by ethnicity</i>	36
4: <i>Respondents' level of completed education</i>	37
5: <i>Respondents by Oklahoma State University classification</i>	38
6: <i>Oklahoma State University respondents by college</i>	39
7: <i>Respondents' experience with agriculture in their lives</i>	40
8: <i>Respondents' current type of residence</i>	41
9: <i>Respondents' eating preferences</i>	41
10: <i>Respondents' chosen places to purchase their food products</i>	42
11: <i>Respondents' previous experience watching the film Food, Inc.</i>	43
12: <i>Statements respondents of the showing</i> <i>Food, Inc. agreed with, prior to the film</i>	45
13: <i>Statements respondents of the showing Food, Inc.</i> <i>were unsure about, prior to the film</i>	46
14: <i>Statements attendees of the showing Food, Inc.</i> <i>disagreed with, prior to the film</i>	47
15: <i>Statements attendees of the showing Food, Inc.</i> <i>strongly agreed with, after the film</i>	48
16: <i>Statements attendees of the showing Food, Inc.</i> <i>agreed with after watching the film</i>	50
17: <i>Statements attendees of the showing Food, Inc.</i> <i>were unsure of after watching the film</i>	51
18: <i>Statements attendees of the showing Food, Inc.</i> <i>disagreed with after watching the film</i>	53
19: <i>Respondents' rating of the film Food, Inc. and the follow-up discussion</i>	54
20: <i>Pretest and Posttest mean of sums in a paired-sample t-test of the</i> <i>respondents' responses to the pretest and posttest questions regarding</i> <i>their perceptions of the U.S. agricultural industry</i>	54
21: <i>Comparison of means from the responses from the</i> <i>pretest and posttest surveys</i>	55

LIST OF FIGURES

Figure	Page
1: <i>Media-system dependency resource relationship</i>	14
2: <i>Factors influencing food preferences</i>	17

CHAPTER I

INTRODUCTION

Background and Setting

In 1906, Upton Sinclair's *The Jungle* gave the first glimpse of the food processing industry to consumers, giving rise to the public's awareness of food safety (Mayer, 1977). Understanding where and how food is produced and processed has been of growing interest ever since, and has led to new legislation and practices in the U.S. agricultural industry (Mayer).

In a study conducted by the International Food Information Council (2008), 68 percent of consumers expressed confidence in the U.S. food supply. However, the study revealed 50 percent of consumers are concerned about disease and contamination of their food. Providing consumers with a safe, reliable food supply is of paramount importance if confidence in the U.S. food supply is to continue.

The increased consumer demand for safe, quality food has been heightened because of the worldwide crises involving food safety (Verbeke, 2005). The extensive media coverage concerning the safety and quality of the world's food supply has increased consumer awareness about the food supply and altered the perceptions and attitudes of the agricultural industry (Verbeke).

After crises such as the Alar contamination of the U.S.'s supply of apples and the *Escherichia coli* O157:H7 outbreak in spinach and hamburgers, consumers are more concerned about the safety of the food supply during the time these issues are negatively portrayed in the media (Brewer & Rojas, 2007). In a study by Brady, Peace, and Brown (2009) regarding consumer perceptions about the risks of food-borne illness before and after the events in 2006 related to spinach and lettuce being contaminated with E. Coli, it was found that consumers who were informed of the events through a media source were more concerned about their risk of contracting a food-borne illness than those individuals who were not informed of the events by a media source. An increase in concern about food safety could lead to consumers avoiding the purchase of certain foods or foods processed a certain way and could alter their buying habits indefinitely (Brewer & Rojas).

“Chemicals in food, whether chemical contaminants such as pesticides, heavy metals, and drug residues, or inherent compounds such as natural toxicants, concern consumers” (Shank, Carson, & Willis, 1991, p 298). Due to the expressed concern of consumers, professionals in the area need to take action to ensure the U.S. food supply is safe (Shank, et al.).

The concept of food safety is broad when considering the different components that come together in this one area (Shank, et al., 1991). Advances in technology used in the food processing system and the food packaging system must be considered when discussing food safety (Shank, et al.).

Consumers often interchange the concept of a safe food supply with “risk-free” (Shank & Carson, 1992, p 27). When consumers feel there is a risk in the food supply, they automatically believe the increased risk comes from an added substance, be it a pesticide or food additive (Shank & Carson).

“Despite the fact that food has never before been as safe and healthy as it is today, it seems that consumers are uncertain and increasingly critical about the quality and safety of their food” (Verbeke, 2005, p. 348).

Because of the increase in consumer awareness, the U.S. government has implemented measures to ensure the safety of the food supply. The Delaney Clause was introduced and added to the Food, Drug, and Cosmetic Act of 1958 (Shank & Carson, 1992). The zero-tolerance policy states any substance that is found to have carcinogenic characteristics that effect either human or animal must be eliminated from the food supply (Shank & Carson). However, today it is known with increased technology that zero is unattainable, and the clause has led consumers to believe that a risk-free food supply is possible, when in reality it is not (Shank & Carson).

With the increase in available technology, consumers are able to obtain information about the agricultural industry from a variety of sources (Verbeke, 2005). The agricultural industry plays a significant role in the lives of every consumer; however, the agricultural processes and system are rarely mentioned in the media (Ruth, Lundy, & Park, 2005). It stands to reason, since consumers are obtaining their information from a variety of sources, research evaluating the impact of these sources of information should be explored.

Studies have examined the effects of films on the perceptions and attitudes of consumers (Cottone & Byrd-Bredbenner, 2007) “Commercial films and television programs are forms of media that can increase knowledge of health issues, while simultaneously appealing to the emotions of viewers” (Cottone & Byrd-Bredbenner, p. 1197). In one study, researchers looked at the effect of watching the film *Super Size Me* on young adults (Cottone & Byrd-Bredbenner). The film explored the changes in the amount of fast food consumed by Americans. The researchers looked at the film’s effects on the eating habits of young adults after watching the film (Cottone & Byrd-Bredbenner). The study found the film had a short-term (nine days) effect on the participants’ eating habits and several other factors. Since this film, many other documentary films have been made highlighting the agricultural industry.

The film *Food, Inc.* shows the agricultural industry as a mechanized system controlled by a few large companies (www.foodinthemovie.com, 2009). “Our nation's food supply is now controlled

by a handful of corporations that often put profit ahead of consumer health, the livelihood of the American farmer, the safety of workers and our own environment” (www.foodinthemovie.com, ¶ 1).

Food, Inc. directed by Robert Kenner, was aimed at educating consumers about aspects of the agricultural industry of which some Americans may be unaware (www.foodinthemovie.com, 2009). The film brings up the notion that the U.S. government is hiding many problems in the agricultural industry through U.S. regulatory agencies such as the United States Department of Agriculture and the Food and Drug Administration (www.foodinthemovie.com). Due to the perceptions of these hidden problems, Kenner directs the film to show how big corporations now control the American farmer, the safety and well-being of the involved, and ultimately the security and safety of the U.S. food supply (www.foodinthemovie.com).

The film highlights technological advances that have created chickens with larger breasts, leaner cuts of pork, crops that are resistant to types of herbicides that are sprayed on the fields, and tomatoes available year-round that have a longer shelf-life (www.foodinthemovie.com, 2009). However, the film shows that with these advances come health issues such as illnesses from E. coli, an increase in childhood obesity and diabetes (www.foodinthemovie.com).

The film *Food, Inc.* was shown on the Oklahoma State University campus in Stillwater, Okla. Oklahoma State University is a land-grant institution, founded on Dec. 25, 1890, as Oklahoma Agricultural and Mechanical College (Oklahoma State University, 2006). It was not until July 1, 1957, that Oklahoma Agricultural and Mechanical College was renamed Oklahoma State University (Oklahoma State University). The university has curriculums for undergraduate, masters and doctoral degrees to accommodate the needs of approximately 22,000 students (Oklahoma State University, 2009). The university has several different colleges and areas to meet the educational needs of the students including the college of agricultural sciences and natural resources, the college of arts and sciences, the Spears school of business, the college of education, the college of engineering, architecture and technology, the college of human and environmental sciences, the graduate college, special graduates, and university academic services (Oklahoma State University, 2009). In the fall of

2009, the college with the largest student enrollment was the college of arts and sciences with 5,316 students (Oklahoma State University, 2009) (see Table 1).

Table 1

Oklahoma State University college enrollment, fall 2009

College	No. of Students
Agricultural Sciences and Natural Resources	2,352
Arts and Sciences	5,620
Spears School of Business	4,524
College of Education	2,785
College of Engineering, Architecture and Technology	3,721
Human Environmental Sciences	2,015
Special Graduates	408
Graduate	247
University Academic Advising	844
Total	22,516

Statement of Problem

While it is important for consumers to be informed about the agricultural industry, it is imperative they receive their information from credible sources. Verbeke (2005) mentions consumers' perceptions of safety and food-risk can be hindered when unsubstantiated claims are made against genetically modified foods and other agricultural processes. "The often-seen gap

between scientific reality and human perception is determined by a large number of factors including individual characteristics and food properties together with information and communication, which act as situational or environmental factors” (Verbeke, p. 348-349).

Understanding why and how consumers’ form their opinions and beliefs about the agricultural industry is imperative for future education and understanding of today’s agricultural production and processing systems. In addition, understanding the impact movies and other entertainment media programs have on consumer perceptions is important because in Cottone and Byrd-Bredbenner’s (2007) research of *Super Size Me* it was shown the film did impact the perceptions of consumers to some extent.

Significance of Study

The agricultural industry needs to stay abreast of the changing perceptions of the general public because as the needs of consumers change, the market place will change its demands of the agricultural industry. As consumers seek information regarding agricultural/food-purchasing decisions, it is important to understand what influences those decisions. With a true understanding of how consumers view the agricultural industry and how they are influenced by the media, professionals can determine marketing and educational strategies to better inform consumers about the food supply.

Also, the agricultural industry should recognize the changing needs and beliefs of consumers, and adjust or modify their company’s products or standards to better serve society. If agriculture companies want to serve consumers in the future they must understand and act upon the demands of their customers today.

Purpose

The purpose of this study was to determine the immediate influence the movie *Food, Inc.* had on the perceptions of the agricultural and food processing systems by those attending a showing of the film on the Oklahoma State University campus on Nov. 20, 2009.

Research Questions

The specific research questions guiding this study were:

1. What are the demographic characteristics of attendees at a showing of *Food, Inc.* on Nov. 20, 2009, at the Oklahoma State University campus?
2. What are the attendees' perceptions of the agricultural industry before viewing the film *Food, Inc.*?
3. What are the attendees' perceptions of the agricultural industry after viewing the film *Food, Inc.*?
4. What are the attendees' perceptions of the film *Food, Inc.* and the follow-up discussion of the film?
5. Do attendees' perceptions of the agricultural industry differ after watching the film *Food, Inc.* and participating in the follow-up discussion of the film?

Scope of Study

The scope of this study was Oklahoma State University students, faculty and staff, citizens of Stillwater, Okla., and surrounding areas, and anyone interested in viewing the film *Food, Inc.* during its showing at the Oklahoma State University, Stillwater campus, on Nov. 20, 2009.

Assumptions

The following assumptions were made regarding this study:

1. The participants in this study are generally interested in agriculture and/or how the food they consume is produced and processed.
2. The participants would be honest about their perceptions regarding the agricultural production, processing and purchasing systems.
3. Participants are interested in seeing different viewpoints regarding the agricultural industry and how food is produced, processed and purchased.
4. The participants in this study are interested in interacting and gaining knowledge from a variety of media formats, including film.

Limitations

The following limitations were considered:

1. Data collection was limited to participants who were aware of the showing of the film *Food, Inc.* at the Oklahoma State University campus on Nov. 20, 2009.
2. Some participants may have already seen the film prior to this study.
3. The researcher collaborated with an organization showing the film and was subject to some of the organization's protocols for the event.

Definition of Terms

The following terms were operationally defined for use in the study:

Consumer: Any individual who utilizes or accesses economic goods and services (Merriam-Webster, 1993).

Perception: To become conscious of, to observe, to become aware, or understand with one's mind or senses (Sijtsema, Linnemann, Gaasbeek, Dagevos, & Jongen, 2004).

Agricultural Production System: Any method of growing, raising, breeding, or otherwise creating goods for consumption, or goods that aid in growing, raising, breeding, or otherwise creating goods for consumption.

Agricultural Processing System: A system that utilizes the goods produced in the agricultural production system to create and/or make ready for consumption and/or gain by the consumer.

Agricultural Purchasing System: A system that connects the consumer with goods created by the agricultural processing system, for the consumer's gain or consumption.

Mass media: "are organizations whose product is information and entertainment" (Stone, Singletary, & Richmond, 1999, p 236).

Chapter Summary

The agricultural industry needs to be aware of where and how consumers are forming their opinions and beliefs about U.S. agriculture. To better serve consumers throughout the world, the agricultural community should understand how the average American perceives and acknowledges the industry that grows and processes food.

To form a cohesive relationship between producer and consumer, the agricultural industry should attempt to understand and relate to the needs and concerns of their customers. Without cohesion, the relationship is plagued to dissatisfaction from both parties and both will suffer.

Producers need to educate themselves on how to better meet and serve the needs of today's consumers to be successful in today's market. This study was intended to help bridge the gap between consumer beliefs, especially after watching the film *Food, Inc.*, and producers.

CHAPTER II

LITERATURE REVIEW

Introduction

This study assessed the impact mass media has on the perceptions of consumers regarding the agricultural industry after watching the film *Food, Inc.* To better understand how consumers form their opinions about the agricultural industry, it is important to research each medium's impact on public perception. In this study, the film *Food, Inc.* is used as a source to measure the impact the entertainment media has on consumers' perceptions about the agricultural industry.

This chapter analyzes previous research and addresses impact of the media, influence and persuasion, consumer perceptions and attitudes of the agricultural industry and agriculture in the media. Also, included in this chapter is the theoretical framework used in this study.

Theoretical Framework: Agenda-Setting Theory

Agenda-setting comes from the media's ability to increase the perceived importance of an event in an individual's mind by the amount of times the issue is mentioned and the language associated with the event (Severin & Tankard, 2001). Walter Lippman (1922) is often credited with the origination of the notion of agenda-setting in his book, *Public Opinion* (Miller, 2002). In his book, Lippman believed the general public created images in their mind regarding the issues the media presented, and that legislators should acknowledge those images when creating policy (Miller).

Bernard Cohen (1963) is known as the theorist who created the phrase the media ‘may not be successful much of the time in telling people what to think, but it is stunningly successful in telling its readers *what to think about*’ (Miller, 2002, p 258).

The first study utilizing the theory of agenda-setting was conducted by Max McCombs and Donald Shaw (1972) when they examined the media’s influence on the publics’ perceptions of the presidential candidates in Chapel Hill, N.C. (Miller, 2002). McCombs and Shaw found the media did influence what the public thought about, with regards to the candidates; thus, creating the term agenda-setting (Miller). Agenda-setting is determined by the media, based on public interest and the environment in which the event is taking place (Severin & Tankard, 2001).

One factor some theorists consider when using the agenda-setting theory in research is a person’s need for orientation (Miller, 2002). “Need for orientation is a combination of high interest in an issue and high uncertainty about that issue” (Miller, p 261). This need for orientation could lead an individual to use the media as a source of information to fulfill their need for information and end their uncertainty about an issue (Miller).

Relying on the media for all information can be detrimental for thorough knowledge of an issue because the media has the ability to draw more emphasis toward one area of an issue and direct attention away from another issue (McCombs & Shaw, 1993). Also, the name an issue is given can impact the amount of influence it has on the public (McCombs & Shaw). Severin and Tankard (2001) gave the example of the media creating “the war on drugs” event in the media. By using language similar to entering a war and by giving the event prominence, the media gave “the war on drugs” importance in the public’s opinion. The way in which an issue or topic is framed by the media can have “measureable behavioral consequences,” and can directly influence public opinion (McCombs & Shaw, p 63).

