

Attitudes of Arkansas Daily Newspaper Editors Toward Agriculture

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Abstract

The primary purpose of this study was to determine Arkansas daily newspaper editors' attitudes toward agriculture that might affect their decision to print, or not to print, agricultural news. Specifically, this study sought to describe the demographic characteristics of editors of Arkansas daily newspapers; determine editors' self-reported knowledge level of agriculture, experience in agriculture, and perception of the importance of agricultural issues; and to determine the attitudes of Arkansas daily newspaper editors toward agriculture. The study used a Web-delivered instrument developed by the researcher. The population of the study consisted of the primary editor of each daily newspaper in Arkansas, as identified by Burrelle's Information Services.

Of the editors responding to the questionnaire, 81% were male. The mean reported age was 44.8, with a range of 31 – 59 years. Most editors lived in a rural area, worked for newspapers that were corporately owned, had 10 or more years experience in journalism, and had considerable experience in writing agricultural news stories. Most were well educated, but had completed only a few college agriculture courses. Two-thirds of Arkansas' daily newspapers published an agricultural section, but less than one-fourth employed an agricultural reporter. For the most part, editors believed that their readers' interests coincided with their own. Health, food safety, and environmental issues were viewed as the areas of greatest interest. Editors possessed positive attitudes toward the agricultural industry, although they were less positive about the image of agriculture or about agriculture's performance in educating the public about the agricultural industry. Editors agreed that journalists should receive instruction in agriculture and that K-12 students should be required to take at least one course in agriculture.

It was recommended that university faculty in journalism and agriculture collaborate to provide a course for students and/or young journalists about agricultural issues, and be encouraged to continue positive, open relationships with journalists to ensure open lines of communication to disseminate information about agricultural issues. Workshops should be conducted for college of agriculture faculty, extension personnel, and university researchers on how to work with, and give appropriate responses to, media representatives.

Introduction/Theoretical Framework

Journalists provide much of the information the public receives about the world, including information about agriculture. Because of this, the mass media have great influence on public perception (Rogers, 1995). Denton (1996) noted that 74% of consumers in the U.S. view their local Sunday newspaper as their primary source of information. According to Rogers' *Hypodermic Needle Model* (1995), media cause direct, immediate, and powerful effects on the public by injecting information into society. This suggests that journalists who report on

agricultural issues should have at least an above average knowledge of agriculture (Rogers). In support of this thesis, Cosby (1998) documented that the media has often been blamed for making science seem revolutionary rather than evolutionary, and are frequently blamed for consumer confusion.

The prominence of the news media as a primary source of information continues to influence society as a whole. A 1993 survey of adults found that 81% considered the news media to be their primary source of information regarding science topics, especially those associated with the environment and natural resources (American Opinion Research, Inc.). Since consumers of information acquire a large portion of scientific information from the mass media (Terry, 1994), it is important that agriculturalists understand editors' attitudes toward agriculture and the topics on which they report so the industry can better work with media personnel.

Attitudes often serve as a filtering device for the way we perceive information. Likewise, the attitudes of journalists also filter what is, or is not, printed. Researchers have focused on the gatekeeping practices of journalists as an explanation for filtering information by the media before dissemination to the general public (Dimmick, 1974; Gans, 1979; White, 1950). This study was conducted to assess the attitudes of editors toward agriculture and to determine their self-reported knowledge about and experience in agriculture.

Historically, the general public has expected news content in the media to be objective and responsible. These expectations are based upon assumptions that content will be reported without bias (Schudson, 1978). However, according to Johnstone, Slawski, and Bowman (1972, 1976), this expectation has not always been met. Negative news on agricultural issues could affect long-term public support and confidence in agriculture if bias is present in publishing agricultural stories. Therefore, it is important to study how decisions are made regarding the publishing of agricultural news.

The global problem addressed by this study is the influence of editors' attitudes toward agriculture on their gatekeeping role regarding agricultural issues. This study sought to determine the attitudes toward agriculture of Arkansas daily newspaper editors and to describe the demographic characteristics of these editors.

