

# The Agricultural Blogosphere: A Snapshot of New Agricultural Communicators Online

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## Abstract

Political science and journalism researchers have extensively explored the characteristics of blogs and the users who produce and read them. However, blogging research has tended to focus on a few specific genres, such as politics and popular culture, and has not usually included agricultural blogging. Blogs have emerged as an alternative to traditional media sources, making it important to understand if the trend of minimal agricultural coverage continues online. It is also important to understand who serves as "reporters" of agriculture in the blogosphere. This content analysis of 52 agriculture blogs—all of which originate in North America—shows that while many characteristics of these blogs are similar to those of other genres, the age of the blogger and frequency of blogging tend to be different. While many mainstream blogs serve as personal journals offering glimpses into the author's life, agriculture blogs mainly focus on filtering news and information for readers. These blogs cover agricultural issues ranging from livestock and crops to biotechnology, biodiesel, and politics.

## So What?

For years, agricultural communicators have monitored the mainstream press to see how it is covering issues of agricultural importance. However, with the advent of blogging technology, that conversation is no longer in the hands of a few. As communicators, we must be aware of how agriculture is portrayed and covered in the blogosphere.

Merriam-Webster recognized "blog" in 2004 as the number-one word for the year (CNN.com, 2004). While many individuals credit this development to the explosion of political blogs during the 2004 election (Herring, Scheidt, Kouper, & Wright, 2007; Tremayne, 2007), blogging technology had been making its mark for several years already (Blood, 2002). The term "blog," or

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"Weblog," dates back to 1990 and is used to describe a reverse chronological presentation of information that often is written in first person, includes links to other online content, and may have a listing of links to other blogs (a blogroll) (Tremayne).

First developed in the 1990s, blogs did not see steady growth until 1999, when the first free Weblog tools were launched (Blood, 2002). Once applications such as Pita, Blogger, and Groksoup launched, blogging became increasingly popular (Herring, Scheidt, Bonus, & Wright, 2004). These applications allow easy self-publication of information for a potentially large audience (Herring et al., 2007). It is estimated that there are more than 165 million blogs on the Web (*blo.gs*, n.d.) and 12 million adults in America who publish their own blogs (Lenhart & Fox, 2006). Journalists, educators, and business organizations are just some of the individuals embracing this new communication tool (Fannin & Chenault, 2005; Festa, 2004; Robinson, 2006). While political science and journalism researchers have studied the characteristics of blogs and the users who produce and read them, some topics, such as agriculture, have not yet been a focus of blogging research.

Given the recent scares about *E. coli* and other food-borne pathogens and the resulting media coverage, it is vital that published agricultural information be accurate and be perceived as accurate by the public because of its significant impact on society and public health (Terry & Lawver, 1995). As important as agriculture and science information is, researchers argue that the media generally ignores this subject or covers it only minimally (Pawlick, 2001). As blogs have emerged as an alternative to traditional media sources (Robinson, 2006), agriculturalists and communicators must understand to what extent agricultural topics will be covered online. It is also important to understand who serves as "reporters" of agriculture in the blogosphere and what these blogs look like in relation to other blogs.

### *Blogging Characteristics*

Blogs offer a service to their readers by serving as a filter of that day's news (Fannin & Chenault, 2005). Many conversations found on blogs contain discussions of current news topics or issues, accompanied by links to further information, the author's thoughts on the issue, and the facts the author feels are pertinent (Blood, 2002). Given the vast amount of information available online, blogs on specific topics offer "one-stop shopping" for prescanned Web information (Blood). While some blogs talk about the news of the day, other, more personal blogs simply discuss details of the writer's day; many of these blogs have smaller, community-like audiences (Trammell & Keshelashvili, 2005). Readers can interact about the topic through conversational exchanges with the blog author, or blogger, through the commenting function found on most blogs (Herring et al., 2004).