“The original agenda-setting notion postulates that media messages have rather direct effects on the perceived importance of different issues and therefore on the so-called ‘public agenda’ (Huck, Quiring, & Brosius, 2009, p 140). This theory gives the media a great amount of power to determine

which messages are of the greatest importance to the consumers, and thus, impacting the public agenda (Miller, 2002). “The news can document the scope of social problems, critique alternative proposals for coping with problems, or focus on the tactical efforts of activists and government officials to cope with problems” (McCombs & Shaw, 1993, p 62). McCombs and Shaw link the media agenda and the public agenda through issues concerning the public; thus, solidifying the concept that the media has a direct impact on the public agenda by what public issues are reported.

Bernard Cohen’s classic summation of agenda setting has been turned inside out. New research exploring the consequences of agenda setting and media framing suggest that the media not only tell us what to think about, but also how to think about it, and, consequently, what to think (McCombs & Shaw, 1993, p 65).

Individual Media-System Dependency

An addition theoretical framework used in this study was Individual Media-System Dependency. The individual media-system dependency framework examines the sociological factors that contribute to a person’s dependencies on media (Ball-Rokeach, 1985). With this approach, the participants’ reliance on the media to form their perceptions and opinions about the agricultural industry was examined.

“In contrast to the more traditional psychological or social psychological approaches to this type of issue, the aim is to offer a sociological approach that lays out the macro as well as the micro-level variables that jointly constitute a good starting point for analysis of how people come to be dependent on the mass media” (Ball-Rokeach, 1985, p. 486).

The media-system dependency is a relationship-based theory reliant primarily on one's resources; "those resources being the capacity to (a) create and gather, (b) process, and (c) disseminate information" (Ball-Rokeach, 1985, p. 487). With this understanding of the Media-System Dependency framework, the study focuses on how individuals gather and process presented materials of a media source.

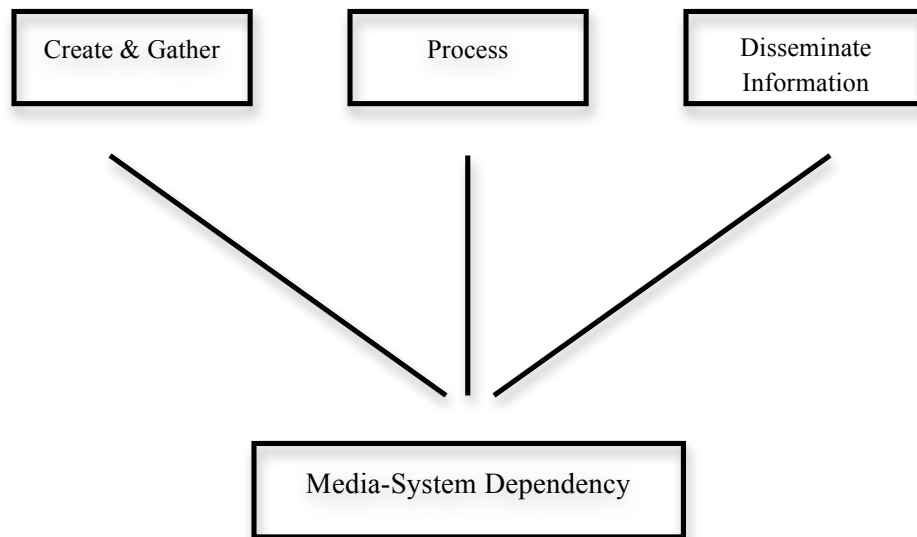


Figure 1. Media-system dependency resource relationship

Origins of Individuals' Media-System Dependencies

The decision of whom or which entity holds the power to disperse information to society has changed throughout the years. As advances in technology become available, most people in Western societies relied on elders, or others whose thoughts were valued and considered trustworthy (Ball-Rokeach, 1985). Technology and time have transferred this communal system of information into a system for economic gain and organizational profit (Ball-Rokeach).

For individuals to receive information about the happenings in today's society they must rely on the media system. With this in mind, individuals have no control on the amount or type of

products or opinions they are subjected to as they seek knowledge. Therefore, the media creates a dependency for the consumer based on the driving economic factors that support the media system (Ball-Rokeach, 1985). As technology progresses and becomes more complex, individuals have less direct contact with the media, beyond their normal role, and rely more heavily on the actions and decisions of the media (Ball-Rokeach & DeFleur, 1976). With the media driven by economic and technological progress, individuals are exposed to more and more persuasion and entertainment messages, provided by business and politics, while in search of information (Ball-Rokeach & DeFleur). This cycle of exposure from the media creates individuals who are dependent on the media, and a media dependent on business and politics for betterment and advancement.

A contributing factor to an individual's media dependency is the social environment in which the individual is immersed (Ball-Rokeach, 1985). Social environment can be defined as aspects that affect an individuals' opinions, understanding or future endeavors, whether at a local or international level (Ball-Rokeach).

Understanding and identifying an individual's media dependencies should be considered when creating and disseminating messages to a given audience (Ball-Rokeach, 1985).

Influence and Persuasion of the Media

The media serve as the most significant mode of transferring information to the public (Ten Eyck, 2000). In this role, the media has a significant impact in creating and influencing consumer perceptions, attitudes, and behavior. In addition, the media has the power to influence public opinion and thoughts about an issue, product, or company (Ten Eyck). Individuals form their opinions based on public and personal interactions regarding an issue (Hoffman, Glynn, Huge, Sietman, & Thomson, 2007). When an issue, presented by the media, is discussed from one person to another it gains momentum until it becomes a public issue (Hoffman, et al.). As such, the media serves a vital role in disseminating information to the public on potential issues of interest (Hoffman, et al.). "Opinions are

simultaneously shaped and strengthened by perceptions gained through discussion and media use” (Hoffman, et al., p 290).

While still in the early phase of forming opinions, individuals likely will have little specific information or knowledge on which to substantiate their thoughts, and tend to depend on the predisposed or issue-relevant information available to them regarding the topic (Hoffman, et al., 2007).

Issue-relevant information often is delivered via mass media, which simultaneously act as a channel for information dissemination as well as another filter within the public opinion process; media outlets choose between many options when determining precisely which issues to cover (Hoffman, et al., 2007, p 292).

In a study conducted by Cottone and Bryd-Bredbenner (2007), the authors evaluated the impact of the film *Super Size Me* on the eating habits of young adults. The study utilized a form of media to determine whether or not the film impacted the participants’ fast food eating habits. The study utilized the film because of television and film’s emotional appeal to individuals (Cottone & Bryd-Bredbenner). The study found the film did impact the individuals’ perceptions of fast food, if for a short period of time (nine days). Media can be in a variety of forms; however, media that holds an entertainment value for consumers is growing in popularity.

Perceptions of Consumers

Perceptions are different for every individual, based on experience and personal history (Sitjsem, Linneman, Gaasbeek, Dagevos, & Jongen, 2004). Consumers’ perceive and form a perception of food when they buy, prepare and consume food products (Sitjsem, et al.). The formation of perceptions are a complex process based on the sensory-based characteristics of the product;

therefore, the smell, packaging, taste, and appearance effect the perception of the product formed by the consumer (Sitjsem, et al.). In addition, other aspects of the individual can impact a formed perception, such as previous experience, beliefs, and the atmosphere in which the product is being perceived, as well as the indirect characteristics of the product, such environmental impact and production methods (Sitjsem, et al.).

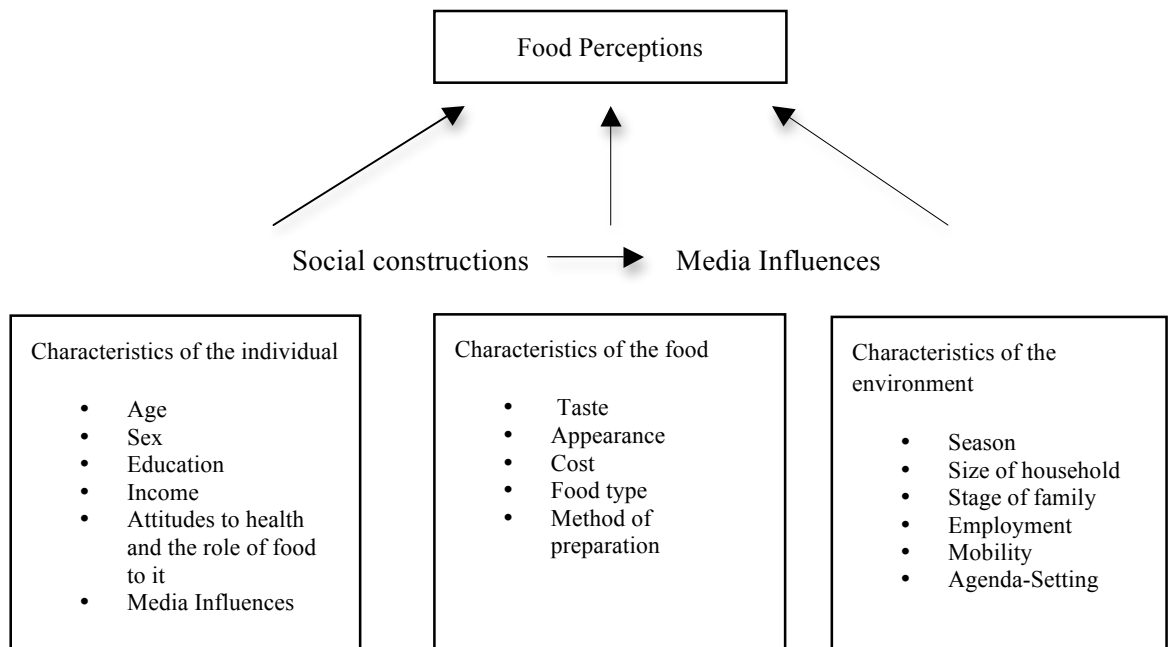


Figure 2. Factors influencing food preferences (Sijtsema, et al., 2004)

A variety of factors can contribute to how an individual forms the perceptions they have, including knowledge, societal level, and the moment and situation in which the perception is formed (Sijtsema, et al., 2004). Understanding how and why consumers form the perceptions of certain products is important to note given a time where information is constantly accessible.

Media Perceptions and Attitudes of Consumers

The perceptions and attitudes the media can create in consumers are important aspects to consider when trying to understand consumer behavior. Research connecting the media and consumer perceptions is of great consequence when relating this material to the agricultural industry. “The media are a factor in shaping the public’s perception of important issues and in helping to place specific issues on the nation’s political agenda” (Sweeney & Hollifield, 2000, p. 26).

Memery, Megicks, and Williams (2005) found in their study regarding ethical and social responsibility issues involved in grocery shopping that advertising and directing promotions at the intended audience could improve individuals’ willingness to purchase organic products with less regard to price. By informing the consumer through advertisements and labeling and gaining their trust in the product, the consumer will be more inclined to evaluate their ethical and social responsible decisions with regards to their purchases (Memery, Megicks & Williams).

Trusting the media source and listening to the company that is promoting a product through this outlet is a critical element to creating a working relationship between the company and the consumer. According to Kenning (2008) many researchers believe trust can be manipulated by using an effective marketing strategy. Also, Kenning describes two types of consumer trust, cognitive and affective. Cognitive trust is based on a consumer’s experiences with the company or source. Affective trust relies on a consumer’s emotional response to a product or source (Kenning). Both cognitive and affective trust impacts a consumer’s likelihood of trusting the source or company in the future (Kenning).

The process of choosing where and when to buy products is also enhanced by an individual’s values. “Values motivate action, giving it direction and emotional intensity” (Vermeir & Verbeke, 2006, p 173). Values motivate individuals to choose one product over another (Vermeir & Verbeke). Understanding an audience’s set of values will allow the media and companies to meet and tailor their products and advertisements to meet the expectations of consumers. However, if a consumer is

uncertain about a company or claim they will seek social information, in the form of peers or respected individuals, who may or may not have had a positive experience with the company (Vermeir & Verbeke).

Also, Lavidge and Steiner (1961) illustrated that in order for a company to create an ultimate consumer, the company must follow a process. The process contains seven steps that should be followed to create an ultimate consumer (Lavidge & Steiner). The seven steps start from the consumer being unaware of the product or service and culminate to the end result of the consumer purchasing the product or service (Lavidge & Steiner).

During these seven steps the consumer is exposed to the three functions of advertising, relating information, developing favorable attitudes, and action or acquiring the product (Lavidge and Steiner, 1961). Understanding how companies utilize the media to gain consumer trust and confidence is significant for comprehending how and why consumers form the opinions they have of products and services. By being able to break down the reasoning and research that has been devoted to creating consumer trust and confidence in a service, an individual's media dependency can be better understood.

In a study involving the buying trends of literature, Janssen and Leemans (1988) found that people were more likely to purchase literature they had seen advertised, rather than literature not featured in the media; thus, confirming the need to draw the media's attention to a piece of work in order to encourage consumers to purchase their titles (Janssen and Leemans). The significance of media exposure for a company to promote and sell their product becomes apparent in studies such as this one.

Recent studies have focused on media, in the form of television and films, as a means of increasing consumer awareness. A study conducted by Ruth, Lundy, and Park (2005) examined the perceptions of individuals involved in the agricultural industry after watching a television show aimed at entertainment. Within the study the impact of television viewing was acknowledged.

... the link between television and social construction of reality can be categorized into four major assumptions: 1) television emphasizes close-up views creating a sense of familiarity with distant people and places, 2) live event coverage gives viewers a sense of participation in public affairs, 3) television pictures seem authentic to viewers, and 4) television coverage may provide a more complete picture of the event than any other media (Ruth, Lundy, & Park, 2005, p 24).

Consumer Perceptions and Attitudes of the Agricultural Industry

Vermeir and Verbeke (2006) describe the relationship between consumer and food as, “a negotiation about what a person will, and will not, let into his or her body” (p.170). However, research has shown that consumers do not have enough knowledge of the agricultural industry to make smart food choices (Cox, 1994).

Research suggests individuals who have experience in an agricultural industry are not as affected by the media’s interpretation of agriculture; whereas, individuals not familiar with the industry believe the media’s views of agriculture to be realistic (Ruth, Lundy, & Park, 2005). Also, individuals who held preconceived ideas of the agricultural industry, derived from the media’s portrayal of the area after watching another television clip regarding agriculture, had their ideas reinforced, either positively or negatively (Ruth, et al.). “... the show might not have an influence in changing or shaping perceptions and opinions toward agriculture, but that it might have the power to support inaccurate perceptions and opinions viewers might currently hold toward agriculture” (Ruth, Lundy, & Park, 2005, p. 29).

Furthermore, once the media’s portrayals of the agricultural industry are instilled in individuals, it is more difficult to change those individuals’ perceptions or opinions of the agricultural industry (Ruth, Lundy, & Park, 2005).

In research, food has been found to maintain an emotional link for individuals (Bennett, 1995). Food choice preferences are influenced by many factors including body image, social preferences and economic well being (Weatherell, Tregear, & Allinson, 2003). Food forms an integral connection between human pleasure and family, making it a critical element to maintaining happiness and fulfillment in the human psyche (Bennett).

Agriculture in the Media

As individuals, people react to the presented materials of the media in different and unique ways (Verbeke, 2005). As such, people will feel the need to research and obtain information about the agricultural industry when they perceive there to be a threat to their health or well being in their individual lives. The amount of information gathered during this process has a direct correlation with the perceived threat or risk to their personal safety (Verbeke). In order for individuals to become involved or interested in the agricultural industry they must believe it to be significant in their life (Thomson & Kelvin, 1996). The media serves as an outlet through which the public can receive its information regarding topics, such as the agricultural industry (Thomson & Kelvin). To increase consumer knowledge of the agricultural industry, the media must cover stories in the agricultural sector not related to only food risk (Ruth, Eubanks, & Telg, 2005).

