Research

Penchant for Print: Media Strategies in Communicating Agricultural Information

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Abstract

The news media provide much of the information the public receives about agriculture and agricultural issues, but they are not the only players in the communication equation. Sources supply the news media with facts and information that eventually direct public thought and opinion about agriculture. Therefore, agricultural communication professionals play a significant role in the dissemination of agricultural information through the news media. In an attempt to better understand the role of agricultural communication professionals, the purpose of this study was to explore their media strategies and choices—specifically their use of different media outlets for their communication efforts. The present applied-exploratory study utilized qualitative methods to gather data from participants. Through 12 in-depth interviews and three online focus groups, a purposive sample of agricultural communication professionals shared their media relations strategies and choices. Overall, the data suggest a preference for working with trade, print media outlets. However, participants also noted that the consolidation and reduction of agricultural media outlets, specifically the farm broadcaster, pose a challenge for the communicator who relies heavily on trade media for their communication needs.

Introduction

As a scientific industry with highly complex issues and information, agriculture faces the same hardships as other scientific industries, which include a strained relationship between science and the public creating increased concern from the scientific community (Gregory & Miller, 2004). To an extent, this concern stems from the declining public support for science and technology, which has been blamed, by some, on the news media's inattention to relevant issues (Hartz & Chappell, 1997). The news media have been linked to several of the causes associated with the declining support in science, including reporters' lack of scientific background and knowledge, their news-gathering norms, and the editorial pressures placed on them (Treise & Weigold, 2002). Nonetheless, Treise and Weigold suggested, "Effective science reporting is perhaps the only mechanism for most people to learn about fast-breaking events and exciting developments that affect everyone" (p. 310).

However, holding the news media solely responsible for the communication of scientific information would be an inaccurate representation of the media coverage process. The news media provide much of the information the public receives about science and scientific issues, but they are not the only players in the science communication equation. Sources supply the news media with facts and information that direct public thought and opinion about science (Stringer, 1999). Gans (1979) suggested that the shaping of news content starts with the source, and commonly that source is a communication professional. Turk (1985) also claimed that communication professionals have a considerable amount of influence on the media agenda and, in turn, the public agenda.

Agricultural communication is one facet of the broad discipline of science communication. De-

spite the significant role that agriculture plays in American society, news surrounding agricultural issues is limited (Stringer & Thomson, 1999), yet some of the most prevalent science communication issues in the last decade surround agricultural issues. For example, recent agricultural issues that have caused heightened public concern include mad cow disease, genetically engineered foods, food safety, agroterrorism, biotechnology, food sustainability, organic foods, and animal cloning. These issues in agriculture and their impact on the American economy make the need for communicating agriculture essential in creating an agriculturally aware public. However, as a component of science, agriculture is experiencing the same public understanding and awareness tribulations that have severely affected the public's attitudes and images of agriculture (Coon & Cantrell, 1985).

The importance of the news media in disseminating agricultural information is becoming increasingly fundamental for improving support of the agricultural industry in the United States. For example, a 1993 survey by American Opinion Research, Inc. suggested that 81% of respondents considered the news media to be their principal source of information regarding science topics, especially information on the environment and natural resources. Research specific to agricultural communication indicates that consumers are primarily informed about agriculture through the news media (Reisner & Walter, 1994; Rogers, 1983). Stringer (1999) established the ensuing connection between the reliance on the mass media for agricultural information and the lack of media coverage by saying, "Because agriculture is taken for granted and media coverage is sparse, the public has little understanding of agricultural issues" (p. 2).

While garnering media coverage for agricultural and other science-related fields may be difficult, there are strategies that can improve the media situation in which agriculture currently finds itself. Research suggests that effective media relations can augment the amount of media coverage devoted to agricultural information (Curtin, 1997; Grunig, 2001; Shin & Cameron, 2001; Shoemaker & Reese, 1991; Turk, 1985). As part of their media relations efforts and with the responsibility of disseminating agricultural information to relevant audiences, agricultural communication professionals need to make many decisions, including what information to share with the news media, how the information will be packaged, and which media outlets should be sent the information.