Filters, personal journals, k(nowledge)-logs, and mixed blogs are the four classifications of blogs developed by researchers (Herring et al., 2007). Personal journals, which resemble online diaries, are the most popular with traditional bloggers. In a longitudinal study of 457 blogs from spring 2003 to spring 2004, Herring and colleagues (2007) found that personal journals were the most common type of blog. Filter blogs, which Herring and colleagues (2007) found to be the second most common type, are described as blogs where the blogger surfs the Web and brings certain items to readers' attention while ignoring other information (Tremayne, 2007). Personal journals have more of an inward focus, while filter blogs have more of an outward focus (Tremayne). Filter blogs direct readers to other sites and tend to focus on politics or current events (Tremayne). Knowledge logs, or k-logs, typically come from organizations or institutions whose goal is to share knowledge (Herring et al., 2004). The last type of blog described by researchers is the mixed blog, which has qualities of all of the previous types (Herring et al., 2004; Herring et al., 2007; Trammell & Keshelashvili, 2005; Tremayne).

Most blogs are updated frequently. Herring and colleagues in 2004 found that the majority of blogs they studied were updated within a day. The blogs however, had a mean of 2.2 days between updates for the whole sample. Other popular blog features include archives of past entries, badges (small icons advertising products or group affiliations), images, advertisements, calendars, syndication services (such as RSS feeds), comments, blogrolls, links, and categories (used to organize blog entries into topics) (Herring et al., 2004; Herring et al., 2007; Sundar, Edwards, Hu, & Stavrositu, 2007; Trammell & Keshelashvili, 2005).

### *The Blogger and the Blog Reader*

A recent Pew Internet study found that 8% of Internet users keep a blog and that 39% of Internet users, or 57 million Americans, read a blog regularly (Lenhart & Fox, 2006). The same study noted that bloggers tend to be under the age of 30 and Caucasian, and they tend to live in the suburbs (Lenhart & Fox). Only 13% of bloggers studied live in rural regions of the United States. However, according to the Pew Internet and American Life Project, only 16% of rural Americans use the Internet, indicating that those that do may be aware of blogging (Lenhart & Fox).

Several studies have found that bloggers tend to be male (Herring et al., 2004; Trammel & Keshelashvili, 2005); however, other authors have found women to be the dominant blogging gender (Sundar et al., 2007). The difference could be due to the genre of blogs studied by each researcher. Male authors tend to dominate blogs covering technology and politics

(Herring et al.), but Sundar and colleagues, in a study on health blogs, found that women bloggers dominated. In their Pew Internet study covering all bloggers (not just one genre), Lenhart and Fox (2006) found that the population of blog authors is almost evenly split in terms of gender (54% male and 46% female).

When it comes to self-presentation on their blogs, findings vary as to how much bloggers reveal about their identity to their readers. The Pew study noted that 55% of bloggers blogged under pseudonyms, while 46% used their own names when blogging (Lenhart & Fox, 2006). However, a study of A-list (or popular) bloggers by Trammell and Keshelashvili (2005) found that 83% were willing to reveal their full names and 89% shared contact information, such as an e-mail address. Trammell and Keshelashvili also noted that 68% shared personal facts, biographies, and /or social status with readers. In a study of 203 random blogs, Herring and colleagues (2004) found that 92% shared some form of name, and of those who shared a name, 28% used a pseudonym. Fifty-four percent shared some other form of personal information with readers (Herring et al.). Both studies found that only a small percentage of bloggers displayed a personal photograph. Two different studies found that females tended to disclose more personal information on their blogs than males (Sundar et al., 2007; Trammel & Keshelashvili, 2005), with Sundar finding that personal blog sites tended to provide more profile information than professional blogs.

In a study of blog readers, Kaye (2007) found that 16.8% are motivated to read blogs for the information presentation, while 16.1% find reading blogs personally fulfilling. Study respondents stated that they read blogs because the information is presented in a way not found in other media. Respondents also described blogs as an alternative to traditional media sources. Many readers find it attractive that bloggers admit their biases up front; indeed, many bloggers are turning to blogging for their news information for this reason (Kaye). In one study of blog readers, Johnson and Kaye (2004) found that 76.8% relied heavily on blogs as their source for information on the Iraq war.

### *Bloggers as Journalists*

Because blogs serve as a source of "citizen journalism," several studies have analyzed users' opinions of the credibility of blogs. Johnson and Kaye (2004) found that blog users rated Weblogs as just as credible as traditional media sources, if not more credible. In a study of political blogs, Kaid and Postelnicu (2007) found that young adults believed information on a blog without question, regardless of whether the information came from a political expert, independent group, or a celebrity. Researchers also found

that blogs rated higher than other media in terms of depth of information, but rated lower in fairness of coverage (Johnson & Kaye, 2004). Johnson and Kaye stated that the more users relied on blogs, the higher their assessment of blogs' credibility. In contrast, however, they found that the majority of blog users (50.2%) consider blogs "somewhat" or "not very" accurate (Johnson & Kaye). The study concluded that many blog users tend to seek out information that supports their preexisting views.

