

Dr. Cindy Akers
Associate Professor
Texas Tech University
Box 42131
Lubbock, Texas 79409
Phone: 806-742-2816
Fax: 806-742-2880
Cindy.akers@ttu.edu

Matthew Hock
Student
Texas Tech University
Box 42131
Lubbock, Texas 79409
Phone: 806-742-2816
Fax: 806-742-2880
M.hock@ttu.edu

Kelly Ayers
Graduate Student
Texas Tech University
Box 42131
Lubbock, Texas 79409
Phone: 806-742-2816
Fax: 806-742-2880
Kelly.j.ayers@ttu.edu

ABSTRACT

UTILIZATION OF SORGHUM PRODUCERS IN A PARTICIPATORY CAPACITY TO DETERMINE PREFERRED INFORMATION SOURCES AND DELIVERY

Technological advancement in farming practices has a direct impact on the quality of life for sorghum belt producers. The implementation of a strategic plan that assesses the needs of sorghum belt producers in terms of their readiness to adopt new sorghum technologies and preferred media sources by using a Q-sort methodology would greatly improve sorghum production. The innovations needed in present day agriculture have collective dimensions. Current farming requires new forms of interaction, organization, and agreement between multiple actors. The Production of new technology demands attention by communication and outreach professionals. Their goal is to understand what motivates and drives the behavior of the producers. Evaluating the behavior and understanding the flow of information to sorghum producers allows researchers to design and implement effective communications and outreach programs that would benefit both producers and consumers. The adoption and diffusion of innovations by sorghum belt producers will be collected through a series of interviews from producers in Texas, Arkansas, Kansas, Oklahoma and Nebraska. By evaluating the characteristics between sorghum belt producers using the Q-sort methodology, we will discover their perceptions and tendencies. Using the Q-sort to identify realities present in current sorghum production, we will have a foundation to build from allowing us to make more innovative decisions. Society and sorghum producers would benefit from this study. Calculating the preferred technology that will be most comfortably adopted by sorghum belt producers and understanding why there is certain preferences would allow us to better address sorghum belt producers' needs and problems in the future.

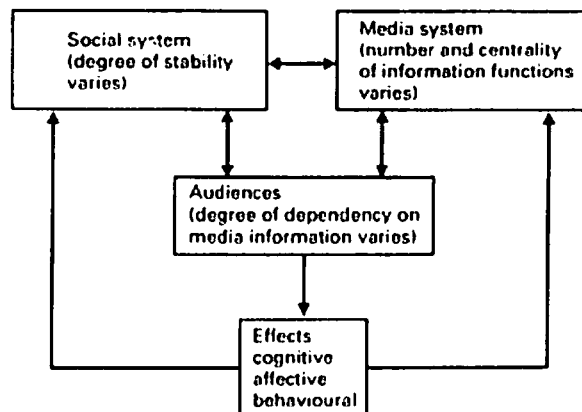
INTRODUCTION/THEORETICAL FRAMEWORK

We are living in a time that has been referred to as the information age, a time where people no longer have to rely on word of mouth to get the latest gossip as well as the news specifically relevant to them and their well-being. There are many mediums available to get information, but sometimes it is questionable whether or not media consumers are using all the available mediums. In this study researchers sought to determine what media sorghum producers in the sorghum belt felt was available to them and which of those sources producers preferred to use.

The U.S. Grain Council (2007) classifies the United States as the top exporter of sorghum, stating that in 2005/6 50 percent of sorghum grown in the country was used for exports, 37 percent for feed and residual, and then close to 13 percent for food, seed and industrial use. Though sorghum is not at the forefront of most consumers' minds as a top cereal grain in present day, the facts are that research and production improvements are being made in all areas of crop production. Due to these facts it is important for all sorghum producers to stay up-to-date on current improvements made to sorghum production. Moore & Nelson (1970) explained the future research potential of sorghum as "wide latitude of unexplored possibilities," (p. 674). With 2.5 million hectares of sorghum being harvested in the United States annually it is important to know where those producers are turning for information concerning their crop (U.S. Grain Council, 2007).