Theoretical Framework

Agricultural communicators have more mass media options now than ever before with regard to communicating agricultural information to their key publics. The Internet, newspapers, magazines, television, radio, video, and billboards are all part of the vast communication toolbox today, meaning communicators must make a decision on what communication channels to use in satisfying their various needs of information dissemination. Thus, the present study extends previous research on the theory of uses and gratifications by exploring the mass media choices of agricultural communicators in communicating with their target audiences through mass media channels.

Research that employs the uses and gratifications theory for theoretical support typically involves a study of the motives for media usage and the rewards that are sought from the use of that medium (Wimmer & Dominick, 1994). From the perspective of the media consumer, uses and gratifications theory examines "how people use the media and the gratifications they seek and receive from their media behaviors" (Wimmer & Dominick, p. 349). At its core, uses and gratifications theory is viewed as an attempt to explain why people use the mass media and the satisfaction they receive from their use (Lazarsfeld & Stanton, 1944). Although used from a different perspective from the media consumer perspective, the theory of uses and gratifications demonstrates value to the present study in its ability to a) uncover how individuals in agricultural communications use mass communication to

gratify their communication needs, b) discover the underlying motives for their use of certain media in communicating their information, and c) identify the positive and negative consequences of their media use.

Organizational Media Use

Dobos (1992) applied the uses and gratifications framework to study media satisfaction and choice in organizations. Following this framework, numerous studies have indicated the importance of exploring user needs and need gratifications in explaining media choice within organizations (Bair, 1989; Rice & Williams, 1984; Steinfield, 1986). "The study of media choice making, variously defined as preference for or selection of a specific channel, has become more important with the increasing diversity of media options available in organizations" (Dobos, p. 33).

Katz, Gurevitch, and Haas (1973) proposed that media satisfaction and choice are linked to the gratifications users seek and uncover in the media. "Gratifications sought" can be defined as needs, expectations, or motivations for media use shaped by individual characteristics and the social milieu, whereas "gratifications obtained" refers to the fulfillment of media expectations by the available communication alternatives (Dobos, 1992). Media choice and media satisfaction differ in that media choice is the result from linking a need gratification to a particular medium that reflects individual evaluations of a medium's various dimensions like credibility. Media satisfaction refers to more of an immediate response associated with need fulfillment and comparisons to actual and expected outcomes (Palmgreen & Rayburn, 1985).

Based on the media choice and media channel discussions presented, this study applies uses and gratifications theory by exploring the choices of agricultural communication professionals in their selection of news media channels to communicate agricultural information. Previous research indicated that "communicators traditionally group their activities around their preferred medium" (Academy for Educational Development, 1985, p. 6), which could have implications on communication effectiveness. Thus, exploring the media relations environment for agricultural communication professionals is believed to be important to understand where and why these professionals are focusing their news media communication efforts.

Research Focus

Currently, the strategies of agricultural communication professionals with regard to the media relations practices mentioned is not known. At best, there are generally held assumptions about the media outlets that are commonly used by agricultural communication professionals in the dissemination of agricultural information. Therefore, the present study explores agricultural communication professionals' media choices and uses the following research questions: a) What constitutes effective media relations strategies in agricultural media relations? and b) What information decisions and media choice strategies do agricultural communication professionals make in disseminating agricultural news?

Methods

Approached from a qualitative research design, this study attempts to describe the strategies and choices of agricultural communication professionals when working with the news media. Through triangulation of in-depth interviews and online asynchronous focus groups, communication professionals from the U.S. agricultural industry provided insight into working with the news media.

Research Design

Qualitative research has been cited as being useful for studying phenomena on which little previous research is available and when the purpose of the research is exploratory and descriptive (Broom & Dozier, 1990; Lindlof, 1995; Marshall & Rossman, 1995; McCracken, 1988). In the present study, a qualitative approach to data collection enabled the researcher to examine agricultural communication professionals' experiences and behaviors about specific areas of media relations from their personal frames of reference, therefore allowing the researcher to gain insight into the media relations environment of agricultural communication professionals (Johnson, 1997).