While many users trust bloggers for information, many bloggers do not see themselves as journalists (Lenhart & Fox, 2006). However, 57% include links to original sources and 56% spend extra time verifying the facts they include in posts. "Citizen journalism," when a blogger serves as a one-person news crew and then publishes his or her impressions online, is currently a topic of much discussion in the world of journalism (Romano, 2005). Nowhere were citizen journalists acting as news crews more in evidence than at the political conventions in 2004, when an estimated 200 bloggers applied for press passes to the Democratic convention (Abrahamson, 2005).

The mainstream media has taken notice of this new form of journalism and has adopted it (Rosen, 2004). Many media organizations integrate journalism blogs (j-blogs) into their sites to compete with the independent "citizen journalists" (Robinson, 2006). Reporters see j-blogs as a way to compete with blogs that are trying to provide alternatives to the stories published in the mass media. Some reporters blur the lines of journalism in these blogs by being more relaxed in their reporting and their use of sources. However, many are trying to maintain their journalistic integrity by combining their traditional media articles and newscasts with their blogs. By referring to their traditional reports on their blogs, reporters feel they establish the credibility of their posts (Robinson, 2006).

### *Agriculture Blogging*

Because most research conducted on blogs occurred after the 2004 "blogging explosion," this is still an understudied medium when compared to more traditional news venues, such as newspapers, television broadcasts, and even the Internet. Most studies thus far have focused on blogs in general (Herring et al., 2004; Papacharissi, 2007), political blogs (Meraz, 2007; Scott, 2007), j-blogs (Bentley et al., 2007; Robinson, 2006), or A-list blogs (Herring et al., 2005; Trammel & Keshelashvili, 2005). Few research studies have focused on the genre of blogs covering agricultural and rural life. Researchers and practitioners have published several pieces looking at how agricultural journalists and communicators are using, or should be using, blogging, but no researchers have looked at the exact make-up of these blogs (Fannin & Chenault, 2005; Mays, 2005; Zimmerman, 2005a; Zimmerman, 2005b). Until

now, it has not been known how and whether such blogs differ from blogs covering other topics.

Fannin and Chenault (2005) reported on the usage of blogging in 2004 by Texas A&M University's agricultural communications department to attract journalists and nonmedia consumers' attention to its beef cattle short course. According to the researchers, two communicators posted stories, images, and audio interviews to the site over the 3-day short course through a blog. Researchers asked select media professionals to monitor the blog and offer comments. Conclusions from the study indicated that blogging could become a useful tool for covering agricultural news events, and reporters appreciated the updated information and story ideas (Fannin & Chenault).

While no other research studies have focused on agricultural blogging, several professional organizations have discussed the use of blogging to reach rural audiences. The University of Illinois (2005) made use of blogging to reach farmers with information about crop marketing, financial management, and other topics from their Extension service. Mays (2005) described blogging, other new technologies, and their relation to new media in a past issue of *AgriMarketing*. Zimmerman (2005b) continued the conversation with agricultural marketers by describing blogs as a valuable business tool that can provide on-site event coverage to personal customer contacts. Zimmerman (2005a) further described the potential for blogs to allow a window of transparency into an agricultural organization. According to Zimmerman (2005a), this window can both bring credibility to a message and serve as a marketing and public relations tool to reach targeted audiences.

### Theoretical Framework

Credibility and trust are extremely important in today's world of high-profile agriculture news. Because agriculture generally receives little attention from the mainstream media, it is important to understand how it is covered online. It is also important to understand how the media affects what is discussed on blogs as well as how blogs affect public perception. McCombs and Shaw (1972) described how traditional media have an agenda-setting function in society. By covering certain issues in their publications, they put those issues on the public's agenda and increase their importance. Relationships have been noted between the coverage an issue receives and the issue's importance to the public (Baran & Davis, 2003). Journalists serve as gatekeepers for information by determining what should be printed, thus signifying to readers what is significant. Bloggers do essentially the same thing by deciding what to publish on their blogs. In an experiment with college students, Trammell (2006) found that blogs had the same agenda-

setting effect on readers as traditional media. Drezner and Farrell (2004) noted similar results when looking at political blogs during the presidential election. They found that when popular political blogs discussed new or neglected political issues, it would set an agenda for large traditional media outlets to then cover.