Over the years the types of media available to producers and those mediums that are preferred over others changes. Oskam & Hudson (1999) state in their study of media preferences among rural residents, that mass mediums are a large part in information dissemination to those in the agricultural community, reporting numerous studies that have consistently found that farm magazines are the medium of choice for farmers followed by newspapers, television, and radio. Rural residents depend on mass media such as radio, television, newspapers and magazines just as urban audiences do (Oskam & Hudson, 1999).

While many of these studies are still very valid, there is one other medium that has made its way into main stream society and offers a great array of information at your finger tips.



PURPOSE AND OBJECTIVES

The purpose of this study was to assess the needs of sorghum belt producers in terms of readiness to adopt sorghum technologies and preferred media sources. The following research objectives were created in order to satisfy the overall purpose of this study:

1. To determine sorghum producers' background with the sorghum industry.
2. To determine what different types of media sources sorghum producers to find information relevant to their profession.
3. To determine which media sources sorghum producers prefer best.

METHODS

Population and Sample

The study participants were chosen from recommendations provided by the National Sorghum Growers Association. The participants involved were located in the in the sorghum belt region, which covers Kansas, Nebraska, Arkansas, Oklahoma and Texas. All participants have had some involvement with the National Grain Sorghum Association. Five producers were interviewed and pseudonyms were selected by the researcher for each of the session participants. Participants were chosen from Kansas, Oklahoma and Nebraska. These areas represent high sorghum producing regions.

Design / Data Collection

The data was collected through a process of interviewing participants face-to-face. Frankel and Wallen (2006) state that interviews play a key role in research in that they assists the authentication or disclaimer of any perceptions a researcher has from examinations or interviews.

Interviews were conducted using a two part process. One being a series of standardized open-ended questions and the second was a generalized interview approach.

The two part process ensures reliability for the study and provides the researcher a consistent method of collecting data. The process used makes data analysis more direct and efficient. The generalized interview approach provides the ground work for ideas issues among the researcher and participants (Patton, 2001).

Demographic information from the participants was found during the interview process with a pre fabricated questionnaire. The questionnaire was then analyzed and any discrepancies were followed up with a phone call for clarification.

Instrumentation

The interview process was based on the Media System Dependency Theory (Rokeach and DeFleur 1976). The Dependency Theory houses several perspectives from psychology and social categories. The Dependency Theory also has a more casual approach and combines elements from the uses and gratification research that looks into media traditions and

its effects. Analysis from this model tend to be more descriptive than explanatory. With the use of the two-part interview process described earlier the researcher was able to interact with the interviewee, but maintain focus (Patton, 2001).