Participant Recruitment

Chain referral, a purposive sampling technique, was employed to identify and select participants who met the participant criteria for both interview and focus group data collection. Chain referral is a technique used to identify additional participants through another participant. Initial interview participants were selected based on a) their familiarity to the researcher, b) their level of media relations experience, and c) the type of organization in which they worked. The researcher thought it was particularly important to choose participants who have extensive experience in media relations in order to gather accurate, information-rich data that accurately described the culture of agricultural communication professionals. Furthermore, because the researcher was interested in exploring all facets of the agricultural industry, it was important that the participants represent university, corporate, and government entities. At the completion of each interview, participants were asked to refer agricultural communication professionals whom they viewed as adept in media relations and who could make significant contributions to the study. From these referrals, a list of potential participants was compiled, reviewed for overlap, and revised. The referral list, which included 43 agricultural communication professionals, was used to recruit online focus group participants.

Data Collection

Two data collection methods were used in this research: interviews and online focus groups. Commonly referred to as a "conversation with a purpose," the qualitative interview can be described as interactive and open-ended (Bingham & Moore, 1959; Lindlof & Taylor, 2002). For the present study, 12 semistructured interviews were conducted over the phone and tape-recorded for transcription in March and April, 2005. The length of the interviews varied from 30 to 55 minutes. The researcher opened and guided the discussion through a semistructured process, hoping to achieve a balance between formality and informality (McCracken, 1988). Prior to the interviews, a panel of experts from academic and industry organizations reviewed the interview guide. In addition, the interview guide was pilot-tested with three representatives similar to the study's participant sample. The interview guide was revised according to expert suggestions and observations made from the pilot interview. In conducting the interviews, the researcher scheduled at least 1 day between interviews (with the exception of three interviews), allowing transcription of each interview before proceeding to the next interview. Lindlof (1995) and Morgan (1997) suggested transcribing while still in the field so that the feel for each group can be captured accurately in the field notes, as well as keeping the moderator fresh for each interview.

Following the interviews, three online focus groups were conducted with an additional 22 agricultural communication professionals during the months of May and June, 2005. Focus groups are cited as being useful for producing "data and insights that would be less accessible without the interaction found in a group" environment (Morgan, 1988, p. 12). Based on this premise, the second

method of data collection for this study utilized asynchronous discussion group software to conduct the online focus groups in an attempt to create meaningful interactions between participants. By conducting online focus groups, the researcher had the ability to extract information that could not be obtained through the one-on-one interviews (Morgan, 1997). Using discussion board software developed and hosted by the researcher's institution, the focus groups were considered a follow-up method, providing elaboration and clarification for the interview data collected.

The three online focus groups each ranged in size from 3 to 10 homogenous participants. The number and size of focus groups fell within Mann and Stewart's (2000) suggestions for online focus groups. As is common with traditional focus groups and often applied in the virtual world, the researcher over-recruited participants by 20% in anticipation of no-shows (Morgan, 1997). Prior to the online focus group discussion, participants were separated into categories by the organization they represented. Separating the participants based on the sector of agriculture in which they work—industry (corporate and nonprofit), government, or institutional—was believed to create and sustain a healthy conversation as well as a comfortable and cooperative virtual environment (Morgan). Each online focus group was designed to serve as a discussion forum for the three communities of agricultural communication professionals, and as such facilitated discussion by allowing all participants to view and comment on participant responses.

Focus groups were conducted consecutively, each lasting 14 days. According to Mann and Stewart (2000), question schedules can be transmitted to participants in a variety of ways. The present study combined two suggested approaches by posting all questions at the outset of the study but allowing participants to access the questions over a 2-week period in which reminder e-mails were sent to participants at 3-day intervals. The researcher anticipated that this approach would allow participants enough time to contribute to the discussion at times convenient to them. Reminder e-mails were sent to encourage in-depth responses to all questions posted and to keep participants interested throughout the duration of the research. Throughout the structured discussion, the moderator responded to messages, probed for more information when necessary, and posed new questions based on the discussion to encourage equal contribution by all participants.