Many U.S. citizens do not truly understand the significant role agriculture plays in their daily lives, partially due to the lack of accurate media coverage of the industry (Lundy, Ruth, & Park, 2007). Specifically, Lundy, et al. found that the youth of America are becoming more and more detached from an agrarian society, and as a result are more dependent on the media to inform and educate them about the agricultural industry.

Thomson and Kelvin (1996) identified five challenges the media are faced with, regarding the agricultural industry. The five challenges include: 1) consumers are uninformed about the relationship existing between the land and the food produced on it, 2) consumers are uneducated about complex

topics and issues that are within the food production system, 3) consumers carry a variety of perspectives and attitudes toward agriculture and the agricultural industry, 4) consumers do not hold fortified opinions about the concept of locally-grown products, and 5) consumers think the products they purchase impact the farming practices on a regional level. As the public has less personal knowledge regarding agriculture and the agricultural industry, they will tend to rely on the media for information (Thomson and Kelvin).

The public continually relies on the media to inform them about the topic of food safety, and the media gives much attention to the stability of the food supply and the security measures implemented by the government to protect the food industry (Whaley & Tucker, 2004). “As the distance between lay consumers and food producers and processors increases, the most likely source of information on food safety for the lay consumer is the mass media” (Ten Eyck, 2000, p. 45).

In a study conducted by Whaley and Tucker (2004) regarding the relationship between an individuals dependency on the media and their trust in the media source, it was revealed that while the respondents found the mass media as moderately useful in forming their opinions, newspapers and television garnered most of the trust by individuals (Whaley & Tucker).

“Trust in sources was the best predictor of media system dependency. Those with higher levels of trust in the government and expert sources were more likely to express higher levels of media dependency” (Whaley & Tucker, 2004, p. 23). In order to gain trust and credibility, the media must utilize expert sources and cover the story in the best possible way to give the consumer information to form their opinions. Whaley and Tucker also found that the respondents ranked farmers in the top three of their trusted sources for agriculture. The link between farmer and the media is a critical relationship to maintain for the consumer’s interest.

One of the most prominent crises that questioned the practices of the agricultural industry was the Alar controversy in 1989 (Chou, 1991). When a supply of apples tested positive for the pesticide residue Alar and caused illness in children throughout the country, the confidence in the nation’s food supply was diminished. However, two years after the crisis, while consumers were still

concerned with pesticide residues, the confidence in the U.S. fresh fruit and vegetable supply had recovered (Chou).

Another instance of the media influencing the perceptions of individuals is when Oprah Winfrey did a show concerning *Bovine Spongiform Encephalopathy*. The effects of that show were reflected in cattle prices, showing a 50 percent drop (Schlenker, 2009). The Oprah show is a popular form of media, and Oprah Winfrey is a respected individual to many and her show impacted the perceptions of many individuals with regard to the safety of beef in the U.S. Oprah, herself, refused to eat a hamburger after the first case of BSE was found in the U.S.

Another situation where agriculture was highlighted in a form of media was in the documentary film *King Corn*. This film was aimed at showing the American people the many uses America's most abundant crop, corn, has (www.kingcorn.net, retrieved March 29, 2010). The filmmakers, Aaron Woolf, Curt Ellis and Ian Cheney, grow an acre of corn and keep track of it as it moves through the processing system. The film shows the variety of ways corn is used including making high fructose corn syrup. The film mentions that the government provides the greatest subsidies for corn and claims that the abundance of corn in the population's diet is to blame for obesity and the increase of diabetes (www.kingcorn.net).

If the media chooses to cover the agricultural industry only when negative events are occurring, the general public will be illiterate to how the food production and processing systems truly operate (Ruth, Eubanks, & Telg, 2005); however, it is the responsibility of those in the agricultural industry to positively promote the industry.

Chapter Summary

Understanding how and why consumers form the perceptions and opinions they hold to be true about the agricultural industry is important. By using the previous research and studies related to this area, a better understanding of why this research is needed is evident.

With the knowledge of why consumers rely on the media for their information, how the media influences perceptions of consumers, and the effects the media has on consumer's attitudes toward agriculture, creates a foundation for understanding the importance of this line of inquiry.

CHAPTER III

METHODOLOGY

Introduction

Chapter I served as an introduction to the study. The study is focused on determining the influence the media, in the form of the film *Food, Inc.*, had on consumer perception and attitude of the agricultural industry. Verbeke (2005) wrote that many factors influence the choices and behaviors of consumers. Also, when unsubstantiated claims of the agricultural industry were presented to the public, the perceived safety and reliability of the industry were diminished. The purpose of this study was to determine the impact the media has on the public's perceptions and attitudes of today's agriculture.

Purpose

The purpose of this study was to determine the immediate influence the movie *Food, Inc.* had on the perceptions of the agricultural and food processing systems by those attending a showing of the film on the Oklahoma State University campus on Nov. 20, 2009.

Research Questions

The specific research questions guiding this study were:

1. What are the demographic characteristics of attendees at a showing of *Food, Inc.* on Nov. 20, 2009, at the Oklahoma State University campus?
2. What are the attendees' perceptions of the agricultural industry before viewing the film *Food, Inc.*?
3. What are the attendees' perceptions of the agricultural industry after viewing the film *Food, Inc.*?
4. What are the attendees' perceptions of the film *Food, Inc.* and the follow-up discussion of the film?
5. Do attendees' perceptions of the agricultural industry differ after watching the film *Food, Inc.* and participating in the follow-up discussion of the film?

The literature review in Chapter II highlights related research about the topics of the media, agriculture, and consumer perceptions. The literature review also established a framework for the study. The agenda setting theory was used as the foundation of this study to determine if the media can alter the perceptions of individuals, with regards to the agricultural industry. The agenda setting theory posits that the media can increase the importance of an issue or event in an individual's mind by the language used to describe the issue and the amount of times the issue is brought to the attention of the individual (Severin & Tankard, 2001).

This chapter's purpose is to describe in detail the methods used to collect data and analyze the collected data for this study. The chapter includes insight into the population, details of the instrument, the data collection method, the data collected, and the analysis procedure, utilized in this study.

Institutional Review Board

Oklahoma State University policy and federal regulations require approval of all research studies that involve human subjects before investigators can begin their research. The Oklahoma State University Office of University Research Services and the Institutional Review Board (IRB) conduct this review to protect the rights and welfare of human subjects involved in biomedical and behavioral research. In compliance with that policy, this study received review and was granted permission to proceed. The IRB assigned number AG0941 (see Appendix A) to this study.

Population

The population for this study consisted of Oklahoma State University students, faculty, staff, Stillwater, Okla., residents, and anyone else interested in watching the film *Food, Inc.* on Nov. 20, 2009. The promotion and showing of the film on the Oklahoma State University campus was organized by a university organization. The population that chose to attend the voluntary event (N = 110) was asked to complete the pretest and posttest surveys.

Research Design

The data collection method for this study was a pretest and posttest survey of attendees at a showing of the film *Food, Inc.* on the Oklahoma State University campus. The instrument was administered by the researcher to the attendees at the showing of the film on Nov. 20, 2009.

Instrument Design

The study was intended to measure the perceptions of consumers about agriculture before and after viewing the film *Food, Inc.* The instrument was a correlation survey designed to determine the impact the film had on the viewers and their thoughts about the U.S. agricultural industry. The instrument used to collect data in this study was created from several existing instruments. The questions were adapted to establish the opinions of the participants specifically related to *Food, Inc.*

Within the survey, 13 demographic questions established education, age, ethnicity, eating preference, agricultural background, and determined previous viewings of the film *Food, Inc.* (Giandomenico, 2000 & Robertson, 2009). The instrument also included 10 questions regarding perceptions of agricultural production, 10 questions regarding perceptions of agricultural processing, and 10 questions regarding perceptions of agricultural purchases (Frick, Birkenholz, & Machtmes, 1995; Pense & Leising, 2004, Giandomenico). These questions were used to determine the participant's perceptions regarding the agricultural industry. The questions' construction was not changed in the posttest; however, the order of questions was altered. In addition, the posttest survey contained questions related to the respondents' thoughts about topics addressed, as a whole, by the film *Food, Inc.* These questions were used to determine the respondents' perceptions of the material discussed throughout the film. Also, the posttest survey included questions related to the respondents' perceptions of the quality of the film and the material presented in the film.

The perception questions of this instrument were derived from the agricultural literacy instrument created by Frick, et al. (1995). The instrument created by Frick et al. was reviewed for content validity by a national panel of experts and the perception portion of the instrument was shown to have a Cronbach's alpha coefficient of .90 (Frick, et al.). The integrity of the questions used from this study was not altered.

Also, Pense and Leising (2004) created an instrument that measures an individual's agricultural literacy with regards to the food and fiber system. The instrument was shown to have a

reliability coefficient of 0.846 in one pilot test, and a reliability coefficient of 0.933 in the second pilot test (Pense & Leising).

The instrument for this study was created to measure consumer's opinions and perceptions about the agricultural industry. The questions utilized from the instrument created by Pense and Leising (2004) were used to establish a knowledge-base of the participants regarding the agricultural industry. The instrument was administered before and after the showing of the film to measure the impact the film had on the perceptions and opinions of the participants regarding the agricultural industry.

Data Collection

The survey was administered to the participants at the showing of *Food, Inc.*, on the Oklahoma State University campus on Nov. 20, 2009. The film was sponsored by the Oklahoma State University Cineculture organization and the college of education.

Both the pre-test and post-test were given to the participants before the film was shown. The surveys were identified by pre-assigned codes, determined by the researcher, to match both the responses from the pre-test and post-test to each individual. Participants were asked to complete the first survey (see Appendix D) prior to the showing of the film. The surveys were given to 110 participants who chose to participate in the study. The participants were then asked to watch the film *Food, Inc.* The film was 93 minutes in length.

Upon the conclusion of the film, a panel of experts were asked to answer questions the participants had regarding the content shown during the film. The panel was established by Oklahoma State University's Cineculture organization and the college of education, and consisted of an expert in the poultry industry, an expert in animal welfare in the agricultural industry, and an expert in sociology. Discussions related to material shown by the media can alter the opinions of individuals when presented with varying view points of their peers (Hoffman, et al., 2007).

Participants were able to leave at any point during the film or discussion. Many participants stayed for a portion of the discussion before returning their posttest survey (see Appendix E) and leaving. Upon completion of the discussion, the remaining participants returned their surveys. A total of 110 surveys were returned; however, 15 of the surveys were unusable because they were incomplete, leaving 95 surveys as usable for data analysis.

The pre-test and post-test surveys were matched by the researcher according to their pre-assigned code. The data from the surveys was coded using a five-point scale. On the scale, one indicated “strongly disagree”, two indicated “disagree”, three indicated “unsure”, four indicated “agree”, and five indicated “strongly agree”. Also, seven of the pretest and posttest questions were reverse coded. Reverse coding was used to ensure that the perceptions of the respondents were portrayed accurately, based on how the question was worded in the survey. The seven reverse coded questions insinuated the respondents did not agree with the current agricultural industry standards; therefore, the original coding would not accurately account for their perceptions. The surveys were then analyzed to determine any change in perceptions and attitudes about the agricultural industry based on the showing of the film *Food, Inc.* Finally, the posttest survey questions related to the content and the respondents’ perceptions of the film were coded and analyzed for mean, standard deviation and frequency.

Validity

The instrument was reviewed by a panel of experts (see Appendix B) within the College of Agricultural Sciences and Natural Resources at Oklahoma State University, to establish content and face validity. The panel of experts offered suggestions for the content and layout of the surveys. The panel of experts were representatives of the department of agricultural economics and the department of agricultural education, communications, and leadership. Each expert was selected based on his or her experience and knowledge in the area of the agricultural industry.

Reliability

Even though previous studies established reliability for the questions used in the study, the researchers chose to run a reliability analysis, post-data collection.

A reliability analysis was conducted for this study. The reliability of the pretest and posttest was evaluated and a Chronbach's Alpha coefficient of .722 was found for the pretest instrument, and Chronbach's Alpha coefficient of .779 was found for the posttest instrument. The reliability analysis was conducted on all respondents ($n = 95$) in this study.

Data Analysis

For this study, the data analysis consisted of examining frequencies, means and standard deviations to determine the influence of *Food, Inc* on the participants' short-term perceptions of the agricultural food and production system.

Quantitative data sets were analyzed using SPSS 16.0 for Windows (2007). Also, descriptive statistics were used to interpret the data.

Research question one, examined the demographics of the participants measured by a series of questions aimed at determining their age, ethnicity, education, previous experience and involvement with agriculture, their eating and shopping preferences, and any previous experience with the film *Food, Inc*. Each participant's response was analyzed for mean, standard deviation and frequency.

Research question two, examined the respondents' perceptions to the agricultural industry, prior to watching the film *Food, Inc.*, measured by 30 opinion questions. The responses were analyzed for frequencies, means and standard deviations.

Research question three, examined the respondents' perceptions of the agricultural industry after watching the film *Food, Inc.* and participating in a discussion following the film measured by 30 opinion questions. The responses were analyzed for frequencies, means and standard deviations.

Research question four, examined the respondents' perceptions of the film *Food, Inc.* and the discussion that followed the film as measured by four questions on the posttest survey. The questions were analyzed for frequencies, means and standard deviations.

Research question five, sought to determine if the respondents' perceptions of the agricultural industry differed after watching the film *Food, Inc.*, the respondents' answers were analyzed by comparing their responses to the pretest and posttest surveys. The mean of sums for both the pretest and posttest surveys were created. The pretest and posttest mean of sums were used to perform a paired-samples t-test to determine any significant difference in the respondents' perceptions after watching the film *Food, Inc.*

CHAPTER IV

FINDINGS

Introduction

Chapter I served as an introduction to the study. This research study was focused on determining the influence the media, in the form of the film *Food, Inc.*, had on consumer perceptions of the agricultural industry. Verbeke (2005) wrote that many factors influenced the choices and behaviors of consumers. Also, when unsubstantiated claims of the agricultural industry were presented to the public, the perceived safety and reliability of the industry were diminished. The purpose of this study was to determine the impact the media had on the public's perceptions of today's agriculture.

The literature review in Chapter II highlights related research about the topics of the media, agriculture, and consumer perceptions. The literature review also established a framework for the study. The literature review in Chapter II highlights related research about the topics of the media, agriculture, and consumer perceptions. The literature review also established a framework for the study. The agenda setting theory was used as the foundation of this study to determine if the media can alter the perceptions of individuals, with regards to the agricultural industry. The agenda setting theory posits that the media can increase the importance of an issue or event in an individual's mind by the language used to describe the issue and the amount of times the issue is brought to the attention of the individual (Severin & Tankard, 2001).

In Chapter III, a description of the methods and procedures were given. The pretest and posttest surveys were developed using surveys written by Frick, Birkenholz and Machtmes (1995), Pense and Leising (2004), Giandomenico (2000) and Robertson (2009). The instrument was designed to determine the media's influence on the participants' perceptions of the agricultural industry.

Purpose

The purpose of this study was to determine the immediate influence the movie *Food, Inc.* had on the perceptions of the agricultural and food processing systems by those attending a showing of the film on the Oklahoma State University campus on Nov. 20, 2009.

Research Questions

The specific research questions guiding this study were:

1. What are the demographic characteristics of attendees at a showing of *Food, Inc.* on Nov. 20, 2009, at the Oklahoma State University campus?
2. What are the attendees' perceptions of the agricultural industry before viewing the film *Food, Inc.*?
3. What are the attendees' perceptions of the agricultural industry after viewing the film *Food, Inc.*?
4. What are the attendees' perceptions of the film *Food, Inc.* and the follow-up discussion of the film?
5. Do attendees' perceptions of the agricultural industry differ after watching the film *Food, Inc.* and participating in the follow-up discussion of the film?

Population

The population for this study consisted of Oklahoma State University students, faculty, staff, Stillwater, Okla., residents, and anyone else interested in watching the film *Food, Inc.* on Nov. 20, 2009. The promotion and showing of the film on the Oklahoma State University campus was organized by a university organization. The population that chose to attend the voluntary event (N = 110) was asked to complete the pretest and posttest surveys.