Westley and McLean (1957) provided the theoretical framework for this study. They introduced a model of communication where Lewin's (1943, 1947) gatekeeper concept was introduced. The Westley and McLean model of communication illustrated and established the gatekeeping phenomenon (Figure 1). In the model, information is gathered by a reporter (A) who then passes it on to the editor (C). In his/her role as gatekeeper, the editor makes the ultimate decision to include or exclude the information. This decision is likely influenced by several factors, including the editor's attitude toward the information, demographic influences, etc. Once published, the consumer (B) either accepts or rejects the information. They may provide feedback to the reporter (A) or the editor (C). If the information is perceived to be unbiased, the consumer likely will accept it as fact. However, since the gatekeeper controls the flow of information, if extraneous influences cause the gatekeeper to view the information negatively, it is likely the consumer will receive the information in a negative context – or not receive the information at all.

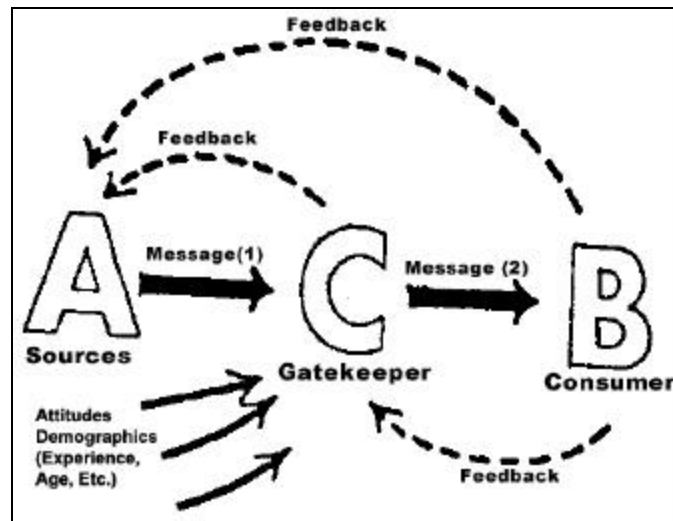


Figure 1. Westley and McLean's (1957) model, as adapted for this study.

Since agriculture affects people across the globe, it is important for editors to be as accurate as possible when publishing agricultural news. With topics such as food safety, animal health, and biotechnology dotting newscasts and newspapers around the world, the process editors go through to make decisions about the newsworthiness of agriculture issues becomes increasingly important. Because editors are reporting on these and other agricultural issues that affect consumers, it is important to begin delineating editors' attitudes toward these issues.

Purpose/Research Questions

The primary purpose of this study was to determine Arkansas daily newspaper editors' attitudes toward agriculture. Specifically, this study addressed the following research questions:

1. What were the demographic characteristics of editors of Arkansas daily newspapers?
2. What were Arkansas daily newspaper editors' self-reported knowledge level of agriculture, experience in agriculture, and perception of the importance of agricultural issues?
3. What were the attitudes of Arkansas daily newspaper editors toward agriculture?

Methods/Procedures

This research used a survey design. The census study focused on gathering information from the entire population of daily newspaper editors in Arkansas. Ary, Jacobs, and Razavieh (1979) noted that a major disadvantage of survey research is that chance differences between samples may seriously bias results. Conducting a census study mitigates the problem of chance differences.

The population for this study consisted of the primary editor of each daily newspaper in Arkansas ($N = 30$). Burrelle's Information Services (1999) was used as the population frame.

Daily newspapers were targeted because of their perceived contribution to the knowledge gap on local and regional issues as suggested by Palmgreen (1979) and Tichenor (1987).

A questionnaire was developed by the researchers to address the stated research questions. Measurement error is one of the major sources of error in descriptive survey research. To help control for this error, instruments from similar studies were examined to aid in the construction of the questionnaire (Duhe, 1993; Dyer, 1994; Reisner & Walter, 1994; Stringer, 1999; Vestal, 1998; Whitaker, 1998; Wood-Turley, 1998). The questionnaire contained 47 statements designed to measure daily newspaper editors' attitudes toward five agricultural themes. A five-point Likert-type scale (1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = Strongly Agree) was used for the attitudinal items.