Although limited research is available on the use of the Internet in conducting qualitative research, there is evidence that supports the notion that online focus groups provide practical and economic research benefits without negatively compromising the quality of data (Crichton & Kinash, 2003; Jones, 1999; Mann & Stewart, 2000; Montoya-Weiss, Massey, & Clapper, 1998; Oringderff, 2004). Thus, due to the time, financial, and geographic constraints of this study, the combination of traditional data collection methods with asynchronous online research methods was explored and utilized.

Data Analysis

To initiate the analysis process, interview data were transcribed and focus group data were formatted so the researcher was able to analyze full transcripts of all data collected. Because the researcher was able to save and store the text from the online discussions, transcription of the focus group data was not necessary, and records from the online interaction were used as transcripts. After the transcripts were compared with field notes and informal analysis techniques were completed, the data were analyzed using the inductive data analysis method outlined by Hatch (2002) and utilized the subsequent steps: a) read data and identify frames of analysis, b) create domains based on semantic relationships discovered within frames of analysis, c) identify salient domains and assign them a code, d) refine salient domains and keep record of emerging relationships, e) decide if domains are

supported by data, f) complete analysis within domains, g) search for themes across domains, h) outline relationships within and among domains, and i) select data excerpts to support the relationships. Following analysis methods similar to other important inductive models (e.g., Glaser & Strauss, 1967; Miles & Huberman, 1994; Spradley, 1979), the model of analysis used in this study searches for "patterns of meaning in data so that general statements about phenomena under investigation can be made" (Hatch, p. 161).

Results

Interviews were conducted with 12 agricultural communication professionals. The demographic characteristics of the interview participants were as follows: 5 participants were male and 7 were female; 4 represented university agricultural communications, 2 represented government agricultural communications, and 6 represented industry agricultural communications. The media relations responsibilities of the participants varied from 10% to 85% of the participants' job responsibilities, with the average being 44%. The number of years working with the media ranged from 4 to 36 years, with the average being 20 years in the agricultural communications field. Job titles held by participants varied from public affairs specialist, press secretary, and director of public opinion management to marketing director and public relations coordinator. From the three focus groups conducted, little demographic information was obtained from the 22 focus participants due to the confidential nature of the online focus group environment. Three themes emerged as relevant to the study's research questions. The following three themes are based on the interview and focus group data gathered.

Theme #1: Attention to Trade Media

Participant responses varied when asked about the industry's current use of the mass media to communicate agricultural information. Although there were opposing opinions as to the industry's effectiveness, participants suggested that the agriculture industry was not very effective in its current use of the mass media in telling the story of agriculture. As an example, KB said,

> Actually, I think the agricultural industry—as a whole—barely uses the mass media. Sure, they take care of their base (e.g., farm radio, farm trade magazines and journals), but they don't venture into mainstream media in a manner that expands their audience. Given the number of new technologies and issues growing from agriculture, I think this tendency is at minimum, a deficit, and at worst, a liability.

This sentiment was echoed in the repeated response of participants that the industry tends to talk to agricultural media and audiences and ignore the consumer media and nonagricultural publics. As JR expressed,

> I believe the ag industry spends too much time talking to itself. You can't ignore ag trades . . . but if you don't reach out to mainstream media, you've got no right to criticize the unbalanced coverage that we often see.

HW confirmed this opinion by admitting, "The ag press is where we spend the most time, therefore neglecting the non-ag press." JH agreed, saying, "Agricultural communicators tend to contact only trade media." JA further explained this belief by providing her reasoning behind the focus on agricultural trade media:

> Ag media work tends to stick exclusively to ag trade media, farm broadcasters, etc. Two main reasons—clients want to use (sometimes limited) resources to target specific ag audiences. Secondly, there is the fear that consumer media may not understand some of the information or challenge the information beyond the scope of ag industry.