### **Purpose and Objectives**

The purpose of the study was to provide a general description of the current state of blogging on agriculture-related topics. The use of blogging in business and politics is well documented, but little to no research has looked into how agriculturalists, agricultural communicators, and rural citizens are adopting this new form of media to spread their stories. No research to date has examined what topics agriculturalists are blogging about and what topics they may be putting into the public agenda. Blogging has allowed many new voices to enter the communication arena, and it is important to understand who is using blogging and how. Researchers developed the following objectives to address this purpose:

1. Describe the basic characteristics of blogs covering agriculture issues.
2. Determine who is blogging about agriculture in terms of age, gender, and occupation.
3. Describe the topics covered in agriculture blogs and determine the level of formality of the writing in such blogs.

### **Methods**

Study researchers used a quantitative content analysis of agricultural blogs in North America to collect study data. "Content analysis is the systematic assignment of communication content to categories according to rules, and the analysis of relationships involving these categories using statistical method" (Riffe, Lacy, & Fico, 1998, p. 2). Content analysis is seen as an effective and reliable method to explore the nature of blogs (Herring et al., 2004; Herring et al., 2007; Papacharissi, 2007; Trammell & Keshelashvili, 2005).

Due to the ever-changing nature of blogs, a complete directory of current blogs does not exist, making a random sample impossible to obtain (Trammell & Keshelashvili, 2005). Therefore, researchers pulled a purposeful sample using Technorati and Best of the Web directories. Researchers searched for agricultural blogs in both directories and then combined the resulting lists to develop the sample of agricultural blogs studied. Technorati currently tracks 63.2 million blogs (*About Technorati*, n.d.) and offers users the opportunity to search for discussions on specific topics or view a ranking of the top 100 blog sites (Herring et al., 2005). Developed in 1994, Best of the

Web provides an all-inclusive directory that classifies Web sites based on their usability and substantive content (*About Best of the Web*, n.d.). The study researchers cross-checked other popular directories used in research, such as blo.gs (Herring et al., 2004; Herring et al., 2005) and popdex (Trammell & Keshelashvili, 2005) to ensure the most complete sample possible.

Researchers excluded blogs that had not been updated in the 10 months preceding, since the primary interest of the study was active blogs. Also excluded from the study were active blogs originating outside of the United States or Canada. Researchers identified 58 blogs that could be classified as current. Five of these blogs were determined to originate outside of the United States or Canada, and one was not a traditional blog based on the definitions described earlier in this paper, leaving a sample size of 52 blogs for the study.

Given the lack of previous research on agricultural blogs, the focus of the study was descriptive and exploratory. The coders began by recording 108 categories, including blog title, blog tagline, primary blog topic, blog characteristics, blog purpose, blogging software used, blogger characteristics, and textual and interactive features of the most recent entry (Herring et al., 2004). The coders also documented the age of the blog and noted the date of the most recent entry. To calculate the age of the blog, researchers visited the archives to determine how long the blog had been active (Papacharissi, 2007).

Coders focused on the index page to analyze blog characteristics, including images, search features, comments, calendars, archives, advertisements, RSS feeds, blogging policies, ability to e-mail posts, ability to print posts, and badges (Herring et al., 2004). Coders also recorded the presence of and number of links to other blogs, news sources, and Web sites.

Coders categorized each blog as a filter blog, personal journal blog, k-log, mixed purpose blog, or other. The category to which each blog belonged was determined through analysis of the blog title, the blog description, and blog entry content. Blogs with equal numbers of entries falling into the filter, personal journal, and k-log categories were coded as mixed, and blogs with content that had a different purpose than those described were coded as other (Herring et al., 2004).

The formality of the language featured on the blogs was coded into one of three categories: formal, moderately formal, and informal. Coders characterized formal blogs as paying close attention to planning, organization, grammar, style, and tone (Papacharissi, 2007). Blogs with less organizational planning that were written carefully were defined as moderately formal. Informal blogs used incomplete sentences and did not pay much attention to grammar, syntax, and spelling (Papacharissi).