As suggested by Tuckman (1978), a panel of experts reviewed the instrument for content and face validity and judged to be valid. The selection of the panel of experts was based on knowledge of journalism, agriculture, and research methods. The instrument was pilot tested using daily newspaper editors from Illinois. A split-half reliability analysis on the attitudinal questions in Part I of the questionnaire resulted in a reliability coefficient of .93.

Data were collected for this study using a Web-based questionnaire as outlined by the Dillman Tailored Design Method (2000). The Dillman Tailored Design Method is a revision of the Dillman Total Design Method (1978) and adds the flexibility of using a variety of data collection procedures, especially email and Web based instruments.

The initial email included a letter of introduction explaining the purpose of the study, the link to the URL location of the questionnaire, and instructions on completing the questionnaire. The introduction page of the Web-based questionnaire provided a brief overview of the purpose and instructions for completing the questionnaire. Precautions were taken to ensure that each newspaper editor completed the questionnaire only once.

After the initial email contact was made, follow-up phone calls were made one week later. Respondents who had not replied were sent a second email message. A second phone call was placed to remind non-respondents to complete the questionnaire. A follow-up email message containing the original message was sent, if requested, at that time. Respondents were also given the option of filling out a FAX version of the questionnaire. A final follow-up phone call was placed to non-respondents four weeks after the instrument was made available online.

FAX and Web responses were compared to control for error in data collection between the two instrument formats. No differences were found between the responses of editors comparing the two data collection formats. Non-respondents were contacted a final time. Non-response error was examined by comparing selected items between respondents and non-respondents.

Though technically ordinal data, results from Likert-type scales were treated as interval data for analysis and presentation of results as outlined by Clason and Dormody (1994). A descriptive analysis using means, modes, frequencies, percentages, and standard deviations were used to analyze and interpret data. For data analysis and interpretation purposes, results generated for attitude were categorized using the following classifications: Strongly Disagree =

1 – 1.79, Disagree = 1.80 – 2.59, Undecided = 2.60 – 3.39, Agree = 3.40 – 4.19, Strongly Agree = 4.20 – 5.0.

Results/Findings

A total of 70% ($n = 21$) of the population completed the questionnaire. All responses were useable for data analysis.

Question 1: *What were the demographic characteristics of editors of Arkansas daily newspapers?*

Of the 21 editors responding to the questionnaire, 17 (81%) were male. The mean reported age of all respondents in this study was 44.8, with a range of 31 – 59 years of age. Nearly all respondents had earned a college degree. One respondent (5%) reported receiving a master's degree whereas seventeen (81%) had received bachelor's degrees. No degrees higher than a master's degree were reported.

Most editors worked for corporately owned newspapers. Twelve editors (57%) indicated corporate ownership of their paper, whereas eight editors (38%) worked for a family-owned newspaper. As expected, most editors resided in small to moderate communities (Figure 2).

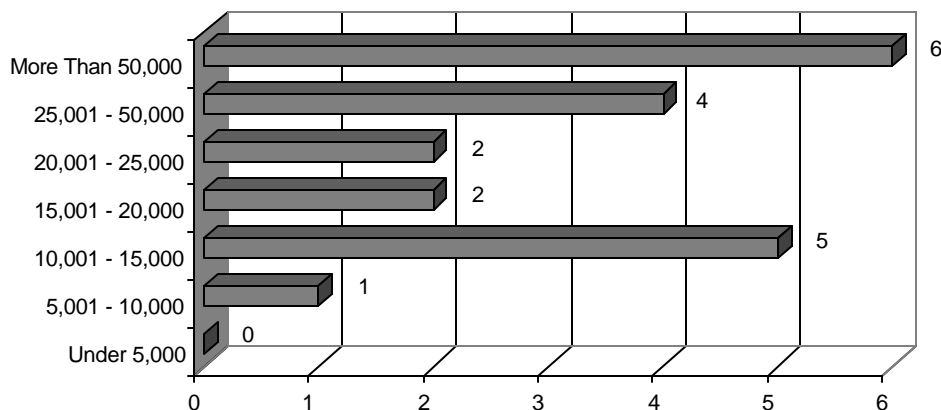


Figure 2. Size of communities where editors reside.