JG professed that it is "the friendliness of the trade media" that appeals to her and may be a reason that she tends to communicate with the trade media over the consumer media. JW commented that working with the trade media is "certainly easier than working with the consumer media that do not understand farming in and of itself." BB reiterated this belief by saying, "It is harder working with the mass media simply because I do not know them as well."

Yet another plausible reason provided for the focus on trade media and avoidance of consumer media is the challenge and difficulty of working with the consumer media, as explained by VM:

> As an agricultural communicator at a land-grant university, I work with the agricultural trade media and find these people are very interested in our information and, more importantly, in providing timely information to producers. When I work with the consumer media, there's often far less interest or understanding and facts can get messed up easily.

DR also expressed this difficulty, as well as the consequences of this tendency to focus on agricultural trade media:

> In the mainstream news media, agriculture is becoming less understood and appreciated as a major news beat, which leaves the industry essentially with only disaster and reaction stories to tell their story. Not a very good way to get a solid understanding of an industry.

Neglect of the consumer media in disseminating agricultural messages was not only evident in participants' responses to the industry's current use of the media, but also in the descriptions of their media relations strategies. Well over half of the participants indicated that they work with agricultural trade media on a regular basis and, only on "special occasion," will they work with the consumer media. MA demonstrated this strategy, saying, "Sometimes we will have some consumer media interaction but, in general, it is mostly trade media." Similarly, JH revealed, "A lot of my PR work for my clients is directed back to agriculture as compared to the general media." These findings reveal a potential deficiency of consumer media relations throughout the agricultural industry.

Theme #2: Consolidation of Media

As revealed in the aforementioned theme, media relations for the majority of participants means working with agricultural trade media outlets more than mainstream consumer media outlets. However, the current theme, media consolidation, undermines the viability of this strategy, as participants' opinions suggest that the traditional agricultural media outlets are becoming extinct. Specifically, TG explained,

> The biggest change that I see is the dying breed of farm broadcasters, who have always been close friends of agriculture. They are a dime a dozen because of layoffs and consolidation, so there is not that much farmer-friendly media out there anymore. Instead, we are having to get our story across with environmental reporters who really do not understand agriculture.

The consolidation referred to by TG was not only frequently alluded to as a change in agricultural media relations but also as a challenge, problem, and barrier for communication professionals in agriculture. JN maintained that consolidation is not only changing the agricultural media, but it is "happening within the agricultural world." JW agreed and implied that the consolidation of the agricultural industry and agricultural media was a domino effect:

> There has been a dramatic consolidation of companies within agriculture, and that cuts down on the number of entities that have advertising. The reduced advertising or more concentrated media purchases have an impact where the publications have to be pretty lean and mean, as well as farm broadcasters. There are fewer farm broadcasters and fewer reporters than there were half a generation ago.

Furthermore, MA projected that this consolidation will continue: "I would assume that the agricultural trade media will continue to consolidate and get smaller. Most major consumer publications are already getting rid of their agriculture beat." Illustrating this consolidation, DR said, "We don't have a single reporter in our state who is covering agriculture full-time. That makes it harder to connect, since we're not anybody's main beat." HW suggested, ". . . there is a lack of outlets interested in covering ag-related topics, let alone entire ag media outlets."

Again the implications of this change for agricultural communication professionals include increased direct communication and use of the consumer media for communication with various audiences. JH said, "With the reduction of the number of broadcasters and reporters that specialize in agriculture, it's going to be a lot of one-on-one communications, and that requires good personal skills." He continued, "There are less and less ag media with fewer and fewer outlets and time and space in those outlets. As a result, they have numerous stories to run in a short amount of time." SS recommended, "We are going to have to increase our focus nevertheless, on urban papers and just finding a way to reach a broader variety of reporters at the different papers and establishing those relationships."