Coders measured topic area by coding each blog site for content categories discussed in entries on the index page. Categories included agriculture policy, media, blogging, Extension, politics, farm life, personal topics, farm bill, environment, farm equipment, farm shows, weather, agribusiness, and the World Trade Organization (WTO). Livestock topics coded included poultry, swine, beef, dairy, equine, sheep, goat, and other. The crop categories coded were corn, soybeans, wheat, hay, vegetables, fruits, cotton, and other. Specific agricultural issues also coded included urban sprawl, large livestock farms, energy concerns, diseases, biotechnology, biodiesel, and other.

Blogger characteristics coded included number of authors, author gender, author age, author occupation, and any identity indicators (e.g., full name, first name, pseudonym, inclusion of photo, personal information, link to personal information, biography). While researchers only utilized the index page while coding the other categories, they searched for this information throughout the blog pages if needed.

Researchers coded the most recent blog entry for date and time, number of links in the entry, number of comments, quotes used, and number of sources cited. Message length was also determined by counting the number of words in the entry.

Two coders completed all coding over a two-week period in early December. Coder training was conducted with a 10% sample of the population (6 blogs) to establish intercoder reliability. Holsti's coefficient of reliability (North, Holsti, Zaninovich, & Zinnes, 1963) was used to calculate a .97 agreement between coders. Coders equally divided remaining sites.

## Results

*Objective 1: Describe the basic characteristics of blogs covering agriculture issues.*

The age of the blogs analyzed ranged from 1 to 48 months, with a mean of 16.31 months. The time between the last two entries posted on each blog was calculated and ranged from 1 to 126 days, with a mean of 11.86 days. The number of entries for the last full month was calculated to determine posting frequency. For the 41 blogs that had entries in November, a mean of 22.34 entries for that month was calculated; 5 blogs had their last entry in October and averaged 4.2 entries for the month; 1 blog was last updated in September with only 1 entry.

Researchers reviewed the number of categories listed on each blog index page and found the number ranged from 0 to 142, with a mean of 14.04. Some examples of categories included dairy, crops, markets, "divine bovine," the WTO, personal, and recipes.

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Study results showed that the majority of blogs (75%,  $n = 39$ ) had links to other blogs, while 84.6% ( $n = 44$ ) of the blogs provided links to other Web sites (nonblog Web sites). Only 32.7% ( $n = 17$ ) of the blogs had links to news sources. A search feature was available for identifying content on 86.5% ( $n = 45$ ) of the blogs in the study. The majority of the blogs allowed readers to comment on entries (86.5%,  $n = 45$ ); however, less than half (42.3%,  $n = 22$ ) of the blogs allowed users to e-mail posts, with only 7.7% ( $n = 4$ ) of the blogs giving users the option to print posts. Of the blogs that allowed comments, researchers counted the number of comments present on the most recent entry and found a range from 0 to 12 comments, with a mean of .51.

Overall, the blogs had few multimedia elements (19.2%,  $n = 10$ ). Of the blogs that provided multimedia, the most popular feature was audio (13.5%,  $n = 7$ ). The majority of the blogs had archives (96.2%,  $n = 50$ ), allowing users to read entries from the past. Few blogs had calendars (15.4%,  $n = 8$ ) showing the days on which entries were posted or when events were happening. Only a few posted a blog policy (5.8%,  $n = 3$ ). Table 1 further illustrates the characteristics associated with the analyzed blog sites. The presence of other features noted in the "other" category included items such as listservs, Web counters, contact forms, or Webrings.

**Table 1.** *Structural Characteristics of Agricultural Blogs (n = 52)*

Characteristic	<i>f</i>	%
Archives	50	96.2
Search feature	45	86.5
Comments allowed	45	86.5
Links to other sites	44	84.6
Links to other blogs	39	75.0
Images	33	63.5
Link to e-mail author	22	42.3
Links to news sources	17	32.7
Multimedia	10	19.2
Calendar	8	15.4
Print entry allowed	4	7.7
Blog policy	3	5.8
Other	37	71.2

Filter blogs accounted for 51.9% ( $n = 27$ ) of the sample, while k-logs accounted for 21.2% ( $n = 21$ ). Mixed blogs, which merge the functions of two or more blog purposes, accounted for 15.4% ( $n = 8$ ), and personal journals were the least common at 11.5% ( $n = 6$ ).