Findings

The population at the showing of the film *Food, Inc.* (N = 110); however, 15 of the returned surveys were unusable and were not used in the data. The data was calculated using n = 95, for a response rate of 86.4 percent.

Findings Related to Research Question 1: Demographic Characteristics

Participants were asked to answer a variety of demographic questions. The demographic questions consisted of age, ethnicity, education, classification at Oklahoma State University, agricultural experience, eating preferences, place of food purchase preference, type of residence, and previous experience watching the film *Food, Inc.*

Age of Respondents

It was found that 62.1 percent of the respondents ($n = 59$) were between the ages of 18 and 25 years old, 17.9 percent ($n = 17$) of the respondents were between the ages of 26 and 35 years of age, 1.1 percent of the population ($n = 1$) were between the ages of 36 and 45 years of age, 5.3 percent ($n = 5$) of the respondents were between the ages of 46 and 55 years of age, and 13.7 percent ($n = 13$) of the respondents were over the age of 55 (see Table 2).

Table 2

Age of respondents

Age in years	No. of Respondents	Percentage (%)
18 – 25 years	59	62.1
26 – 35 years	17	17.9
36 – 45 years	1	1.1
46 – 55 years	5	5.3
Over 55 years	13	13.7

Ethnicity of Respondents

Of the respondents, 84.2 percent ($n = 80$) identified themselves as Caucasian while other ethnicities represented 15.8 percent ($n = 15$) of the population at the showing of *Food, Inc.* on Nov. 20, 2009, at Oklahoma State University (see Table 3).

Table 3

Respondents' by ethnicity

Ethnicity	No. of Respondents	Percentage (%)
African-American	3	3.2
Asian or Pacific Islander	2	2.1
American Indian or Alaskan Native	3	3.2
Caucasian	80	84.2
Hispanic	7	7.4

Education Level of Respondents

The survey revealed 55.3 percent of the respondents' ($n = 52$) highest achieved education was a high school degree or equivalent (GED), while 4.3 percent ($n = 4$) had completed an associate's degree, 9.6 percent ($n = 9$) of respondents had completed a bachelor's degree. Of the population, 19.1 percent ($n = 9$) had completed a master's degree and 11.7 percent ($n = 11$) of the population had completed a doctorate, law or medical degree (see Table 4).

Table 4

Respondents' level of completed education

Education Level	No. of Respondents	Percentage (%)
High school or equivalent (GED)	52	55.3
Associate's degree	4	4.3
Bachelor's degree	9	9.6
Master's degree	18	19.1
Doctorate, law or medical degree	11	11.7

Respondents' Classification at Oklahoma State University

Of the population, 56.4 percent ($n = 53$) were undergraduate students at Oklahoma State University and 20.2 percent ($n = 19$) of the population were Oklahoma State University graduate students. Eleven respondents (11.7 percent) were faculty members at Oklahoma State University and 2.1 percent of the respondents ($n = 2$) were staff members at Oklahoma State University. Nine of the respondents (9.6 percent) placed themselves in the other category for their classification at Oklahoma State University (see Table 5).

In analyzing college affiliation, 21.7 percent ($n = 18$) of the respondents were in the College of Agricultural Sciences and Natural Resources, 27.7 percent ($n = 23$) were in the College of Arts and Sciences, 14.5 percent ($n = 12$) were in the College of Education, 7.2 percent ($n = 6$) were in the College of Engineering, Architecture and Technology, 8.4 percent ($n = 7$) were in the College or Human Environmental Sciences, 18.1 percent ($n = 15$) were in the College of Business, and 2.4 percent ($n = 2$) were in the College of Medicine (see Table 6).

Table 5

Respondents by Oklahoma State University classification

Classification	No. of Respondents	Percentage (%)
OSU undergraduate student	53	56.4
OSU graduate student	19	20.2
OSU faculty	11	11.7
OSU staff	2	2.1
Other	9	9.6

Respondents' Agricultural Experience

The respondents were asked about their experience with agriculture, including the organizations in which they were actively involved in within the industry. While 41.1 percent ($n = 39$) of the respondents had experience working on a farm, 38.9 percent ($n = 37$) indicated they had no experience with any of the agricultural experiences listed. However, 66.4 percent of the respondents ($n = 63$) indicated they had some experience in agriculture, either through organizations or education. Four respondents (4.2 percent) had experience working in the agricultural processing industry (see Table 7).

Table 6

Oklahoma State University respondents by college

Classification	No. of Respondents	Percentage (%)
College of Agricultural Sciences and Natural Resources	18	21.7
College of Arts and Sciences	23	27.7
College of Education	12	14.5
College of Engineering, Architecture and Technology	6	7.2
College of Human Environmental Sciences	7	8.4
College of Business	15	18.1
College of Medicine	2	2.4

Respondents' Type of Residence

The type of residence the respondents lived in was found to help establish their background and history with agriculture. The survey showed that 65.3 percent of the respondents ($n = 62$) lived in a residence that included no livestock animals or a garden. Of the respondents, 17.9 percent lived in a town residence with a garden and/or livestock. Nine respondents (9.5 percent) lived in a rural residence with no crops or livestock animals. Six respondents (6.3 percent) lived in a rural residence with a garden or livestock animals, but not for farming purposes. Of the respondents, only one (1.1 percent) had held a residence active in the agricultural industry (see Table 8).

Table 7

Respondents' experience with agriculture in their lives

Agriculture activity	No. of Respondents	Percentage (%)
Worked on a farm	39	41.1
Lived on a farm	24	25.3
Participated in 4-H	15	15.8
Participated in FFA	11	11.6
Enrolled in a high school agriculture education course	17	17.9
Enrolled in a college agriculture education course	20	21.1
Worked in the processing agriculture industry	4	4.2
Not applicable	37	38.9

Eating Preference of the Respondents

In the population, 86.2 percent of the respondents ($n = 81$) were omnivores, eating meat, fruits, vegetables, and dairy products. Of the respondents, 5.3 percent were vegetarian ($n = 5$), eating no meat products, but did eat dairy products. Five respondents (5.3 percent) were pescetarian, eating no meat products, but did eat dairy and fish products; 1.1 percent ($n = 1$) were lacto-ovo, eating no meat products, but do eat dairy and egg products; and 2.1 percent ($n = 2$) were vegan, eating no meat or animal products. One respondent did not answer the question (see Table 9).

Table 8

Respondents' current type of residence

Type of residence	No. of Respondents	Percentage (%)
In town residence – no garden or livestock animals	62	65.3
In town residence – with garden and/or livestock animals	17	17.9
Rural residence – no crops or livestock animals	9	9.5
Rural residence – with garden and/or livestock animals, but not for farming	6	6.3
Rural residence – on a working farm	1	1.1

Table 9

Respondents' eating preferences

Eating Preference	No. of Respondents	Percentage (%)
Omnivore	81	86.2
Vegetarian	5	5.3
Pescetarian	5	5.3
Lacto-ovo	1	1.1
Vegan	2	2.1
Unanswered	1	1.1

Respondents' Preference for Place of Food Purchases

Within the population, 87.4 percent ($n = 83$) indicated they purchase their food from large supermarkets, 55.8 percent ($n = 53$) purchase their food from small supermarkets, 40.0 percent ($n = 38$) preferred to purchase their food from farmer's markets, 9.5 percent of the population ($n = 9$) chose to purchase their food from food co-ops, 29.5 percent ($n = 28$) preferred to make their food purchases from health food stores, 11.6 percent of the population ($n = 11$) chose to purchase their food from organic food markets, and 6.7 percent ($n = 6$) chose to purchase their food from other sources (see Table 10).

Table 10

Respondents' chosen places to purchase their food products

Locations to purchase food from	No. of Respondents	Percentage (%)
Large supermarkets	83	87.4
Small supermarkets	53	55.8
Farmer's markets	38	40.0
Food co-ops	9	9.5
Health food stores	28	29.5
Organic food markets	11	11.6
Other	6	6.7

Respondents' experience with the film Food, Inc.

Of the respondents, 3.2 percent ($n = 3$) indicated they had viewed the film *Food, Inc.* while 95.8 percent of the respondents indicated they had no previous experience watching the film *Food,*

Inc. before the data was collected. One respondent (1.1 percent) chose not to answer this question (see Table 11).

Table 11

Respondents' previous experience watching the film Food, Inc.

Experience watching the film	No. of Respondents	Percentage (%)
Yes	3	3.2
No	91	95.8

Findings Related to Research Question 2: Determining respondents' perceptions of the agricultural industry prior to watching the film Food, Inc.

Research question two sought to determine the perceptions of the attendees who attended the showing of *Food, Inc.* on the Oklahoma State University campus on Nov. 20, 2009, before watching the film *Food, Inc.* Respondents were asked to rate their thoughts about the agricultural industry using a five-point Likert scale (1 = strongly disagree; 2 = disagree; 3 = unsure; 4 = agree; 5 = strongly agree).

Seven of the questions were reverse coded (5 = strongly disagree; 4 = disagree; 3 = unsure; 2 = agree; 1 = strongly agree). Reverse coding was used to ensure the responses to the questions were portrayed accurately in the data. The seven reverse-coded questions were constructed to read that the current agricultural industry was lacking and insufficient at meeting the standards to which the participants ascribe. Both numerical scales were used to determine mean, frequency and standard deviation for each question.

The respondents most agreed (see Table 12) with the statement "Transportation and storage affects the supply of agriculture products" ($M = 4.10$). The respondents also agreed with "I cook

meals, at home, regularly” ($M = 4.03$), “Country of origin labeling should be mandatory in the U.S.” ($M = 3.90$), “An efficient food distribution system is essential to the agricultural industry” ($M = 3.84$), “Knowledge of a brand/company’s production practices influences my food purchasing decisions” ($M = 3.77$), “Consumer preferences influence farmer/producer decisions about what type of product to grow and how it is processed” ($M = 3.72$), “The use of pesticides has increased the yield of crops” ($M = 3.64$), “Price is a primary factor I consider when purchasing food” ($M = 3.56$), “Biotechnology has increased the pest resistance of plants” ($M = 3.54$), “Livestock/animal tracking systems should be mandatory in the U.S.” ($M = 3.50$), “Animal health and nutrition are important to farmers/producers” ($M = 3.45$), and “The United States Department of Agriculture (USDA) regulates food handling, preparation and storage” ($M = 3.44$).

Respondents of the film *Food, Inc.* at Oklahoma State University on Nov. 20, 2009 indicated an uncertainty about several issues in the agricultural industry prior to the film *Food, Inc.*, as indicated by their answers on the pretest survey (see Table 13). The attendees were unsure if “*Organic is a primary factor I consider when purchasing food” ($M = 3.37$), “The Environmental Protection Agency (EPA) regulates fertilizers, pesticides and herbicides used by producers” ($M = 3.37$), “I think super centers (Wal-mart, etc.) provide a necessary outlet for food purchases” ($M = 3.20$), “New technology has helped ensure the safety of agricultural processing” ($M = 3.17$), “*Organic products require less processing than other modified products” ($M = 3.08$), “Food safety is a major concern of the food processing industry” ($M = 3.00$), “U.S. citizens spend a higher percentage of their income on food than in other countries” ($M = 2.93$), “I purchase food based on a brand name” ($M = 2.76$), “*Organic production methods are a realistic alternative to using pesticides” ($M = 2.73$), “*If available, I prefer to buy organic food products” ($M = 2.71$), and “Local laws and regulations have little effect on farmers” ($M = 2.60$).

Table 12

Statements respondents of the showing Food, Inc. agreed with, prior to the film

Statement	<i>M</i>	<i>SD</i>
Transportation and storage affects the supply of agriculture products.	4.10	.623
I cook meals, at home, regularly.	4.03	1.036
Country of origin labeling should be mandatory in the U.S.	3.90	1.068
An efficient food distribution system is essential to the agricultural industry.	3.84	.859
Knowledge of a brand/company's production practices influences my food purchasing decisions.	3.77	1.106
Consumer preferences influence farmer/producer decisions about what type of product to grow and how it is processed.	3.72	.999
The use of pesticides has increased the yield of crops.	3.64	.728
Price is a primary factor I consider when purchasing food.	3.56	1.039
Biotechnology has increased the pest resistance of plants	3.54	.863
Livestock/animal tracking systems should be mandatory in the U.S.	3.50	1.045
Animal health and nutrition are important to farmers/producers.	3.45	1.244
The United States Department of Agriculture (USDA) regulates food handling, preparation and storage.	3.44	.902

Note. Classification of statements based on scale: $M = 4.20$ or higher = Strongly Agree; $3.40 - 4.19$ = Agree; $2.60 - 3.39$ = Unsure; $1.80 - 2.59$ = Disagree; and $1 - 1.79$ = Strongly Disagree

Table 13

Statements respondents of the showing Food, Inc. were unsure about, prior to the film

Statement	<i>M</i>	<i>SD</i>
*Organic is a primary factor I consider when purchasing food.	3.37	1.158
The Environmental Protection Agency (EPA) regulated fertilizers, pesticides and herbicides used by producers.	3.31	.900
I think super centers (Wal-mart, etc.) provide a necessary outlet for food purchases.	3.20	1.199
New technology has helped ensure the safety of agricultural processing.	3.17	1.028
*Organic products require less processing than other modified products.	3.08	.912
Food safety is a major concern of the food processing industry.	3.00	1.303
U.S. citizens spend a higher percentage of their income on food than in other countries.	2.93	1.393
I purchase food based on a brand name.	2.76	1.108
*Organic production methods are a realistic alternative to using pesticides.	2.73	1.036
*If available, I prefer to buy organic food products.	2.71	1.279
Local laws and regulations have little effect on farmers.	2.60	1.044

Note. Classification of statements based on scale: $M = 4.20$ or higher = Strongly Agree; $3.40 - 4.19$ = Agree; $2.60 - 3.39$ = Unsure; $1.80 - 2.59$ = Disagree; and $1 - 1.79$ = Strongly Disagree

Note. * Indicates a question that was reverse scored.

The respondents at the showing of *Food, Inc.*, prior to the showing of the film on Nov. 20, 2009, at Oklahoma State University, most disagreed with the statements (see Table 14) “Agricultural processing plants maintain a safe and clean working environment” ($M = 2.54$), “Confinement is an acceptable practice when raising livestock” ($M = 2.52$), “*Production of organic foods is better for the

environment” ($M = 2.50$), “*Food processing increases the cost of food products” ($M = 2.48$), “Food additives improve nutrition of processed foods” ($M = 2.30$), “There are more farmers in the U.S. than there were 10 years ago” ($M = 2.15$), and “*Farmer’s markets are a needed outlet for food purchases” ($M = 2.04$).

Table 14

Statements attendees of the showing Food, Inc. disagreed with, prior to the film

Statement	<i>M</i>	<i>SD</i>
Agricultural processing plants maintain a safe and clean working environment.	2.54	1.104
Confinement is an acceptable practice when raising livestock.	2.52	1.161
*Production of organic foods is better for the environment.	2.50	1.003
*Food processing increases the cost of food products.	2.48	.985
Food additives improve the nutrition of processed foods.	2.30	1.066
There are more farmers in the U.S. than there were 10 years ago	2.15	1.037
*Farmer’s markets are a needed outlet for food purchases.	2.04	.967

Note. Classification of statements based on scale: $M = 4.20$ or higher = Strongly Agree; $3.40 - 4.19$ = Agree; $2.60 - 3.39$ = Unsure; $1.80 - 2.59$ = Disagree; and $1 - 1.79$ = Strongly Disagree

Note. * Indicates a question that was reverse scored

Findings Related to Research Question 3: Determining respondents’ perceptions of the agricultural industry after watching the film Food, Inc.