Clearly, agricultural communication professionals are experiencing a change in how and with whom they are communicating. Although participants insinuated that this change is outside of their traditional comfort zone, it is one they recognized as increasingly evident and important to manage sooner than later.

Theme #3: Penchant for Print

"You've got a whole variety of media outlets. That has provided more choices and more voices out there competing for attention." This response from MA summarized the reasoning for the investigation into the mass media choices of agricultural communication professionals. As DR suggested, "Mass media ain't just your morning paper anymore." As a result, agricultural communication professionals have a choice of various communication tools for information dissemination. The assumption of the present study was that these choices hold implications for how and whom agricultural communication professionals are reaching with agricultural information.

Overwhelmingly, the findings suggest that participants choose print media to communicate their agricultural information. This is not only the media outlet they commonly target but also the media outlet with which they prefer to communicate. Exemplifying this shared communication preference, KF said, "Number one is always going to [be] print for me because that is the background I come from. But my least favorite is TV." Although KF explained this choice as being a personal preference, print was preferred for various reasons as demonstrated in the following responses:

MH: I tend to do more print media here than broadcast media, only because I think trade is a complicated issue and I don't think broadcasters can cover it as well.

TD: I am a retreaded newspaperman and still have an affinity for print because radio and TV are so ephemeral and so shallow.…Print media are more oriented towards agriculture.

BL: In general, print is the more conscientious and effective medium. Print is the preferred outlet for most of our information, and the agricultural press is the preferred subset.

LS: Ultimately, the stakeholders and policymakers pay more attention to clippings, so print. If you got a headline it seems to live longer. So what you want is exposure in the print media, your key newspapers.

BB: I have priority on print just because I think it is more effective for the ultimate groups of people you are trying to reach. I certainly do work with television stations, and the network

news has been here for various things, but it is not as enduring. It does not get the kind of recognition that the print does.

JW: We focus our efforts on the print side because again we see more effective results with that, and part of that is the ability to measure it. You know, we can clip print, but we cannot clip air…sometimes we are selling and explaining complex ideas or nutrition or things that are maybe a little more in-depth, and print sometimes is conducive to that.

DF: I would say print, and I think it is the fact that when you do something with broadcast media, it is there for that instant and may be remembered for a day or two, but then it is gone. With print, you have the record and people can make copies and distribute, and so it tends to have a longer life.

Although these responses capture just a few of the reasons provided for print preferences, they show the tremendous focus on print media for dissemination of agricultural information.

Interestingly, many of the same participants who indicated print media as their focus and preference as a mass media communication tool also suggested that print may not be the only valuable media outlet in terms of impact. For example, KF suggested,

For my purposes, I think print is always going to be much more valuable, but sometimes you know consumers love to see things that are positive on the pork industry on their TV sets, too. So to me, I hope to not turn anyone away, but let's put it this way…when CNN calls or News Hour with Jim Lehrer, I am not real happy.

Following this frame of mind, many participants indicated print as their preferred outlet and the one with which they most frequently communicated, but indicated television as the most valuable.

DG shared this perspective:

I tend to lean more toward working with the print media, and I think again it is because, compared to broadcast media, they take a little more time with the story. Print covers more angles of a topic, but I have to say if you get one good TV story, you generally get more public feedback than with one good print story.

Despite the inclination to work with newspapers most often, FP offered that print media are not "necessarily the most valuable." Instead, she suggested, "Sometimes 30 seconds on television can get you more bang for your buck than a half of a page in the newspaper." Similar to FP, LS focuses on print even though she "recognizes the great importance of television," leading her to guess they "should probably do more with television." Summarizing this contradiction in choice, uses, and gratifications in media outlets, SS shared,

In terms of people actually seeing and we hear that they see it, it would have to be print [used more often]. But there is nothing like television to get people here in our organization excited. You know, so-and-so from Channel 10 showed up, and that is pretty cool.