All categories of newspaper circulation were represented in the results (Figure 3). A majority of editors (57%) worked at newspapers with a circulation size of 5,001 - 15,000.

Editors indicated substantial experience as journalists. Seventeen editors (81%) listed 13 or more years experience as a journalist. All respondents had held more than one full-time newspaper position. A majority of respondents ($n = 19$) had been reporters prior to becoming an editor, indicating experience in gathering news stories and working with sources. However, some editors had never served as a reporter.

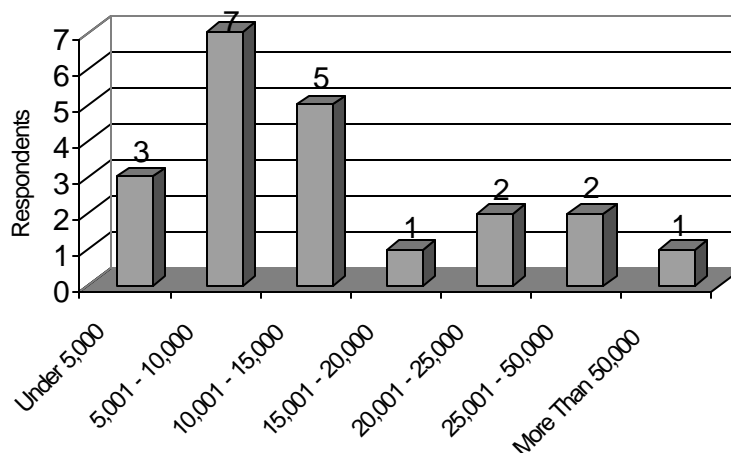


Figure 3. Circulation sizes of daily newspapers.

Question 2: *What were Arkansas daily newspaper editors' self-reported knowledge level of agriculture, experience in agriculture, and perception of the importance of agricultural issues?*

Editors' self-reported knowledge level of the agriculture, food, fiber, and natural resources industry was generally perceived to be high. Eighteen editors (86%) indicated having an "Average" to "Somewhat High" level of knowledge about agriculture, although few editors indicated that they had completed formal coursework in agriculture. More than three-fourths of the respondents (76%) had never taken a course in agriculture. Only one editor (5%) had completed 10 or more courses in agriculture.

There are a variety of ways to get experience in agriculture, just as there are various levels of experience. The majority of editors (67%) indicated they had experience in agriculture from living in a rural area. Nine editors (43%) indicated they had worked on a farm, five (24%) reported that they had completed a high school agriculture course, and five editors (24%) had completed a college agriculture course. Only three editors (14%) had attended extension workshops in agriculture. Four editors (19%) indicated no experience in agriculture.

Fourteen of the 21 editors (67%) indicated that they publish a special agriculture section or page. However, only five of the newspapers (24%) had an agricultural reporter assigned to cover agricultural news. For newspapers that did not have an agriculture section, agricultural news typically appeared in the business section.

The percentage of newspaper issues containing agricultural news in the last 12 months was consistent between newspapers. Respondents indicated a range of 6% to 40% of their daily news publications contained agricultural news.

The number of agricultural news stories printed in daily newspapers changed somewhat during the last five years. Nine of the 21 editors (43%) reported an increase in the number of agriculturally related news items. Six editors (29%) indicated the amount printed remained the same, whereas only one editor noted a decrease in agricultural news stories.

Editors were accustomed to writing agricultural news stories. During their careers, 16 editors (76%) had written more than 20 agricultural stories. Only one editor had written no stories about agriculture in their career.

Whether or not agricultural news gets published in daily newspapers may be a function of the perceived level of reader interest by the news gatekeeper. Editors were asked to give their opinion of the interest among their readers in agricultural news. While three editors (14%) indicated their readers were “Very Interested” in agricultural news, more than three-fourths of the editors (76%) indicated their readers were “Somewhat Interested.” The topics in which editors perceived their readers to be most interested are listed in Table 1.