Research question three sought to determine the perceptions of the attendees who attended the showing of *Food, Inc.* on the Oklahoma State University campus after watching the film *Food,*

Inc. Respondents were asked to rate their thoughts about the agricultural industry using a five-point Likert scale (1 = strongly disagree; 2 = disagree; 3 = unsure; 4 = agree; 5 = strongly agree).

Seven of the questions were reverse coded (5 = strongly disagreed; 4 = disagreed; 3 = unsure; 2 = agree; 1 = strongly agree). Reverse coding was used to ensure the responses to the questions were portrayed accurately in the data. The seven reverse-coded questions were constructed to read that the current agricultural industry was lacking and insufficient at meeting the standards to which the participants ascribe. Both numerical scales were used to determine means, frequencies and standard deviations.

The statement the attendees of the showing of *Food, Inc.* most strongly agree with after watching the film (see Table 15) was “Country of origin labeling should be mandatory in the U.S.” ($M = 4.20$).

Table 15

Statements attendees of the showing Food, Inc. strongly agree with, after the film

Statement	<i>M</i>	<i>SD</i>
Country of origin labeling should be mandatory in the U.S.	4.20	.774

Note. Classification of statements based on scale: $M = 4.20$ or higher = Strongly Agree; $3.40 - 4.19$ = Agree; $2.60 - 3.39$ = Unsure; $1.80 - 2.59$ = Disagree; and $1 - 1.79$ = Strongly Disagree

After the film, attendees agreed with the statements (see Table 16) “Transportation and storage affects the supply of agriculture products” ($M = 4.04$). The other statements the attendees agreed with were, “Consumer preferences influence farmer/producer decisions about what type of product to grow and how it is processed” ($M = 3.95$), “I cook meals, at home, regularly” ($M = 3.88$), “Knowledge of a brand/company’s production practices influences my food purchasing decisions” ($M = 3.87$), “An efficient food distribution system is essential to the agricultural industry” ($M = 3.77$),

“The use of pesticides has increased the yield of crops” ($M = 3.73$), “Livestock/animal tracking systems should be mandatory in the U.S.” ($M = 3.66$), “Price is a primary factor I consider when purchasing food” ($M = 3.61$), and “Biotechnology has increased the pest resistance of plants” ($M = 3.55$).

The attendees of the showing of the film *Food, Inc.* indicated an uncertainty of the following statements after watching the film (see Table 17). The attendees were unsure if “I think super centers (Wal-mart, etc.) provide a necessary outlet for food purchases” ($M = 3.29$), “The Environmental Protection Agency (EPA) regulates fertilizers, pesticides, and herbicides used by producers” ($M = 3.09$), “U.S. citizens spend a higher percentage of their income on food than in other countries” ($M = 3.02$), “I purchase food based on a brand name” ($M = 3.01$), “The United States Department of Agriculture (USDA) regulates food handling, preparation and storage” ($M = 2.99$), “*Organic is a primary factor I consider when purchasing food” ($M = 2.96$), “Animal health and nutrition are important to farmers/producers” ($M = 2.93$), “New technology has helped ensure the safety of agricultural processing” ($M = 2.77$), and “*Food processing increases the cost of food products” ($M = 2.65$).

The attendees of the showing of *Food, Inc.* most disagreed with “*Organic products require less processing than other modified products” ($M = 2.56$), “Food safety is a major concern of the food processing industry” ($M = 2.55$), “Agricultural processing plants maintain a safe and clean working environment” ($M = 2.42$), “*If available, I prefer to buy organic food products” ($M = 2.33$), “*Organic production methods are a realistic alternative to using pesticides” ($M = 2.33$), “Local laws and regulations have little effect on farmers” ($M = 2.32$), “Food additives improve the nutrition of processed foods” ($M = 2.24$), “Confinement is an acceptable practice when raising livestock” ($M = 2.17$), “*Production of organic foods is better for the environment” ($M = 2.14$), “There are more farmers in the U.S. than there were 10 years ago” ($M = 2.00$), and “*Farmer’s markets are a needed outlet for food purchases” ($M = 1.80$) (see Table 18).

Table 16

Statements attendees of the showing Food, Inc. agreed with after watching the film

Statement	<i>M</i>	<i>SD</i>
Transportation and storage affects the supply of agriculture products.	4.04	.624
Consumer preferences influence farmer/producer decisions about what type of product to grow and how it is processed.	3.95	.977
I cook meals, at home, regularly.	3.88	1.135
Knowledge of a brand/company's production practices influences my food purchasing decisions.	3.87	.981
An efficient food distribution system is essential to the agricultural industry.	3.77	.886
The use of pesticides has increased the yield of crops.	3.73	.870
Livestock/animal tracking systems should be mandatory in the U.S.	3.66	1.032
Price is a primary factor I consider when purchasing food.	3.61	1.055
Biotechnology has increased the pest resistance of plants	3.55	.899

Note. Classification of statements based on scale: *M* = 4.20 or higher = Strongly Agree; 3.40 – 4.19 = Agree; 2.60 – 3.39 = Unsure; 1.80 – 2.59 = Disagree; and 1 – 1.79 = Strongly Disagree

Findings Related to Research Question 4: Respondents' perceptions of the film Food, Inc. and the follow-up discussion of the film

Research question four sought to determine the attendees' perceptions of the film *Food, Inc.* and the discussion that followed the movie. Respondents were asked to rate their thoughts about the film and discussion using a five-point Likert scale (1 = strongly disagree; 2 = disagree; 3 = unsure; 4 = agree; 5 = strongly agree). One of the questions was reverse coded (5 = strongly disagreed; 4 = disagreed; 3 = unsure; 2 = agree; 1 = strongly agree). Two of the questions presented to the respondents were in a four-point Likert scale (1 = poor; 2 = fair; 3 = good; 4 = excellent).

The attendees of the showing of *Food, Inc.* most agreed (see Table 19) after watching the film with “The information presented in the film, *Food, Inc.* seemed trustworthy” ($M=3.78$). The respondents, after watching the film were unsure (see Table 19) about whether “The information presented in the film *Food, Inc.* seemed sensationalized” ($M = 3.20$). When the respondents rated their opinion of the film (see Table 19) *Food, Inc.* they gave the film a good rating ($M = 3.20$). The respondents also gave the discussion of the film a good rating ($M = 3.11$).

Table 17

Statements attendees of the showing Food, Inc. were unsure of after watching the film

Statement	<i>M</i>	<i>SD</i>
I think super centers (Wal-mart, etc.) provide a necessary outlet for food purchases.	3.29	1.151
The Environmental Protection Agency (EPA) regulated fertilizers, pesticides and herbicides used by producers.	3.09	.996
U.S. citizens spend a higher percentage of their income on food than in other countries.	3.02	1.406
I purchase food based on a brand name.	3.01	1.122
The United States Department of Agriculture (USDA) regulates food handling, preparation and storage.	2.99	1.092
*Organic is a primary factor I consider when purchasing food.	2.96	1.138
Animal health and nutrition are important to farmers/producers.	2.93	1.333
New technology has helped ensure the safety of agricultural processing.	2.77	1.149
*Food processing increases the cost of food products.	2.65	1.104

Note. Classification of statements based on scale: $M = 4.20$ or higher = Strongly Agree; $3.40 - 4.19$ = Agree; $2.60 - 3.39$ = Unsure; $1.80 - 2.59$ = Disagree; and $1 - 1.79$ = Strongly Disagree

Note. * Indicates a question that was reverse scored.

Findings Related to Research Question 5: Determining any difference in the respondents' perceptions of the agricultural industry before and after watching the film Food, Inc.

Research question five sought to determine any differences in perceptions of the attendees who attended the showing of on the Oklahoma State University campus before and after watching the film *Food, Inc.*. Respondents were asked to rate their thoughts about the agricultural industry using a five-point Likert scale (1 = strongly disagree; 2 = disagree; 3 = unsure; 4 = agree; 5 = strongly agree) on both a pretest and posttest survey.

Seven of the questions were reverse coded (5 = strongly disagreed; 4 = disagreed; 3 = unsure; 2 = agree; 1 = strongly agree). Reverse coding was used to ensure the responses to the questions were portrayed accurately in the data. The seven reverse-coded questions were constructed to read that the current agricultural industry was lacking and insufficient at meeting the standards to which the participants ascribe. Both numerical scales were used to determine mean, frequency and standard deviation.

To determine whether or not there was any difference in the participants' perceptions of the U.S. agricultural industry due to watching the film *Food, Inc.* and the group discussion that followed the film, a paired-samples t-test was performed on the mean of sums from the pretest and posttest questions (see Table 20). This analysis was used to determine if there was any significant difference in the respondents' perceptions of the U.S. agricultural industry. The analysis revealed a 95 percent confidence level in the correlation of the mean of sums from the pretest and posttest responses. The pair-samples t-test revealed a .764 correlation between the pretest and posttest sum of means and 5.325. The analysis gave a significance of .000, and since the significance value is less than .001, the difference in the sum of means of the pretest and posttest is statistically significant. The Cohen's D for the treatment is .378, which indicates a small to medium effect size.

Table 18

Statements attendees of the showing Food, Inc. disagreed with after watching the film

Statement	<i>M</i>	<i>SD</i>
*Organic products require less processing than other modified products.	2.56	1.037
Food safety is a major concern of the food processing industry.	2.55	1.367
Agricultural processing plants maintain a safe and clean working environment.	2.42	1.107
*If available, I prefer to buy organic food products.	2.33	1.101
*Organic production methods are a realistic alternative to using pesticides.	2.73	1.036
Local laws and regulations have little effect on farmers.	2.32	1.148
Food additives improve the nutrition of processed foods.	2.24	1.031
Confinement is an acceptable practice when raising livestock.	2.17	1.179
*Production of organic foods is better for the environment.	2.14	.952
There are more farmers in the U.S. than there were 10 years ago	2.00	1.088
*Farmer's markets are a needed outlet for food purchases.	1.80	.798

Note. Classification of statements based on scale: $M = 4.20$ or higher = Strongly Agree; $3.40 - 4.19$ = Agree; $2.60 - 3.39$ = Unsure; $1.80 - 2.59$ = Disagree; and $1 - 1.79$ = Strongly Disagree

Note. * Indicates a question that was reverse scored.

Table 19

Respondents' rating of the film Food, Inc. and the follow-up discussion

Statement	<i>M</i>	<i>SD</i>
The information presented in the film <i>Food, Inc.</i> seemed trustworthy.	3.78	.970
The information presented in the film <i>Food, Inc.</i> seemed sensationalized.	3.20	1.141
**Please give your rating of the film <i>Food, Inc.</i>	3.15	.747
**Please give your rating of the discussion of the film <i>Food, Inc.</i>	3.11	.737

Note. Classification of statements based on scale: *M* = 4.20 or higher = Strongly Agree; 3.40 – 4.19 = Agree; 2.60 – 3.39 = Unsure; 1.80 – 2.59 = Disagree; and 1 – 1.79 = Strongly Disagree

Note. ** Indicates the question used a four-point Likert scale (1 = poor; 2 = fair; 3 = good; 4 = excellent)

Table 20

Pretest and Posttest mean of sums in a paired-sample t-test for change in perceptions about the agricultural industry

Group	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>	<i>W</i> ²
Pretest	95	3.1297	.35219	--	--	--
Posttest	95	2.9899	.38654	5.325	.000	.378

df = 94; $\alpha = 0.05$

The means from the pretest and posttest analyzed to determine if there was any difference in the respondents' perceptions before and after watching the film *Food, Inc.* and participating in the discussion after the film (see Table 21).

Table 21

Comparison of means from the responses from the pretest and posttest surveys

Statement	Pretest <i>M</i>	Posttest <i>M</i>
Consumer preferences influence farmer/producer decisions about what type of product to grow and how it is processed.	3.72	3.95
*Production of organic foods is better for the environment.	2.50	2.14
The Environmental Protection Agency (EPA) regulated fertilizers, pesticides and herbicides used by producers.	3.31	3.09
The use of pesticides has increased the yield of crops.	3.64	3.73
Animal health and nutrition are important to farmers/producers.	3.45	2.93
*Organic production methods are a realistic alternative to using pesticides.	2.73	2.33
Confinement is an acceptable practice when raising livestock.	2.52	2.17
There are more farmers in the U.S. than there were 10 years ago	2.15	2.00
Local laws and regulations have little effect on farmers.	2.60	2.32
Biotechnology has increased the pest resistance of plants	3.54	3.55
Food safety is a major concern of the food processing industry.	3.00	2.55
*Food processing increases the cost of food products.	2.48	2.65
An efficient food distribution system is essential to the agricultural industry.	3.84	3.77
The United States Department of Agriculture (USDA) regulates food handling, preparation and storage.	3.44	2.99
*Organic products require less processing than other modified products.	3.08	2.56
Transportation and storage affects the supply of agriculture products.	4.10	4.04
Livestock/animal tracking systems should be mandatory in the U.S.	3.50	3.66
Agricultural processing plants maintain a safe and clean working environment.	2.54	2.42
New technology has helped ensure the safety of agricultural processing.	3.17	2.77
Food additives improve the nutrition of processed foods.	2.30	2.24
Knowledge of a brand/company's production practices influences my food purchasing decisions.	3.77	3.87
Country of origin labeling should be mandatory in the U.S.	3.90	4.20
U.S. citizens spend a higher percentage of their income on food than in other countries.	2.93	3.02
*If available, I prefer to buy organic food products.	2.71	2.33
I cook meals, at home, regularly.	4.03	3.88
Price is a primary factor I consider when purchasing food.	3.56	3.61
*Organic is a primary factor I consider when purchasing food.	3.37	2.96
I purchase food based on a brand name.	2.76	3.01
*Farmer's markets are a needed outlet for food purchases.	2.04	1.80
I think super centers (Wal-mart, etc.) provide a necessary outlet for food purchases.	3.20	3.29

Note. Classification of statements based on scale: $M = 4.20$ or higher = Strongly Agree; $3.40 - 4.19$ = Agree; $2.60 - 3.39$ = Unsure; $1.80 - 2.59$ = Disagree; and $1 - 1.79$ = Strongly Disagree

Note. * Indicates a question that was reverse scored.

Chapter Summary

The findings from the pretest and posttest surveys showed that the respondents' chose to cook meals at home on a regular basis, believe country of origin labeling should be mandatory, and knowledge of a company's practices does influence their buying decisions. After the showing of the film *Food, Inc.*, respondents' certainty of the farmers' diligence in raising their animals in a healthy atmosphere was diminished. Also, respondents' were no longer unsure, after the film, about organic practices being a realistic alternative to current agricultural industry methods, and believed organic methods to be a possibility. Also, the respondents' perceptions of the agricultural processing industry were altered after watching the film *Food, Inc.* The respondents were unsure about whether or not food safety is a major concern of the food processing industry; however, after the film the respondents changed their perceptions and did not believe the food processing industry was concerned with food safety.

CHAPTER V

DISCUSSION AND RECOMMENDATIONS

Introduction

Chapter I served as an introduction to the study. This research study was focused on determining the influence the media, in the form of the film *Food, Inc.*, had on consumer perceptions of the agricultural industry. Verbeke (2005) wrote that many factors influenced the choices and behaviors of consumers. Also, when unsubstantiated claims of the agricultural industry were presented to the public, the perceived safety and reliability of the industry were diminished. The purpose of this study was to determine the impact the media had on the public's perceptions of today's agriculture.

The literature review in Chapter II highlights related research about the topics of the media, agriculture, and consumer perceptions. The literature review also established a framework for the study. The literature review in Chapter II highlights related research about the topics of the media, agriculture, and consumer perceptions. The literature review also established a framework for the study. The agenda setting theory was used as the foundation of this study to determine if the media can alter the perceptions of individuals, with regards to the agricultural industry. The agenda setting theory posits that the media can increase the importance of an issue or event in an individual's mind by the language used to describe the issue and the amount of times the issue is brought to the attention of the individual (Severin & Tankard, 2001).