Media outlet choice was a self-selection process of each agricultural communication professional. Several participants implied that personal bias, previous experience, and personal success rate had the largest impact on their media choices for agricultural information dissemination. As a result, print is the medium of choice, despite the gratifications associated with television. However, manifest in this theme is the evidence that agricultural communication professionals may not be taking advantage of those different tools.

Conclusion

The significant findings of the present study concerned the predisposition to communicate with print media and, as a subset, the agricultural trade media. As evidenced in the data, there is a tendency

of agricultural communication professionals to focus their media relations efforts on the agricultural trade media—more specifically, the agricultural print media. However, an even more beguiling finding is the paradox presented through the investigation into the uses and gratifications of participants' media outlet choices. Participants indicated that they focus their efforts on print media for various reasons, even though they perceive television to have the most impact in communicating to their audiences. The second paradox in the data is participants' focused efforts on the agricultural trade media, although they suggest the trade media are diminishing and slowly becoming obsolete, slowly making consumer media the only viable mass media communication choice.

The tendency of agricultural communication professionals to work with agricultural trade media outlets implies that this lack of communication with consumer media could be a contributing factor to the limited media coverage of agricultural issues that has been reported in previous studies (Stringer, 1999). Literature supports the notion that sources of information play a significant role in the gate-keeping process and agenda-building practices of the news media. Salwen (1995) argued that the "media agenda is not created within the newsroom as much as it is shaped by the sources that provide information to the newsroom" (as cited in Burns, 1998, p. 1). Therefore, if agricultural communication professionals were to enhance their communication efforts with consumer media outlets, there is an increased likelihood that the amount of agricultural media coverage would also increase. Needless to say, this suggestion is not a simple solution; conversely, it is a solution that will take time and effort, and agricultural communication professionals may have to forsake their comfort level and communicate with a changing, less interested, and nontraditional media representative. Endorsing work with consumer media outlets, Reisner and Walter (1994) suggest that general interest media "cover agricultural events and issues for the nonfarming public, who depends on that coverage for their understanding of agricultural topics" (Stringer, p. 7).

Agricultural communication professionals not only have endured the ever-evolving media environment, but also are forced to deal with the changing field of agricultural communications, specifically the consolidation and reduction of agricultural media outlets. Participants revealed that there are fewer and fewer agricultural media outlets and reporters dedicated to covering the agricultural beat. Consequently, when dealing with consumer media, agricultural communication professionals are, by and large, not working with "one of their own." Although this finding is congruent with some of the challenges of communicating agricultural information, it reinforces the need for agricultural communication professionals to change their media relations practices in order to accommodate the contemporary and prevailing reporters covering agricultural information: the environmental, health, and lifestyle reporters. Furthermore, if the agricultural trade media are truly "a dying breed," then it is even more imperative that agricultural communication professionals concentrate on developing relationships with the consumer media as a practical alternative for reaching diverse audiences with agricultural information.

Also emerging from the data was participants' preference in communicating with the print media over other news media, such as radio, television, and the Internet. Print media were unmistakably the focus of most agricultural media relations efforts. While reasons for this predisposition varied, the implications of this finding are evident in the literature, which indicates print media as the source of information least accessed by individuals for information, as well as the source of information that is declining in circulation and readership (Brody, 2004). This association does not connote that print media are not valuable for reaching certain audiences or communicating certain issues; however, it does propose that the tendency to focus on print media, and generally neglect broadcast media, could be a contributing factor in the agricultural industry's perceived inability to reach nonagricultural

audiences. Nonetheless, the limited use of broadcast media by agricultural communication professionals is, without doubt, excluding several segments of the population through selective information dissemination efforts.

Incongruously, participants did denote the value of alternative media by referring to the greater impact and reach of broadcast. Evidently, the impact and reach were not perceived important enough, or did not contain enough value for the communicators, to actually alter their media relations strategies and information dissemination decisions. Furthermore, recent research on the state of the mass media indicated that newspaper and magazine readership has declined, broadcast television viewership has also declined, radio listenership has remained stable at 90% of Americans listening to radio, and Internet use is the only mass medium that has increased in audience use (Brody, 2004). Clearly, agricultural communication professionals who disregard such trends in their media relations efforts do so at their own peril.