Table 1

Importance and Readers’ Interest Levels of Agricultural Topic Areas (n = 21)

Importance			Topic Areas	Reader’s Interest		
<u>M</u>	<u>SD</u>	Order		<u>M</u>	<u>SD</u>	Order
3.62	.50	1	Water Quality	3.38	0.50	2
3.43	.75	2	Animal Health (mad cow disease, etc.)	3.24	0.62	4
3.38	.67	3	Human Health	3.43	0.68	1
3.38	.74	3	Environment	3.05	0.74	6
3.29	.72	5	Food Safety	3.14	0.65	5
3.14	.79	6	Agricultural Economics/Farm Income	2.71	0.96	9
3.10	.77	7	Business/Consumer Information	2.81	0.75	7
3.10	.89	7	Alternative Fuels	2.00	0.86	19
3.05	.80	9	FFA, 4-H, other Ag Organizations	2.76	0.89	8
3.00	.71	10	Urban/Rural Conflict	2.67	0.86	10
2.95	.86	11	Gardening	3.38	0.67	2
2.86	.85	12	Biotechnology	2.24	0.77	16
2.81	.81	13	Food Access/Security	2.62	0.74	11
2.80	.83	14	Agricultural Legislation	2.45	1.00	13
2.76	.89	15	Farm Land Development	2.52	0.87	12
2.71	.72	16	Animal Production	2.29	0.85	15
2.71	.85	16	Genetically Modified Organisms (GMOs)	2.14	0.79	18
2.57	.60	18	Pest and Disease Control	2.43	0.68	14
2.57	.87	18	Crop Production	2.24	0.94	16
2.19	.68	20	Animal Rights Issues	1.90	0.62	20

The perceived level of importance of the topic by the gatekeeper is another factor that may influence whether a story is published. Editors indicated that their perceptions of the most important topics related to agriculture were water quality, followed by animal health, human health, environment, food safety, agricultural economics/farm income, business/consumer information, alternative fuels, FFA, 4-H, and other ag organizations, and urban/rural conflict, gardening, biotechnology, food access/security, agricultural legislation, farm land development,

animal production, genetically modified organisms, pest and disease control, crop production, and animal rights issues.

Do editors perceive that readers are interested in the same agricultural issues as the editors themselves? Table 1 indicates strong similarities, with the only major differences noted in the ranking of alternative fuels and gardening. Editors ranked their interest level for alternative fuels as 7th on the list of 20 topic areas, whereas they perceived their readers' interest in alternative fuels as 19th of these 20 topics. Editors believed that the level of reader interest in gardening to be the 2nd highest area of interest, whereas editors ranked gardening as 11th.

Question 3: What were the attitudes of Arkansas daily newspaper editors toward agriculture?

Arkansas editors “strongly agreed” with the attitudinal statement, “Agriculture is an important industry in Arkansas” ($\underline{M} = 4.90$). (See Table 2.) Editors also strongly agreed that “Agriculture is a scientific area” ($\underline{M} = 4.43$), “Animals are an important source of food” ($\underline{M} = 4.38$), “Agriculture is a highly technical industry” ($\underline{M} = 4.38$), “Agriculture has the scientific capacity to develop new technologies to improve society” ($\underline{M} = 4.33$), “Agriculture is a vital part of my community” ($\underline{M} = 4.29$), “Agriculture is a constantly changing industry” ($\underline{M} = 4.29$), and that “Family farms are vital to the success of Arkansas agriculture” ($\underline{M} = 4.24$).

Table 2

Attitudinal Statements with which Arkansas Daily Newspaper Editors Strongly Agree (n = 21)

Statement	\underline{M}	\underline{SD}
Agriculture is an important industry in Arkansas.	4.90	0.30
Agriculture is a scientific area.	4.43	0.60
Animals are an important source of food.	4.38	0.50
Agriculture is a highly technical industry.	4.38	0.59
Agriculture has the scientific capacity to develop new technologies to improve society.	4.33	0.48
Agriculture is a vital part of my community.	4.29	0.96
Agriculture is a constantly changing industry.	4.29	0.64
Family farms are vital to the success of Arkansas agriculture.	4.24	0.89

Note. Classifications based on the scale: $\underline{M} = 4.20$ or higher = Strongly Agree; 3.40 – 4.19 = Agree; 2.60 – 3.39 = Undecided; 1.80 – 2.59 = Disagree; and 1 – 1.79 = Strongly Disagree