In Chapter III, a description of the methods and procedures were given. The pretest and posttest surveys were developed using surveys written by Frick, Birkenholz and Machtmes (1995), Pense and Leising (2004), Giandomenico (2000) and Robertson (2009). The instrument was designed to determine the media's influence on the participants' perceptions of the agricultural industry.

In Chapter IV the findings from the data collection for the research were presented. The findings included the mean and standard deviation for each question, both in the pretest and posttest surveys. The results were then analyzed for mean, frequency and standard deviation.

Purpose

The purpose of this study was to determine the immediate influence the movie *Food, Inc.* had on the perceptions of the agricultural and food processing systems by those attending a showing of the film on the Oklahoma State University campus on Nov. 20, 2009.

Research Questions

The specific research questions guiding this study were:

1. What are the demographic characteristics of attendees at a showing of *Food, Inc.* on Nov. 20, 2009, at the Oklahoma State University campus?
2. What are the attendees' perceptions of the agricultural industry before viewing the film *Food, Inc.*?
3. What are the attendees' perceptions of the agricultural industry after viewing the film *Food, Inc.*?
4. What are the attendees' perceptions of the film *Food, Inc.* and the follow-up discussion of the film?

5. Do attendees' perceptions of the agricultural industry differ after watching the film *Food, Inc.* and participating in the follow-up discussion of the film?

Population

The population for this study consisted of Oklahoma State University students, faculty, staff, Stillwater, Okla., residents, and anyone else interested in watching the film *Food, Inc.* on Nov. 20, 2009. The promotion and showing of the film on the Oklahoma State University campus was organized by a university organization. The population that chose to attend the voluntary event (N = 110) was asked to complete the pretest and posttest surveys.

Summary of Findings

Summary of Research Question 1 Findings

The first research question for this study involved determining the demographics of the participants at the showing of *Food, Inc.* on the Oklahoma State University campus. The participants were asked 12 questions in the pretest and posttest survey to determine their demographics.

The age of respondents selected showed the majority of the participants were between the ages of 18 – 25 years. The question resulted in a mean of 1.91 and a standard deviation of 1.445 on a five-point scale (1 = 18 – 25 years in age; 2 = 26 – 35 years; 3 = 36 – 45 years; 4 = 46 -55 years; and 5 = over 55 years in age). The survey showed that 62.1 percent ($n = 59$) of the respondents were between 18 – 25 years in age.

Ethnicity of the participants was measured and showed that 84.2 percent ($n = 80$) of the participants were of Caucasian ethnicity. The question was based on a five-point scale (1 = African-American; 2 = Asian or Pacific Islander; 3 = American Indian or Alaskan Native; 4 = Caucasian; 5 = Hispanic ethnicity). The mean for the question was 3.91 with a standard deviation of .685.

Education level of the participants was found for the participants. Of the respondents, 55.3 percent ($n = 52$) indicated a high school diploma or equivalent as the highest level of completed education. This question was measured on a five-point scale (1 = high school or equivalent; 2 = associate's degree; 3 = bachelor's degree; 4 = master's degree; 5 = doctorate, law or medical degree). The mean for the question was 2.28 with a standard deviation of 1.555.

The participants' classification at Oklahoma State University was determined, as 56.4 percent ($n = 53$) were undergraduates at the institution. The question was based on a five-point scale (1 = undergraduate student; 2 = graduate student; 3 = faculty member; 4 = staff member; 5 = indicating other). The question revealed a mean of 1.89 and a standard deviation of 1.28.

Experience with agriculture was determined as a demographic characteristic. Of the participants, 41.1 percent ($n = 39$) indicated having worked on a farm while 38.9 percent ($n = 37$) indicated having no experience with agriculture. This question was measured by allowing participants to mark all boxes that applied to them. The choices for this question were: I have worked on a farm, I have lived on a farm, I have participated in 4-H, I have participated in FFA, I am/was enrolled in a high school agriculture course, I am/was enrolled in a college of agriculture course, I have worked in the processing agriculture industry, and not applicable.

The type of residence the participants lived in was asked using a five-point scale (1 = in town residence – no garden or livestock animals; 2 = in town residence – with garden and/or livestock animals; 3 = indicated rural residence – no crops or livestock animals; 4 = rural residence – with garden and/or livestock animals, but not for farming; 5 = rural residence – on a working farm). Of the respondents, 65.3 percent ($n = 62$) lived in town with no garden and/or livestock. The question had a mean of 1.60 and a standard deviation of .972.

The participants were asked to indicate their eating preference. Of the participants, 86.2 percent ($n = 81$) indicated following an omnivore eating lifestyle, eating meat, dairy and plant products. The question had a mean of 1.28 and a standard deviation .795.

The buying habits of the participants was revealed by allowing them to choose from the following choices: large supermarkets, small supermarkets, farmer's markets, food co-ops, health food stores, organic food markets, and other. Of the choices, 87.4 percent ($n = 83$) of the participants selected large supermarkets.

The participants' previous exposure to the film *Food, Inc.* was established, and only 3.2 percent ($n = 3$) of the population had previously seen the film before the showing at Oklahoma State University.

Summary of Research Question 2 Findings:

The second research question was to determine the participants' perceptions of the agricultural industry before they watched *Food, Inc.*

The attendees of the film *Food, Inc.* on the Oklahoma State University campus most agreed with the statement, "Transportation and storage affects the supply of agriculture products" ($M = 4.10$). The attendees also agreed with "I cook meals, at home, regularly" ($M = 4.03$), "Country of origin labeling should be mandatory in the U.S." ($M = 3.90$), "An efficient food distribution system is essential to the agricultural industry" ($M = 3.84$), "Knowledge of a brand/company's production practices influences my food purchasing decisions" ($M = 3.77$), "Consumer preferences influence farmer/producer decisions about what type of product to grow and how it is processed" ($M = 3.72$), "The use of pesticides has increased the yield of crops" ($M = 3.64$), "Price is a primary factor I consider when purchasing food" ($M = 3.56$), "Biotechnology has increased the pest resistance of plants" ($M = 3.54$), "Livestock/animal tracking systems should be mandatory in the U.S." ($M = 3.50$), "Animal health and nutrition are important to farmers/producers" ($M = 3.45$), and "The United States Department of Agriculture (USDA) regulates food handling, preparation and storage" ($M = 3.44$).

The attendees of the showing of *Food, Inc.*, prior to the showing of film, most disagreed with the statements "Agricultural processing plants maintain a safe and clean working environment" ($M = 2.54$), "Confinement is an acceptable practice when raising livestock" ($M = 2.52$), "**Production of

organic foods is better for the environment” ($M = 2.50$), “*Food processing increases the cost of food products” ($M = 2.48$), “Food additives improve nutrition of processed foods” ($M = 2.30$), “There are more farmers in the U.S. than there were 10 years ago” ($M = 2.15$), and “*Farmer’s markets are a needed outlet for food purchases” ($M = 2.04$).

Summary of Research Question 3 Findings:

The third research question was to determine the participants’ perceptions of the agricultural industry after they watched *Food, Inc.*

After the film attendees agreed with the statement, “Transportation and storage affects the supply of agriculture products” ($M = 4.04$). The other statements the attendees agreed with were, “Consumer preferences influence farmer/producer decisions about what type of product to grow and how it is processed” ($M = 3.95$), “I cook meals, at home, regularly” ($M = 3.88$), “Knowledge of a brand/company’s production practices influences my food purchasing decisions” ($M = 3.87$), “An efficient food distribution system is essential to the agricultural industry” ($M = 3.77$), “The use of pesticides has increased the yield of crops” ($M = 3.73$), “Livestock/animal tracking systems should be mandatory in the U.S.” ($M = 3.66$), “Price is a primary factor I consider when purchasing food” ($M = 3.61$), and “Biotechnology has increased the pest resistance of plants” ($M = 3.55$).

The attendees of the showing of *Food, Inc.* most disagreed with the following statements after watching the film: “*Organic products require less processing than other modified products” ($M = 2.56$), “Food safety is a major concern of the food processing industry” ($M = 2.55$), “Agricultural processing plants maintain a safe and clean working environment” ($M = 2.42$), “*If available, I prefer to buy organic food products” ($M = 2.33$), “*Organic production methods are a realistic alternative to using pesticides” ($M = 2.33$), “Local laws and regulations have little effect on farmers” ($M = 2.32$), “Food additives improve the nutrition of processed foods” ($M = 2.24$), “Confinement is an acceptable practice when raising livestock” ($M = 2.17$), “*Production of organic foods is better for the

environment” ($M = 2.14$), “There are more farmers in the U.S. than there were 10 years ago” ($M = 2.00$), and “*Farmer’s markets are a needed outlet for food purchases” ($M = 1.80$).

Summary of Research Question 4 Findings:

The fourth research question sought to determine the participants’ perceptions of the film *Food, Inc.* and the follow-up discussion of the film.

The attendees of the showing of *Food, Inc.* most agreed after watching the film *Food, Inc.*, with “The information presented in the film, *Food, Inc.*, seemed trustworthy” ($M = 3.78$).

The respondents, after watching the film *Food, Inc.*, were unsure (Table 16) about whether “The information presented in the film *Food, Inc.* seemed sensationalized” ($M = 3.20$).

When the respondents rated their opinion of the film (Table 16) *Food, Inc.* they gave the film a good rating ($M = 3.20$). The respondents also gave the discussion of the film a good rating ($M = 3.11$).

Summary of Research Question 5 Findings:

The fifth research question was to determine if there was any difference in the participants’ perceptions of the agricultural industry before and after they watched *Food, Inc.* and participated in a discussion following the film.

To determine any difference in the participants’ perceptions of the U.S. agricultural industry after watching the film *Food, Inc.* and the group discussion that followed the film, a paired-samples t-test was performed on the mean of sums from the pretest and posttest questions. This analysis was used to determine if there was any significant difference in the respondents’ perceptions of the U.S. agricultural industry as a whole. The analysis revealed a 95 percent confidence level in the correlation of the mean of sums from the pretest and posttest responses. The pair-samples t-test revealed a .764 correlation between the pretest and posttest sum of means. The analysis gave a .000 significance, and since the significance value is less than .001 the difference in the sum of means of the pretest and

posttest is significant. The effect size of the treatment was .378, as determined by the Cohen's D analysis.

Conclusions

Conclusions Related to Research Question 1:

The demographic questions contained on the pretest survey revealed characteristics of the sample population. The population sampled for this study was primarily between the ages of 18 – 25 years of age. This age range is not surprising, given the location of data collection was a university campus. As expected, based on the found age range, attendees were primarily undergraduate students pursuing higher education at Oklahoma State University.

The attendees' were overwhelmingly of Caucasian ethnicity with a few attendees representing the African-American, Asian or Pacific Islander, American Indian or Alaskan Native, or Hispanic ethnicities.

Of the participants, more than 60 percent had some experience in a farm setting, 40 percent of the attendees had enrolled in an agricultural course, either in high school or college, while almost 39 percent had no agricultural experience. This question revealed more than half of the attendees had some experience with agriculture, and their knowledge in the area would be expected to be higher than those without any experience in agriculture.

The attendees of the film *Food, Inc.* primarily lived in a town residence with no garden or livestock animals. Given the age range and education level, this finding is reasonable. While attending college most students are on a fixed-income and prefer to live close to campus; thus, they live in town without the expense or responsibility of a garden and livestock.

Interestingly, of the participants more than 86 percent considered themselves to follow an omnivore eating preference. The omnivore eating preference indicated eating meat, plant and dairy products. More than five percent of the attendees indicated following a vegetarian (consuming plant

and dairy products only) eating preference. The survey also revealed more than five percent of the attendees followed a pescetarian eating preference, eating plant, dairy and fish products. From this finding it can be determined the majority of the participants prefer to follow a diet including meat, plant and dairy products. According to Crowley (2004) most individuals who choose to avoid dairy or meat products originally do so for health reasons, and then become more informed of the issues surrounding food choice. Therefore, it can be assumed that the majority of the population, following an omnivore eating preference, does not have any major health concerns with consuming meat, dairy and plant products. At this juncture it is difficult to determine if this eating preference is founded on research, convenience or tradition.

It was found the majority of the population experienced the film *Food, Inc.* for the first time during this study's data collection. This finding shows the attendees were unaware of the contents of the film and viewed the film from an objective manner with regards to the potential subject matter.

It can be concluded the majority of the attendees were undergraduate students between the ages of 18 – 25 years old who ascribe to a diet of meat, plant and dairy products, with some agriculture experience, live in-town, and had never seen the film *Food, Inc.* prior to this study.

Conclusions Related to Research Question 2:

The data showed the questions the majority of the attendees agreed with prior to watching the film *Food, Inc.* were: transportation and storage affects the supply of agriculture products; I cook meals, at home, regularly; country of origin labeling should be mandatory in the U.S.; an efficient food system is essential to the agricultural industry; and knowledge of a brand/company's production practices does influence their buying decisions.

The attendees agreed with the statements that transportation and storage affects the supply of agriculture products and an efficient food system is essential to the agricultural industry. Their understanding and acknowledgement of the nation's need for a food system that can provide food for

its citizens from one side of the country to the other in an efficient manner could indicate their comprehension of the amount of food and labor needed to provide the U.S. citizens with food.

Whether or not the attendees regularly cooked meals at home was established to determine their familiarity with purchasing and interacting with agricultural products. By the respondents indicating they regularly cook meals at home, they must make buying decisions at the grocery store on a frequent basis. This interaction with agriculture products gives them an insight and power to influence the agricultural industry trends, even if they are unaware. The respondents can influence the trends of the agricultural industry with their buying habits. This consumer demand will travel down to the producer and affect what products they choose to grow in the future.

Country of origin labeling should be mandatory was another area upon which the attendees agreed. It can be postulated the attendees have received some information regarding this notion due to the media coverage of food safety crises.

Interestingly, the attendees demonstrated their desire for purchasing products from companies whose values and ethics coincide with their own. This marks an interesting finding for companies and their production practices. To gain and maintain consumers they must align their production practices to meet the desires and needs of consumers, not just tangibly but ethically as well.

These top responses by the attendees provide insight into the perceptions the individuals within the demographics described earlier about the current agricultural industry. This finding in itself can be valuable to leaders and decision makers in the agricultural industry.

The statements the attendees most disagreed with were agricultural processing plants maintain a safe and clean working environment, confinement is an acceptable practice when raising livestock, and production of organic foods is better for the environment.

Whether the respondents' perceptions of agricultural processing plants was created by reading Upton Sinclair's *The Jungle* or by another documentary film, it is important to recognize the general public's negative perception of the agricultural processing industry. Without the agricultural

industry acknowledging the negative perception held by citizens, the perception will continue to precipitate to younger generations.

Previous media coverage of legislation with regards to animal confinement could account for the attendees' knowledge of the issue. With legislation in the media regarding gestation crates and farrowing crates, the attendees could have formed their opinions prior to the showing of *Food, Inc.* This is of importance to note that the legislation circulating throughout the country, even if it is not passed, does generate media attention and forms perceptions for the general public.

The statement, production of organic foods is better for the environment, was reverse coded to create a statement that agrees with the current agricultural industry practices. With that understanding, the respondents actually agreed with the statement; however, the statement infers the respondents hold the opposite statement as negative. Therefore, the attendees' disagree with current agricultural production standards, and hold a higher perception of organic production methods, with regards to the benefits for the environment.

Conclusions Related to Research Question 3:

After watching the film *Food, Inc.* the questions with which attendees were most likely to agree were transportation and storage affects the supply of agriculture products; consumer preferences influence farmer/producers decisions about what type of product to grow and how it is processed; I cook meals, at home, regularly; and knowledge of a brand/company's production practices influences my food purchasing decisions.

It is interesting to note the similarity in the top responses attendees were likely to agree with before and after the film *Food, Inc.* The top responses in the pretest and posttest are almost identical, and only differ slightly in mean. The issues surrounding the top responses the attendees were most likely to agree with were discussed in the film *Food, Inc.* It can be concluded the perceptions the attendees had prior to the film were substantiated or supported by the film *Food, Inc.* This finding

supports the research conducted by Ruth, Lundy, and Park (2005) that media can impact individuals' existing perceptions of agriculture, positively or negatively.