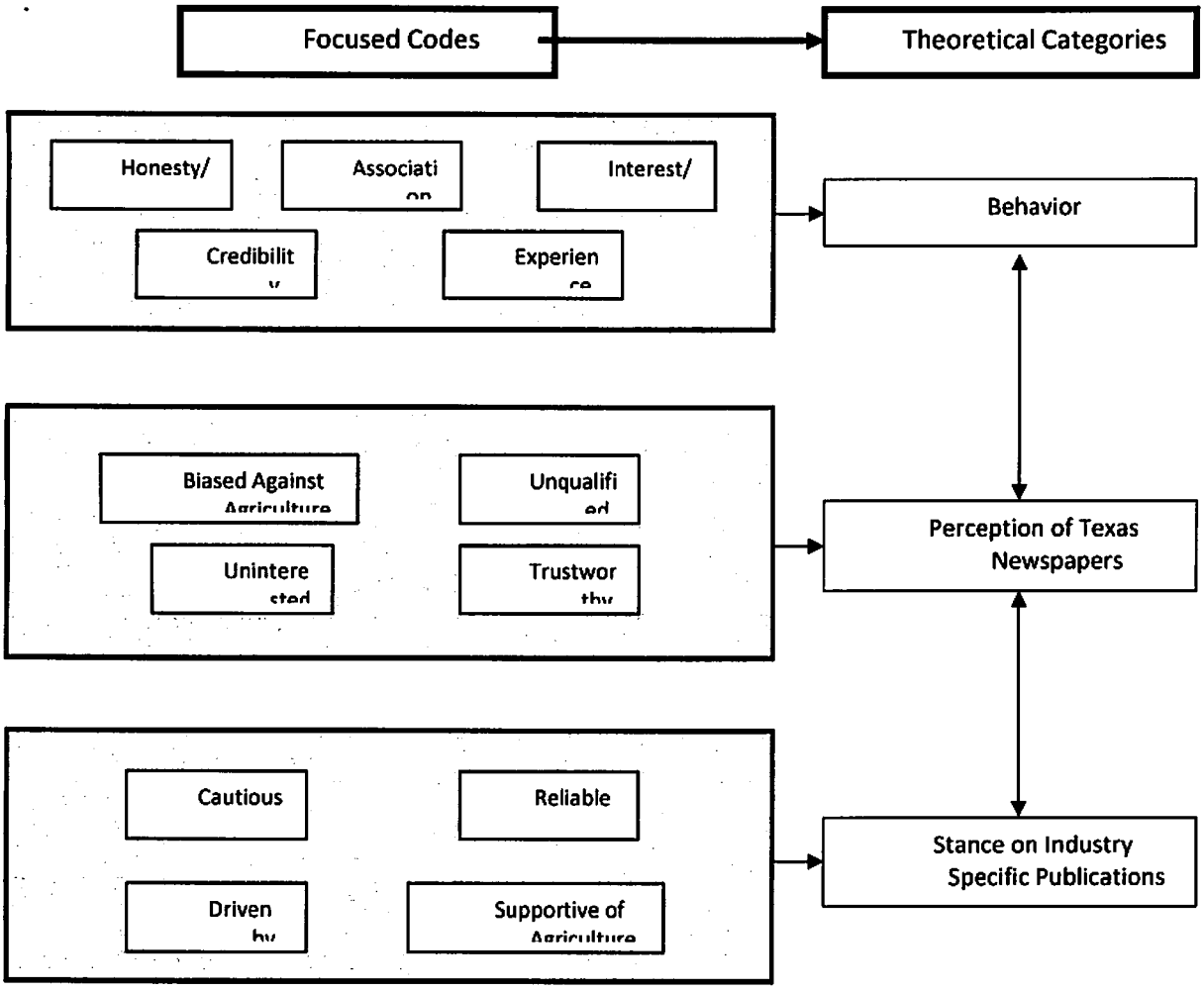
Data Analysis

Analysis of the interview data was accomplished by note taking during the interview process and performing a detailed transcription of the audio records after the interview. The actual coding and analysis of the research took place after completing all required interviews. During the interview process hand written notes were taken and reviewed for all participants. This allowed the researcher to distinguish common themes from one interviewee to the next. Common findings were revealed from all subjects.

Open, line-by-line coding occurred after transcribing each interview (Charmaz, 2006). Memos were developed in order for the researchers to note when certain codes occurred across several individuals. After initial coding, the researchers followed the process of analysis and implemented focused coding. Focused coding is referred to as a type of categorization and sub-categorization of initial codes that are used frequently or bear some importance to the study (Charmaz, 2006).

After coding, the researcher engaged in advanced memo development, a process in which the actual data was combined with the memos made previously, and themes of consistency were developed, as well as supportive evidence through the implementation of quotes within these memos. Findley (2007) suggested using quotations from participants in the advanced memos to strengthen the findings as well as provide depth to each category of raw data.

As a result of focused coding and the implementation of advanced memos, five focused codes were developed for research question one, four focused codes were identified for research question two, particularly in regards to preferred media usage. four focused codes were identified for research question three. The three theoretical categories developed for this study include (1) behavior, (2) perception of Texas newspapers, and (3) stance on industry specific publications. An illustration of how the developed focused codes for this study were categorized theoretically is shown in figure 1.