Agricultural communication professionals' preference for print media also carries several implications for the uses and gratifications theory that was used to guide this area of investigation. First, these findings are fairly consistent with the traditional assumptions associated with uses and gratifications research. The theory states that a media user seeks out a media source that best fulfills the needs of the user. Previous literature supports this notion and relates it to the present context in that "communicators traditionally group their activities around their preferred medium" (Academy for Educational Development, 1985, p. 6). Participants in the present study indicated that they choose to work with print media for various reasons, including familiarity, the ability to communicate more complex information, more time to work with the medium, and more ease in establishing personal relationships. Demonstrating the central concept of uses and gratifications theory, this finding supports the assumption that individuals actively seek out the mass media to satisfy individual needs even though these needs may not accurately meet the needs of the communication purpose. In other words, the findings revealed that although the gratifications of the target audience may be better met through other media channels, print media were primarily used to disseminate agricultural information for what appears to be the personal gratification of the communicator.

If these challenges in working with the news media on agricultural issues continue to be a constant in the agricultural communications profession, it is essential that agricultural communication professionals unearth strategies to overcome them. It would be worthwhile for this culture of communicators to examine their counterparts in other fields of science communication because, as literature suggests, communicators in science are more than likely experiencing similar challenges regardless of their specific fields (Friedman, Dunwoody, & Rogers, 1999; Gastel, 1983; Treise & Weigold, 2002).

Recommendations

In addition to the implications this study carries for the agricultural communication professional, a great deal can be learned from the study that can be applied in future research and practice in agricultural media relations. Although the use of this theory as a guide in the present qualitative investigation was nontraditional in the sense that it was used to explore the media choices in communicating information rather than to access or retrieve information, assumptions of the theory were supported in the findings. Future research in this area should focus on testing the three initial objectives in developing uses and gratifications theory by exploring the following areas: a) to explain how agricultural communication professionals use mass communication to gratify their personal needs and their audiences' needs, b) to discover underlying motives for agricultural communication profes-

sionals' media use, and c) to identify the positive and the negative consequences of individual media use on the target audiences' media use.

Additional research on the theory of uses and gratifications, based on the findings from the present study, should include exploring the contradiction between the perceived greater communication impact of television and the overwhelming choice of print to communicate scientific information to external audiences. This phenomenon could be investigated using a relative theory to uses and gratifications theory, expectancy value theory. Through this approach, it may be possible to explore the communicator's biases that can influence media choices, applications, and consequences. Moreover, this partiality for print despite the professed value of television should be quantitatively measured in order to establish the validity of the finding within a larger population of agricultural communication professionals.

Finally, agricultural communication professionals should utilize mixed media strategies, determining the most appropriate media to reach the target audience and to communicate the message. Previous research presents the advantages of various media in certain situations and for certain audiences; therefore, print media are not the most effective all the time (Crowder, 1991). The utilization of all media outlets—broadcast, print, and Internet—will increase the efficiency and value of media relations efforts to the organization. Without doubt, each type of medium offers advantages and disadvantages; however, completely ignoring a type of medium could also be alienating the audiences that use that medium as their primary source of information. In fact, Hino and Jensen (1996) suggested that science-based messages were most powerful in effecting public opinion when delivered through the high-profile medium of television. Knowing that different media carry different returns, it is essential that communication efforts be designed based on the needs of target audiences instead of the media needs and interests of the communicators (Crowder).

In summary, as Evans has suggested and as evidenced in the present study, "agriculture and society will need new and improved agricultural information channels and services that are geared to the scientific, progressive, change-oriented dimensions of a culture" (as cited in Boone, Meisenbach, & Tucker, 2000, p. 49). The intention of this research was to expand the literature on sources of scientific news and to provide direction for improving the information channels and services used in communicating agricultural information.

About the Author

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