Arkansas editors “agreed” with several attitudinal statements that pertained to sustainable agriculture, agricultural technology, environmental issues, food safety, food supply, and food costs. (See Table 3.) Editors agreed that sustainable agricultural practices helped protect the environment, and that the use of animals for research purposes was important. Editors also agreed that agricultural technology had a positive impact on the U.S. standard of living, agriculture should do more to publicize its scientific contributions to society, American agricultural products were safe for human consumption, all journalists should receive some instruction about agricultural issues, consumers had confidence in the safety of their food, at least one course in agriculture should be required for all K-12 students, genetic research is

necessary to ensure a dependable food supply, and that genetic research is necessary to ensure an abundant food supply.

Table 3

Attitudinal Statements with Which Arkansas Daily Newspaper Editors Agree (n = 21)

Statement	<u>M</u>	<u>SD</u>
Sustainable agricultural practices (e.g. soil conservation, integrated pest management, decreased use of fertilizers and other chemicals, etc.) help protect the environment and our natural resources.	4.19	0.51
The use of animals for research purposes is important.	4.19	0.40
Agricultural technology has a positive impact on the U.S. standard of living.	4.05	0.86
Agriculture should do more to publicize its scientific contributions to society.	4.00	0.32
American agricultural products are safe for human consumption.	3.95	0.50
Science-based technologies in agriculture have the potential to help resolve environmental concerns.	3.90	0.62
Biotechnology in agriculture provides needed products for human use.	3.86	0.48
The prices farmers receive for their products are too low.	3.81	0.87
Farmers are good stewards of the environment.	3.76	0.62
There are numerous career opportunities in agriculture.	3.76	0.83
All journalists should receive some instruction about agricultural issues.	3.71	0.64
More biological (vs. chemical) control of pests should be used in agriculture.	3.71	0.72
Consumers have confidence in the safety of their food.	3.67	0.66
At least one course in agriculture should be required for all K-12 students.	3.67	0.80
Genetic research is necessary to ensure a dependable food supply.	3.67	0.58
Genetic research is necessary to ensure an abundant food supply.	3.62	0.59
Corporate farms are vital to the success of Arkansas agriculture.	3.62	0.74
Agricultural producers use effective conservation practices.	3.57	0.60

Note. Classifications based on the scale: M = 4.20 or higher = Strongly Agree; 3.40 – 4.19 = Agree; 2.60 – 3.39 = Undecided; 1.80 – 2.59 = Disagree; and 1 – 1.79 = Strongly Disagree

Editors responded with means in the “undecided” range for a number of attitudinal statements that pertained to animal production and processing, the image of agriculture, and the marketing of agricultural products (See Table 4.). Statements with which editors were undecided included: “The image of agriculture is improving,” “The public receives valuable agricultural information from the media,” “Procedures used in the processing of animals are appropriate,” “Livestock are handled in a humane manner by producers,” and that “Imported agricultural products are safe for human consumption.” However, standard deviations throughout these statements indicate variance in the expressed attitudes.

Editors “disagreed” with attitudinal statements that dealt with knowledge about agriculture, the stability of the agricultural economy, and agriculture’s contribution to the deterioration of the environment (See Table 5.). Editors disagreed that agriculture has greatly contributed to the deterioration of the environment, the U.S. agricultural economy was stable,

most journalists were knowledgeable about agricultural issues, and that the American public was knowledgeable about agricultural issues.

Table 4

Attitudinal Statements with Which Arkansas Daily Newspaper Editors Were Undecided (n = 21)

Statement	<u>M</u>	<u>SD</u>
The image of agriculture is improving.	3.38	0.92
The public receives valuable agricultural information from the media.	3.33	0.97
Procedures used in the processing of animals are appropriate.	3.29	0.78
Livestock are handled in a humane manner by producers.	3.24	0.77
Imported agricultural products are safe for human consumption.	3.10	0.83
Farmers use chemicals appropriately for pest management.	3.05	0.74
Farmers effectively use agricultural markets.	2.95	0.86
Livestock confinement operations maintain humane animal living conditions.	2.86	0.85
Agriculture is a major contributor to pollution.	2.86	0.85
The ag. industry does an adequate job of informing the public about ag. Issues.	2.76	0.83
The prices received by processors of agricultural products are too low.	2.76	0.70
The agricultural industry does an adequate job of public relations.	2.67	0.80
Agriculture has a negative image.	2.62	1.02