FINDINGS

Background of Sorghum Producers

Looking into the backgrounds of the selected sorghum producers several themes emerged. Every producer interviewed had received at least a bachelor's degree and in several cases even a masters. It seems that education has played a key role into the success of today's farmers and also the readiness to adopt new technologies. With the ever changing technological advancements and improvements to farming, education is a must in order to stay within the bell curve. The decision to adopt new technology is an investment that often has high initial costs with no guaranteed profit, but having the most current information concerning the technology will better assist adoption decisions and increase farm profitability. Learning about the performance characteristics of one or more new technologies and the benefits can often lead to profit and production increases. Successfully adopting new technology requires information and with the numerous media sources that are offered it is our goal to pin-point the preferred media source to better facilitate the needs of the early adopters and laggards.

Wozniak (1993) examined farmer's joint decisions on attaining information and adopting technology. He looked into the adoption of two technologies one new and one established and two channels of information for each. One active and one passive information channel for extension and private sector information providers. His study showed that farmers with higher education levels were significantly more likely to adopt new and established technologies. Also, they were more apt to acquire information from extension by talking with extension workers (passive) and attending demonstrations or meetings (active) about the use of new products or procedures sponsored by extension. However, producer's education did not have a statistically high effect on acquiring knowledge by talking with private industry personnel or attending demonstrations or meetings on the use of new products or procedures sponsored by private companies.

The high demand for more economical production practices has created a knowledge gap among many farmers. The potential for exchanging knowledge is rapidly growing with the innovation of the internet and the use of satellites, fiber optics, and wireless technologies. Producers are more connected now to the global network and each other than ever before. Advancements in communication have been on a steady up rise and costs for the services have been decreasing in return. The new communication and information technologies are the future of farming. The traditional way farming is conducted is shifting due to technological advancements and its prompt results. New markets for agriculture are being created every day to help educate and produce stability for all parties involved. Producers now have the opportunity to make more educated assessments on market analysis for a relatively low cost. This will not only benefit producer's profit, but also the efficiency in which markets operate.

Findings

Characteristics of Participants

All subjects interviewed were male and of Caucasian decent.

The Preferred media sources of the participants consists of trade journals, radio broadcast, industry news letters, newspapers, magazines and web based media. Reading tendencies and media preference in relation to the media sources varied in time spent, but were practiced by all participants.

CONCLUSIONS

Several themes emerged from the information received from the producers. When asked what types of sources they used to get their crop information, most of them mentioned at least one magazine including: *High Plains Journal*, *Sorghum Grower* and *Successful Farming*. Many of the producers still rely heavily on traditional forms of communication like farmer to farmer interaction, word of mouth and interactions with extension and university services.

While some mentioned television and radio, it seemed as if they went to this media for general agricultural information. Almost all of the participants said that they believed the Internet was the future for information dissemination, but not as many listed it as their number one method for obtaining sorghum information. Most of them went to the Internet to buy farm supplies and equipment or check prices for sorghum related services. Several listed concerns with getting lost or being overwhelmed while using the Internet because of the immense amount of information as well as problems with sites being updated consistently. Many participants said that their use of the internet was usually to look specifically at something rather than acquiring a broad array of information concerning sorghum.

For the most part, the producers interviewed did not use the Internet as their number one source of information, but they are using it more than they thought they ever would. Most of them mentioned using email and getting updates from extension agents or publications. It is easy to conclude from the information obtained from the interviews that sorghum producers would be willing to use the Internet more frequently if they knew where to go to get all the information they needed and they knew it was coming from a credible and reliable source.

Another important finding of this research is the continued magnitude of face-to-face or word of mouth contact. Even though there is an immense amount of information available to producers through various mediums, producers still rely heavily on face-to-face interactions and word of mouth. This finding only emphasizes how vital people like extension agents still are today and most likely for the future as well.