The attendees were most likely to disagree with the statements of organic products require less processing than other modified products, food safety being a major concern of the food industry, agricultural processing plants maintain a safe and clean work environment, and if available, I prefer to buy organic products.

It is important to note the statements regarding organic products were reverse coded because the statement disagreed with current agricultural practices. If the responses to the statement were interpreted with the understanding of the reverse-coded scale, the attendees agreed with the statement; therefore, they disagreed with current agricultural industry standards.

After the film *Food, Inc.*, attendees' perceptions of organic foods and its production methods were better than current agricultural industry practices and production methods. The attendees' perceptions of organic production and processing were reflected in all questions related to organic foods, production and processing, in the posttest survey. Whether this notion is based on research or a popular niche is undetermined. However, it is obvious this population, with the demographic characteristics described, believes organic products are more beneficial for the environment, and could play an integral role in their purchases. Thus, it can be inferred the attendees' perceptions of the organic agricultural market was fortified from the showing of *Food, Inc.* as Ruth, Lundy, and Park (2005) experienced in their research. The media can strengthen a faint, or in this case an unsure, perception held by individuals by solidifying in their minds the issue's relevance and importance in their lives.

Interestingly, the attendees' perceptions of the food processing system were altered after watching the film *Food, Inc.* The attendees' lack of trust in safety being a cornerstone of the food industry is disconcerting. Without the trust and support of the general public, the food industry could be in jeopardy in the future.

Also, after watching *Food, Inc.*, the attendees' questioned the safety and cleanliness of the food processing system. This perception could be contributed to the section of the film dedicated to highlighting the processing practices of a few large companies. The attendees' perceptions could be impacted by their emotions of watching the happenings at an agricultural processing plant. It cannot be determined whether the attendees' perceptions of the food processing system is based purely on a logical rationale or if it is tainted by their emotional rationale.

Conclusions Related to Research Question 4:

The attendees viewed the film *Food, Inc.* as a trustworthy piece of media. Following the media-system dependency theory, the public relies on the media to inform them of issues and events, as long as the media source is viewed as trustworthy (Ball-Rokeach, 1985, Whaley & Tucker, 2004). Therefore, the respondents in this study viewed the film *Food, Inc.* as a trustworthy media source and used the information provided by the film to form their perceptions about the agricultural industry.

Conclusions Related to Research Question 5:

The correlation shown in the data analysis of the pretest and posttest mean of sums shows an individual's perceptions before watching the film *Food, Inc.* is a strong predictor of their perceptions after watching the film.

The impact of the film *Food, Inc.* can be seen in the difference in responses in several questions from the pretest and posttest survey. The questions with a significant change in the attendees' perceptions were: organic production methods are a realistic alternative to using pesticides, production of organic foods is better for the environment, food safety is a major concern for the food industry, animal health and nutrition are important to farmers, farmer's markets are a needed outlet for food purchases, organic products require less processing than other modified products, confinement is an acceptable practice, and new technology has helped ensure safety of agricultural processing.

After comparing the survey results from before watching the film *Food, Inc.* to after watching the film and participating in the discussion that followed, the attendees' perceptions of organic production and processing were altered. The attendees went from indicating they were unsure about organic methods to agreeing with organic methods being superior for health, the environment and long-term sustainability. It is evident the film *Food, Inc.* did increase the attendees' perceptions of the organic agricultural industry, and as a result could impact the agricultural industry in the future. As consumers demand organic products and practices from the industry, companies will have no choice but to comply, even if organic practices are not as efficient as today's industry practices. The media has altered the perceptions of the consumers, whether based on science or emotion, and the industry will need to meet the needs of the consumers.

Also, the need for farmer's markets as an outlet for food purchases increased in the perceptions of the attendees. Again, the film *Food, Inc.* highlighted a farmer who produced all-natural products and the audience could have related more easily to this *small farmer* than large corporations, and increased their desire to interact and support the *small farmer*. Whether or not the attendees will buy more products from the farmer's market than at a large commercial operation is unknown. This change in perception could be based on the attendees' emotional rationale at the time, and may not translate to their everyday life.

Another finding that may be founded in the attendees' emotional rationale is their disagreement with confinement as a practice used by producers. Whether the attendees are more concerned with the animals' welfare based on an emotional or science-based rationale is unknown. It is also unknown if attendees would be willing to pay more for agricultural products that were not from animals living in confinement.

A finding of great importance is that the attendees' had a negative perception of the agricultural processing industry's interest in creating the safest products possible after watching the film *Food, Inc.* As stated before, the public's lack of trust in the agricultural industry could be detrimental in the future and must be addressed immediately by companies and the government.

It is interesting to note, the areas in which attendees' perceptions of the agricultural industry were altered were issues discussed in the film *Food, Inc.* From this it can be concluded the film *Food, Inc.* did impact the attendees' perceptions; therefore, it has power to influence the perceptions of the general public since it was viewed as a trustworthy piece of media (Ball-Rokeach, 1985).

Recommendations

Recommendations for Action

1. Agricultural industry representatives should take notice of the media being disseminated to the public, and design strategic plans to highlight the benefits of current agricultural industry practices.
2. Agriculturalists should recognize the media does influence the perceptions of the general public, and this could change the demands placed on them from consumers.
3. With the understanding that the media can influence perceptions of individuals, agricultural industry representatives should take action and produce materials to promote positive perceptions of the current agricultural industry as a preemptive measure.
4. Agricultural industry representatives should be encouraged to create educational materials for youth promoting the agricultural industry practices. Creating a positive perception of the agricultural industry at a young age could be beneficial for future industry.
5. Agriculturalists should make great efforts to educate and explain the scientific reasoning for current agricultural industry practices. Uncertainty in current practices could be a contributing factor to perceptions.
6. This study should be conducted at different times during the year, and on different populations, to determine if individuals have different perceptions of the agricultural industry and the film *Food, Inc.*, based on holidays, events, etc., than they did in this particular study.

Recommendations for Further Research

1. Further research should examine the long-term impact of the altered perceptions the film *Food, Inc.* created on individuals buying decisions.
2. Research should be focused on determining the type of rationale individuals use to form their perceptions of the agricultural industry, whether their perceptions are formed based on science and research or on emotions.
3. Future research determining the impact of other media sources on the perceptions individuals hold regarding the agricultural industry could be beneficial to understand which type of media is most impactful on the formation of perceptions.
4. With new social media outlets emerging, research examining how the agricultural industry could use this technology to form positive perceptions of the agricultural industry could aid in the public's understanding of current agricultural industry practices.
5. Research focused on determining the key factors that contribute to individuals having a higher perception of organic production practices could shed light on what modifications the agricultural industry could integrate into current practices to satisfy the needs and desires of consumers.

Discussion/Implications

Prior to this study, it was unknown whether the film *Food, Inc.* would influence the perceptions individuals on the Oklahoma State University campus held regarding the agricultural industry. This study revealed the film *Food, Inc.* did impact the public's perceptions of the agricultural industry.

The study supported the finding of Ruth, Lundy, and Park (2005) that individuals who previously held perceptions of the agricultural industry would have their perceptions substantiated by

the film *Food, Inc.* and the film would further solidify their previously held perceptions of the agricultural industry, either positively or negatively.

With this understanding, it is important for agricultural industry representatives to form strategic communications plans to combat the creation of negative perceptions of the agricultural industry among the general public. The public has an interest in where their food comes from and how it gets to their plate, and the agricultural industry should take a proactive stance and create marketing materials to create positive perceptions of the agricultural industry before negative perceptions can be formed by other organizations.

An example of creating a positive perception of the agricultural industry can be seen in the *Got Milk* campaign, spear-headed by the California Milk Processor Board. By having celebrities and people of interest supporting the dairy industry, the marketing campaign gave the public a positive perception of the dairy industry. If nothing else, the campaign brought the idea of drinking milk to the forefront of the public's mind.

By creating communications plans that highlight the agricultural industry in a positive light, the general public can use the provided information to form a perception of agriculture with information provided by people within the industry, not extremists.

REFERENCES

- Ball-Rokeach, S. J. (1985). The origins of individual media-system dependency a sociological framework. *Communication Research*, 12(4). 485-510.
- Ball-Rokeach, S. J. & DeFleur, M. L. (1976). A dependency model of mass-media effects. *Communication Research*, 3(1). 3-21.
- Bennett, M. (1995). Tell me my food is safe! *AgriMarketing*, 33(1). 16-18.
- Brady, J. T., Peace, L., & Brown, D. (2009). Consumer perceptions of food-borne illness risks before and after the 2006 E. Coli events. *Family and Consumer Research Journal*, 37(4), 456-466.
- Brewer, M.S. & Rojas, M. (2007). Consumer attitudes toward issues in food safety. *Journal of Food Safety*, 28, 1-22.
- Chou, M. (1991). Two years after the Alar crisis. *Cereal Foods World*, 36(6), 526-527.
- Cottone, E. & Byrd-Bredbenner, C. (2007). Knowledge and psychosocial effects of the film *Super Size Me* on young adults. *Journal of the American Dietetic Association*, July, 1197-1203.
- Cox, C. B. (1994). *An assessment of the knowledge and perceptions of agriculture by selected forth grade teachers in Oklahoma*. Unpublished doctoral dissertation, Oklahoma State University – Stillwater.
- Crowley, E. (2004). Book review [Review of the book *Vegetarianism: Movement or Moment?*]. *Agriculture and Human Values*, 21, 423.
- Food, Inc. (n.d.). Retrieved November 14, 2009, from <http://www.foodincmovie.com>

- Frick, M. J., Birkenholz, R. J., & Machtmes, K. (1995). Rural and urban adult knowledge and perceptions of agriculture. *Journal of Agricultural Education*, 36(2), 44-53.
- Hoffman, L. H., Glynn, C. J., Huge, M. E., Sietman, R. B., & Thomson, T. (2007). The role of communication in public opinion processes: Understanding the impacts of intrapersonal, media, and social filters. *International Journal of Public Opinion Research*, 19(3), 289-312.
- Huck, I. Quiring, O., & Brosius, H. B. (2009). Perceptual phenomena in the agenda setting process. *International Journal of Public Opinion Research*, 21(2), 139-164.
- International Food Information Council (IFIC). (2008). 2008 Food biotechnology: A study of U.S. consumer trends. Retrieved April 10, 2010 from <http://www.foodinsight.org/Resources>.
- Janssen, S. & Leemans, H. (1988). Differences in consumer behavior between buyers of literature. *Poetics*, 17, 563-575.
- Kenning, P. (2008). The influence of general trust and specific trust on buying behavior. *International Journal of Retail & Distribution Management*, 36(6), 461-476.
- King Corn (n.d.). Retrieved March 29, 2010 from <http://kingcorn.net>
- Lavidge, R. J. & Steiner, G. A. (1961). A model for predictive measurements of advertising effectiveness. *The Journal of Marketing*, 25(6), 59-62.
- Lundy, L. K., Ruth, A. M., & Park, T. D. (2007). Entertainment and agriculture: An examination of the impact of entertainment media on perceptions of agriculture. *Journal of Applied Communications*, 91(1 & 2), 65-79.
- Giandomenico, L. (2000) A tale of two co-ops: Personal characteristics, food behaviors and food consciousness in the food cooperative organizational context. *Unpublished Dissertation*, Cornell University – Ithaca.
- Mayer, J. (1977). Give thanks for safe food. *Family Health*, 9(11), 37.
- McCombs, M. E. and Shaw, D. L. (1993). The evolution of agenda-setting research: Twenty-five years in the marketplace of ideas. *Journal of Communication*, 43(2), 58-67.

- Memery, J., Megicks, P., & Williams, J. (2005). Ethical and social responsibility issues in grocery shopping: A preliminary typology. *Qualitative Market Research*, 8(4), 399-412.
- Merriam-Webster's collegiate dictionary (10th ed). (1993). Springfield, MA: Merriam-Webster.
- Miller, K. (Eds). (2002). Communication theories: Perspectives, processes, and contexts. Boston: McGraw Hill.
- Oklahoma State University (2006). Oklahoma State University history. Retrieved April 28, 2010, from <http://osu.okstate.edu/index.com>
- Oklahoma State University (2009). Oklahoma State University student body profile. Retrieved April 26, 2010 from <http://vpaf.okstate.edu/IRIM/StudentProfileDownload.html>
- Pense, S. L. & Leising, J. G. (2004). An assessment of food and fiber systems knowledge in selected Oklahoma high schools. *Journal of Agricultural Education*, 45(3), 86-96.
- Robertson, J. T. (2009). *Media dependency during a potential agricultural terrorist attack on the U.S. food and fiber system*. Unpublished Dissertation, Oklahoma State University – Stillwater.
- Ruth, A. M., Eubanks, E. E., & Telg, R. (2005). Framing of mad cow media coverage. *Journal of Applied Communications*, 89(4), 39-54.
- Ruth, A. M., Lundy, L. K., & Park, T. D. (2005). Glitz, glamour, and the farm: Portrayal of agriculture as the simple life. *Journal of Applied Communications*, 89(4), 21-37.
- Schlenker, W. (2009). Consumer and market responses to mad cow disease. *American Journal of Agricultural Economics*, 91(4), 1140-1152.
- Severin, W. J. & Tankard, J. W. (2001). *Communication Theories: Origins, Methods, and Uses in the Mass Media Fifth Edition*. New York: Addison Wesley Longman, Inc.
- Shank, F. R. & Carson, K. L. (1992). What is safe food? *American Chemical Society*, 484, 26-34.
- Shank, F. R., Carson, K. L., & Willis, C.A. (1991). Evolving food safety. *American Chemical Society*, 446(1), 297 -307.

- Sijtsema, S., Linnemann, A., Gaasbeek, T. V., Dagevos, H., & Jongen, W. (2002). Variables influencing food perception reviewed for consumer-oriented product development. *Critical Reviews in Food Science and Nutrition*, 42(6), 565-581.
- Stone, G., Singletary, M., & Richmond, V. P. (Eds). (1999). Clarifying communication theories: A hands on approach. Ames, Iowa: Iowa State University Press.
- Sweeney, S., & Hollifield, C. (2000). Influence of agricultural trade publication on the news agendas of national newspapers and news magazines. *Journal of Applied Communications*, 84(1), 23-45.
- Ten Eyck, T. A. (2000). The marginalization of food safety issues: An interpretative approach to mass media coverage. *Journal of Applied Communications*, 84(2), 29-47.
- Thomson, J. S. & Kelvin, R. E. (1996). Suburbanites' perceptions about agriculture: The challenge for media. *Journal of Applied Communications*, 80(3), 11-20.
- Verbeke, W. (2005). Agriculture and the food industry in the information age. *European Review of Agricultural Economics*, 32(3), 347-368.
- Vermeir, I. & Verbeke, W. (2006). Sustainable food consumption: Exploring the consumer "attitude – behavioral intention" gap. *Journal of Agricultural and Environmental Ethics*, 19, 169-194.
- Weatherell, C., Tregear, A., & Allinson, J. (2003). In search of the concerned consumer: UK public perceptions of food, farming and buying local. *Journal of Rural Studies*, 19, 233-244.
- Whaley, S. R. & Tucker, M. (2004). The influence of perceived food risk and source trust on media system dependency. *Journal of Applied Communications*, 88(1), 9-27.

APPENDICES

APPENDIX A

INSTITUTIONAL REVIEW BOARD

Oklahoma State University Institutional Review Board

Date: Wednesday, November 18, 2009

IRB Application No AG0941

Proposal Title: Influence and Persuasion of the Media Regarding Perceptions of the U.S. Agriculture Industry Upon Viewing the Film Food, Inc.

Reviewed and
Processed as: Exempt

Status Recommended by Reviewer(s): Approved Protocol Expires: 11/17/2010

Principal
Investigator(s):

Jessica Holt
2518 N. Glenwood Dr.
Stillwater, OK 74075

Dwayne Cartmell
448 Ag Hall
Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

☒ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

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

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Beth McTernan in 219 Cordell North (phone: 405-744-5700, beth.mcternan@okstate.edu).