For better understanding of the characteristics of each entry, the header and footer information of the most recent entry was analyzed. The characteristics found most often in the entry header were the title (98.1%,  $n = 51$ ) and the date (92.3%,  $n = 48$ ). Characteristics that appeared less often in the header included time of posting (7.7%,  $n = 4$ ), author's name (17.3%,  $n = 9$ ), category filed under (5.8%,  $n = 3$ ), and comments (3.8%,  $n = 2$ ). Recurring characteristics found in the footer of the last entry included comments (88.5%,  $n = 46$ ), author's name (61.5%,  $n = 32$ ), and time of posting (57.7%,  $n = 30$ ). Certain footer characteristics appeared less frequently in the study, including internal links to more information (32.7%,  $n = 17$ ), footer date (30.8%,  $n = 16$ ), and category filed under (21.2%,  $n = 11$ ). The most frequently used software to post blogs was Blogger, with 24 blogs, followed by WordPress, with 10 blogs, and TypePad, with 4 blogs.

*Objective 2: Determine who is blogging about agriculture in terms of age, gender, and occupation.*

The majority of authors identified themselves as blogging primarily as individuals (56.8%,  $n = 25$ ), as compared to media professionals (20.5%,  $n = 9$ ), nonprofit associations (11.4%,  $n = 5$ ), or university groups (6.8%,  $n = 3$ ).

Many bloggers provided personal information on their blog sites. More than half (59.6%,  $n = 31$ ) provided a full name, while 30.8% ( $n = 16$ ) provided a pseudonym and 1.9% ( $n = 1$ ) provided a first name only. A small percentage of blogs (7.7%,  $n = 4$ ) provided a biography of the author, and 9.6% ( $n = 5$ ) had a link to the author's personal information on another Web site. Bloggers identified their gender in only 30 blogs, with significantly more bloggers being male (86.7%,  $n = 26$ ) than female (13.3%,  $n = 4$ ). Age was only identifiable in 7 cases. Of those, 28.6% ( $n = 2$ ) were under the age of 30. Those between the ages of 30 and 50 made up 42.9% ( $n = 3$ ), and those 50 and older constituted 28.6% ( $n = 2$ ). Bloggers mentioned their occupations in 51.9% ( $n = 27$ ) of the blogs. The majority of blog authors studied (23.1%,  $n = 12$ ) indicated they were journalists. Other occupations included farmer, agricultural economist, beekeeper, environmental and conflict management consultant, certified financial planner, university law professor, and Web designer.

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*Objective 3: Describe the topics covered in agriculture blogs and determine the level of formality of the writing in such blogs.*

Blogs were analyzed to determine which topics received the most coverage (Table 2). The majority of blog entries (53.8%,  $n = 28$ ) covered agricultural issues. Coders identified topics such as energy issues in 25.5% ( $n = 13$ ) of blogs, while biodiesel and biotechnology appeared in 15.7% ( $n = 8$ ) and 11.8% ( $n = 6$ ) of blogs, respectively. Of the blog entries covering livestock issues (51.9%,  $n = 27$ ), 18.8% ( $n = 9$ ) covered dairy topics, followed by beef cattle topics (16.7%,  $n = 8$ ). Crop-related topics were discussed in 38.5% ( $n = 20$ ) of the blog entries analyzed, with corn (10.4%,  $n = 5$ ) and wheat (8.3%,  $n = 4$ ) being the most common. Other topics covered included farm life (30.8%,  $n = 16$ ), the environment (28.8%,  $n = 15$ ), agricultural policy (23.1%,  $n = 12$ ), agribusiness (21.2%,  $n = 11$ ), politics (21.2%,  $n = 11$ ), media (17.3%,  $n = 9$ ), and weather (15.4%,  $n = 8$ ).