Note. Classifications based on the scale: M = 4.20 or higher = Strongly Agree; 3.40 – 4.19 = Agree; 2.60 – 3.39 = Undecided; 1.80 – 2.59 = Disagree; and 1 – 1.79 = Strongly Disagree

Table 5

Attitudinal Statements with Which Arkansas Daily Newspaper Editors Disagree (n = 21)

Statements	<u>M</u>	<u>SD</u>
Agriculture has greatly contributed to the deterioration of the environment.	2.57	0.75
The U.S. agricultural economy is stable.	2.29	0.78
Most journalists are knowledgeable about agricultural issues.	2.05	0.67
The American public is knowledgeable about agricultural issues.	1.90	0.54

Note. Classifications based on the scale: M = 4.20 or higher = Strongly Agree; 3.40 – 4.19 = Agree; 2.60 – 3.39 = Undecided; 1.80 – 2.59 = Disagree; and 1 – 1.79 = Strongly Disagree

Conclusions /Implications/Recommendations

Most Arkansas daily newspaper editors live in a rural area, work for newspapers that are corporately owned, have 10 or more years experience in journalism, and have considerable experience in writing agricultural news stories. Most are well educated (though not in agricultural subject matter), have completed few college agriculture courses, and have attended very few Extension workshops.

Two-thirds of Arkansas' daily newspapers print an agricultural section, but less than one-fourth employ an agricultural reporter. This necessitates that journalists who also have other duties and assignments write agricultural news stories as well.

For the most part, editors believe that their readers' interests coincide with their own. Health, food safety, and environmental issues were the areas of greatest interest. Interestingly, biotechnology and genetic modification of organisms ranked toward the bottom of editors' list of interests.

Editors possess positive attitudes toward the agricultural industry, although they were less positive about the image of agriculture or performance in educating the public about the agricultural industry. Editors expressed attitudes that were positive about such topics as the technical and scientific nature of agriculture, the ability of agriculturalists to address issues dealing with environment and research, and the belief that agriculture provides a safe and abundant food supply. With positive attitudes in these areas, it is likely editors would be biased toward reporting positive news about these topics – if bias in reporting occurs, as indicated by Hayakawa and Hayakawa (1990).

Editors agree that more education in agriculture is necessary. Editors expressed attitudes in agreement that journalists should receive some instruction in agricultural issues and that K-12 students should be required to take at least one course in agriculture.

While editors and journalists should be encouraged to garner more information about agricultural issues, the responsibility for informing editors and other journalists rests primarily with agriculturalists themselves. Journalists need to be able to draw upon a diverse knowledge base, but it may be up to agricultural educators/communicators to provide that knowledge. It is not realistic to expect journalists to receive educational training in all areas in which they will be reporting throughout their careers. However, by working together to ensure that journalists/editors fully understand agricultural issues, less bias in reporting agricultural news should be an expected outcome.

Another strategy to address the possible lack of literacy in the understanding of agricultural issues is for university faculty in journalism and agriculture to collaborate to provide a course for students and/or young journalists about agricultural issues. University faculty should also be encouraged to continue positive, open relationships with journalists to ensure open lines of communication in order to disseminate information about agricultural issues. Workshops should be conducted by agricultural communication and agricultural education faculty for other college of agriculture faculty, extension personnel, and university researchers on how to work with, and give appropriate responses to, the media.

A qualitative study should be conducted that delineates how attitudes and experience impact the decision-making process of journalists. Likewise, additional studies should be undertaken to determine the influence of editors' and other journalists' attitudes on weekly newspaper and news magazines gatekeeping strategies. Research should also be conducted to determine the effectiveness of the use of technology (i.e., listserves, bulletin boards, World Wide Web sites, etc.) in providing updated information to journalists about agriculture. This could

allow agricultural educators and communicators to target editors with updated information in the most effective manner.

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