Sincerely,



Shelia Kennison, Chair
Institutional Review Board

APPENDIX B

PANEL OF EXPERTS

PANEL OF EXPERTS

Bailey Norwood, Ph.D.

426 Agricultural Hall

Oklahoma State University

Shane Robinson, Ph.D.

440 Agricultural Hall

Oklahoma State University

Jill Rucker

436 Agricultural Hall

Oklahoma State University

APPENDIX C

SCRIPT

Script

Oklahoma State University's agricultural communications department constantly strives to contribute meaningful research to the agriculture industry. In order to improve and enhance communication efforts between consumers and producers it is essential to better understand the thoughts and perceptions of consumers, with regards to the agriculture industry. This study is examining the impact of media, in this case the film *Food, Inc.*, on the public's perceptions of the U.S. agricultural industry. At any time throughout the survey period, you may withdraw from the study without penalty.

If you are willing to participate in the study, you will be asked to complete two question content assessment surveys this evening. One survey will be given before the showing of the film *Food, Inc.*, and the second survey will be administered upon the conclusion of the film. Both surveys are voluntary. If you do not want to participate in the surveys, you will be given time to prepare for the film and post-discussion.

The surveys contain demographic questions, such as race, age and any agriculture background you may have. The surveys also contain opinion questions related to your thoughts about agriculture and the U.S. agriculture industry.

Each survey should take about 10 minutes to complete. Please complete the entire survey. Again, this information will provide the agricultural communications department which valuable information to better enhance communications between agriculture consumers and producers. If you have any questions regarding this study, please contact Jessica Holt at jessica.holt@okstate.edu or by phone at 405-744-8135.

Survey precursor

In order to ensure Oklahoma State University's agricultural communications department continues to meet the demands of industry, research is conducted to improve communication between agriculture consumers and producers. This survey is voluntary. At any time throughout the survey period, you feel uncomfortable or would like to discontinue the study, please inform the proctor and your personal identification code will be removed from the survey.

This survey ensures anonymity. Each survey participant is assigned a four-digit personal identification code that will be used for both surveys. The code will only be used to match your two surveys, and will serve no other purpose. There will be no way to match you to your survey responses.

Your responses will help ensure the OSU agricultural communications department continues to meet the demands of industry and consumers. Your responses will be treated confidentially and will be stored for approximately three years in a password-protected spreadsheet on the researcher's computer in Agricultural Hall. Your participation in this study is voluntary, and you will not be provided any form of course credit for participating. You may withdraw from the study at any time without penalty.

Thank you for completing the survey. If you have any questions about this project, please contact Jessica Holt at jessica.holt@okstate.edu. If you have questions about your rights as a research volunteer, you may make contact with Dr. Shelia Kennison, IRB Chair, 219 Cordell North, Stillwater, OK 74078, 405-744-3377 or irb@okstate.edu.

APPENDIX D

PARTICIPANT INFORMATION SHEET

Participant Information Sheet

Project Title: Influence and Persuasion of the Media Regarding Perceptions of the U.S. Agricultural Industry Upon Viewing the Film *Food, Inc.*

Investigator(s): Jessica Holt, Department of Agricultural Education, Communications & Leadership, Oklahoma State University

Purpose: The purpose of this study is to determine the impact the media has on the public's perceptions and attitudes of today's agriculture upon viewing the film, *Food, Inc.*

Procedures: This study will include the survey handed out with this information sheet, followed by the viewing of the film *Food, Inc.* The film is 93 minutes in length. Each survey should take about 10 - 15 minutes to complete. The first survey will determine your current perceptions of the U.S. agricultural industry, as well as establish any prior experience with agriculture. The survey, which will be given upon the conclusion of the film, will assess your perceptions of the U.S. agricultural industry after viewing the content of the film. The information gained from these surveys will serve as an assessment for the media's ability to alter the public's perceptions with the use of a film. The information collected from this study will remain anonymous and will not be used to identify any individual.

If you wish to participate, please complete the questions as directed. When you are finished, please wait for a proctor to come collect your survey. If you do not want to participate, please return your blank questionnaire.

Note: This research is not being conducted by the OSU Cineculture organization.

Risks of Participation: There are no known risks associated with this project that are greater than those ordinarily encountered in daily life.

Benefits: The findings of this study will be used to improve the communication efforts between the U.S. agricultural industry and its consumers. By understanding what impacts the perceptions of consumers the U.S. agricultural industry can develop better practices for educating and communicating their efforts with their consumers.

Anonymity: Individual responses to survey questions will be tracked throughout this study by the use of the personal identification code. No names or identifying information will be asked. The purpose of the personal identification code is for the researcher to be able to match the two surveys, in order to compare the results of the two surveys. Only the participant will know his/her personal identification code, at no time will your name be asked. Responses will be anonymous and accessible only to the researcher. Identifying information will be destroyed when data are entered into a spreadsheet in preparation for analysis. All results will be reported as aggregated data and no individual responses will be reported. The OSU IRB has the authority to inspect consent records and data files to assure compliance with approved procedures.

Contacts: If you have any questions about the research or your rights as a participant in this study, please feel free to contact Jessica Holt at 744-5130 or jessica.holt@okstate.edu. If you have questions about your rights as a research volunteer, you may contact Dr. Shelia Kennison, IRB Chair, 219 Cordell North, Stillwater, OK 74078, 405-744-3377 or irb@okstate.edu.

Participant Rights: Your participation in this project is appreciated and completely voluntary. You may choose not to participate at any time without any penalty or problem. Returning your completed questionnaire to a proctor indicates your willingness to participate in this study.

APPENDIX E

PRETEST INSTRUMENT

Personal Code _____

Determining the Media's Impact on the Public's Perception of the U.S. Agriculture Industry

Please select which response best suits you.

1. How did you learn about OSU Cineculture showing this film?

- ☐ Flier on campus
- ☐ Flier in the community
- ☐ E-mail
- ☐ Professor
- ☐ Name _____
- ☐ Course Prefix & Number _____
- ☐ Friend/ word-of-mouth
- ☐ Facebook
- ☐ Other _____

2. What best describes your eating preference?

- ☐ Omnivore (eat meat, dairy, and plant products)
- ☐ Vegetarian (eat no meat products)
- ☐ Pescetarian (vegetarian, except eat fish)
- ☐ Lacto Ovo (eat dairy and eggs, but no meat products)
- ☐ Vegan (no meat or animal products)

3. Please check all that apply:

I purchase my food from

- ☐ Large supermarkets
- ☐ Small supermarkets
- ☐ Farmer's markets
- ☐ Food Co-ops
- ☐ Health food stores
- ☐ Organic food markets
- ☐ Other _____

4. Please describe any agricultural experiences you have had.

Please indicate which response **BEST** describes your opinion regarding each statement below:

5. Consumer preferences influence farmer/producer decisions about what type of product to grow and how it is processed.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Production of organic foods is better for the environment.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. The Environmental Protection Agency (EPA) regulates fertilizers, pesticides, and herbicides used by producers.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. The use of pesticides has increased the yield of crops.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Animal health and nutrition are important to farmers/producers.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Organic production methods are a realistic alternative to using pesticides.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. Confinement is an acceptable practice when raising livestock.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Page 4 of 9

12. There are more farmers in the U.S. than there were 10 years ago.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. Local laws and regulations have little effect on farmers.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. Biotechnology has increased the pest resistance of plants.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. Food safety is a major concern of the food processing industry.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. Food processing increases the cost of food products.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. An efficient food distribution system is essential to the agricultural industry.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. The United States Department of Agriculture (USDA) regulates food handling, preparation and storage.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19. Organic products require less processing than other modified products.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

20. Transportation and storage affects the supply of agriculture products

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. Livestock/animal tracking systems should be mandatory in the U.S.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22. Agricultural processing plants maintain a safe and clean working environment.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

23. New technology has helped ensure the safety of agricultural processing.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

24. Food additives improve the nutrition of processed foods.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

25. Knowledge of a brand/company's production practices influences my food purchasing decisions.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

26. Country of origin labeling should be mandatory in the U.S.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

28. U.S. citizens spend a higher percentage of their income on food than in other countries.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

29. If available, I prefer to buy organic food products.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

30. I cook meals, at home, regularly.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

31. Price is a primary factor I consider when purchasing food.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

32. Organic is a primary factor I consider when purchasing food.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

33. I purchase food based on a brand name.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

34. Farmer's markets are a needed outlet for food purchases.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

35. I think super centers (Wal-mart, etc.) provide a necessary outlet for food purchases.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

36. I eat out at least twice a week.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

37. Which best describes your age?

- ☐ 18 – 25 years
- ☐ 26 – 35 years
- ☐ 36 – 45 years
- ☐ 46 – 55 years
- ☐ over 55 years

38. In which of the following groups would you place yourself?

- ☐ African-American
- ☐ Asian or Pacific Islander
- ☐ America Indian or Alaskan Native
- ☐ Caucasian
- ☐ Hispanic

39. What is the highest level of education you have completed?

- ☐ High school or equivalent (GED)
- ☐ Associate degree
- ☐ Bachelor degree
- ☐ Master degree
- ☐ Doctorate, law or medical degree

40. Where do you live?

- ☐ In town residence - no garden or livestock animals
- ☐ In town residence - with garden and/or livestock animals
- ☐ Rural residence - no crops or livestock animals
- ☐ Rural residence - with garden and/or livestock animals, but not for farming
- ☐ Rural residence - on a working farm

41. Please check all that apply to you.

- ☐ I have worked on a farm
- ☐ I have lived on a farm
- ☐ I have participated in 4-H
- ☐ I have participated in FFA
- ☐ I am/was enrolled in a high school agriculture course
- ☐ I am/was enrolled in a college agriculture course
- ☐ I have worked in the processing agriculture industry
- ☐ Not applicable

42. Which best describes you?

☐ OSU undergraduate student

Major _____

Minor _____

☐ OSU graduate student

Field of Study _____

☐ OSU faculty

Department _____

☐ OSU staff

Job Title _____

☐ Other _____

APPENDIX F

POSTTEST INSTRUMENT

Personal Code _____

Determining the Media's Impact on the Public's Perception of the U.S. Agricultural Industry After Viewing the Film Food, Inc

Please indicate which response **BEST** describes your opinion regarding each statement below:

1. If available, I prefer to buy organic food products.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Organic production methods are a realistic alternative to using pesticides.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. There are more farmers in the U.S. than there were 10 years ago.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Production of organic foods is better for the environment.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Food safety is a major concern of the food processing industry.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. I think super centers (Wal-mart, etc.) provide a necessary outlet for food purchases.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. An efficient food distribution system is essential to the agricultural industry.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Livestock/animal tracking systems should be mandatory in the U.S.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. The use of pesticides has increased the yield of crops.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Country of origin labeling should be mandatory in the U.S.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. Local laws and regulations have little effect on farmers.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. Food additives improve the nutrition of processed foods.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. Animal health and nutrition are important to farmers/producers.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. The United States Department of Agriculture (USDA) regulates food handling, preparation and storage.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. Knowledge of a brand/company's production practices influences my food purchasing decisions.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. The Environmental Protection Agency (EPA) regulates fertilizers, pesticides, and herbicides used by producers.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. Transportation and storage affects the supply of agriculture products

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. Farmer's markets are a needed outlet for food purchases.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19. Organic products require less processing than other modified products.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

20. Food processing increases the cost of food products.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. Confinement is an acceptable practice when raising livestock.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22. U.S. citizens spend a higher percentage of their income on food than in other countries.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

23. I cook meals, at home, regularly.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

24. Consumer preferences influence farmer/producer decisions about what type of product to grow and how it is processed.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

25. I purchase food based on a brand name.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

26. Biotechnology has increased the pest resistance of plants.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

27. New technology has helped ensure the safety of agricultural processing.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

28. Organic is a primary factor I consider when purchasing food.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

29. Price is a primary factor I consider when purchasing food.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

30. Agricultural processing plants maintain a safe and clean working environment.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

31. The information presented in the film, *Food, Inc.*, seemed trustworthy.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

32. The information presented in the film, *Food, Inc.*, seemed sensationalized.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

33. People are unhealthy because the food industry promotes and sells unhealthy food.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

34. People are unhealthy because they choose to buy unhealthy food products.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

35. Have you seen the film, *Food, Inc.*, before tonight?

Yes

No

☐☐

36. Please give your rating of the film, *Food, Inc.*

Excellent

Good

Fair

Poor

☐☐☐☐

37. Please give your rating of the discussion following the film, *Food, Inc.*

Excellent

Good

Fair

Poor

☐☐☐☐

38. What are your new insights as a result of this film, *Food, Inc.*

39. Please use this space to add any additional thoughts or comments you may have about the film, *Food, Inc.*

VITA

Jessica Ann Holt

Candidate for the Degree of

Master of Science

Thesis: CONSUMERS' PERCEPTIONS ABOUT AGRICULTURE BEFORE AND AFTER
VIEWING THE FILM *FOOD, INC.*

Major Field: Agricultural Communications

Biographical:

Personal Data: Born in LaCrosse, Wisconsin, September 15, 1985, the daughter of Thomas and Mary Rothering.

Education: Graduated from Durany High School in Plant City, Florida in May 2003.

Completed the requirements for the Master of Science/Arts in Agricultural Communications at Oklahoma State University, Stillwater, Oklahoma in December, May, 2010.

Completed the requirements for the Bachelor of Science in Agricultural Education, Communications and Leadership at University of Florida, Gainesville, Florida, in 2007.

Experience: Worked for the Paso Fino Horse Association as a marketing intern, summer 2006. Employed by Discovery Cove SeaWorld as a horticulture intern, summer 2007. Journalist for *In The Field* magazine 2007-2008. Employed by the State of Florida Legislature as an assistant to Senator Ronda Storms, 2008. Employed by Oklahoma State University as a graduate teaching assistant, 2008 -2010.

Professional Memberships: Phi Kappa Phi, Agricultural Communicators of Tomorrow, University of Florida Alumni Association, Graduate Student Association.

Name: Jessica Holt

Date of Degree: May, 2010

Institution: Oklahoma State University

Location: Stillwater, Oklahoma

Title of Study: CONSUMERS' PERCEPTIONS ABOUT AGRICULTURE BEFORE AND AFTER VIEWING THE FILM *FOOD, INC.*

Pages in Study: 112

Candidate for the Degree of Master of Science

Major Field: Agricultural Communications

Scope and Method of Study: The scope of this study was Oklahoma State University students, faculty and staff, citizens of Stillwater, Okla., and surrounding areas, and anyone interested in viewing the film *Food, Inc.* during its showing at the Oklahoma State University, Stillwater campus, on Nov. 20, 2009. The attendees were asked to voluntarily complete a pretest survey regarding their perceptions of the agricultural industry before watching the film *Food, Inc.* The attendees were then asked to complete a posttest survey after watching the film and participating in the follow-up discussion. The responses from the pretest and posttest surveys were compared using means, frequencies and standard deviations to determine any change in the respondents' perceptions of the agricultural industry.

Findings and Conclusions: The study used the framework of the agenda setting theory and the media-system dependency theory to examine if the film *Food, Inc.* had an influence on individuals' perceptions of the agricultural industry. The study used a pretest and posttest survey with questions aimed at determining the individuals' perceptions of the agricultural industry. The findings revealed that the film *Food, Inc.* did impact individuals' perceptions of the agricultural industry based on their previously held perceptions. If the individuals previously held negative perceptions of the agricultural industry then the film solidified those negative perceptions, and the same was found true for individuals who had positive perceptions of the agricultural industry prior to the film *Food, Inc.* The theoretical framework supported these findings that the media can impact individuals' perceptions of issues, events, and in turn, the agricultural industry.

ADVISER'S APPROVAL: Dr. Dwayne Cartmell