**Table 2.** *Topic Areas of Agricultural Blogs (n = 52)*

Topic	<i>f</i>	%
Agriculture issues	28	53.8
Livestock	27	51.9
Crops	20	38.5
Farm life	16	30.8
Personal	15	28.8
Environment	15	28.8
Agricultural policy	12	23.1
Politics	11	21.2
Agribusiness	11	21.2
Media	9	17.3
Weather	8	15.4
Blogging	4	7.7
Extension	3	5.8
WTO	3	5.9
Farm equipment	3	5.8
Farm show	3	5.8
Farm bill	2	3.8

In terms of the formality of the writing, a majority of the blogs (76.9%,  $n = 40$ ) fell into the formal category. Coders categorized 15% ( $n = 8$ ) of blogs as moderately formal, while 7.7% ( $n = 4$ ) were coded as informal. The number of quotes used in the most recent blog entry ranged from 0 to 8, with a mean of 1.0. However, bloggers cited an average of one source per entry with a range of 0 to 15. The average message length was 474 words, with a range of 32 to 3,632 words.

## Conclusions

Little research has been done on agriculture blogs. This study aimed to describe the current coverage of agriculture in the blogging world and to determine who authors these blogs. The analysis of the 52 blogs studied indicated that these blogs had many of the same characteristics as blogs in health care, politics, and the mainstream public (Herring et al., 2004; Sundar et al., 2007; Trammell & Keshelashvili, 2005).

However, the blogs analyzed also had characteristics that were not in line with previous studies. Past research has shown that most blogs are updated frequently (Herring et al., 2004). This was not found to be the case in this study. While many of the blogs were relatively new (ranging from 1 month old to 4 years old), they were, in most cases, not updated frequently. The study found an average of 11 days between blog entries, whereas studies of other genres found that blogs were updated every 1 or 2 days (Herring et al., 2004). This finding could be due to the recent inception of many of these blogs; the authors may not yet be accustomed to updating the blogs frequently. Alternatively, one could argue that rural bloggers are farming and working during the day and may not have as much time to spend at a computer blogging.

Agricultural blogs differed from genres previously studied in other ways as well. Although this study found more agricultural blogs allowing comments than blogs in other genres (Herring et al., 2004), coders found an average of only .51 comments per entry on the agricultural blogs analyzed. Current blogging technology makes comments a set feature of blogs; this feature might not have been as common during past studies. It is important to note that while it is a standard feature today, a blogger can choose to remove it from his or her blog. The fact that there was a low occurrence of comments posted could be due to the researchers' practice of only counting comments made on the most recent post. Given the low incidence of comments, a visual inspection was performed on a random group of the blogs analyzed to see if this low occurrence of comments was a trend for all entries; this did appear to be the case. Herring and colleagues (2004) cited similar findings with a mean of only .3 comments per entry. They

also inspected older entries and concluded that entries do not continue to collect comments over time, and that most comments will occur shortly after posting.

Alternatively, these blogs may simply have few readers. Agriculture is a niche genre, and the readers of these blogs may not be accustomed to the blog format or comfortable with commenting yet. As noted earlier, only 13% of bloggers are in rural America, and only 16% of rural residents use the Internet, according to the Pew Internet Life Project (Lenhart & Fox, 2006).

Past research has indicated that personal journals are the most popular type of blog, followed by filter blogs and k-logs (Herring et al., 2007). However, this study found that 51% of the agricultural blogs analyzed were filter blogs. K-logs were the next most popular, followed by mixed blogs, and then personal journals. These findings indicate that bloggers in the agricultural genre are more interested in discussing the news and issues of the day and spreading agricultural information and literacy than discussing happenings in their personal lives. It may also be relevant that the overwhelming majority of bloggers in the sample were male. Research suggests that women tend to divulge more personal information in their blogs than men (Sundar et al., 2007; Trammel & Keshelashvili, 2005). Since the sample in this study had few women bloggers, this could be a contributing factor as to why there were fewer personal journal blogs.

One surprising finding of this study contradicts much of the previous research on other blog genres. The bloggers analyzed in this study were mostly over the age of 30 and male. While some previous studies found that males tend to blog more (Herring et al., 2004; Trammel & Keshelashvili, 2005), other studies indicated that females blog more (Sundar et al., 2007). All researchers agree, however, that bloggers tend to be under the age of 30 (Herring et al., 2004; Lenhart & Fox, 2006). The differences found could be due to the make-up of the rural population. The majority of individuals living in rural areas and involved in farming tend to be over the age of 30 (United States Department of Agriculture, 2006).

While individuals posted the majority of blogs, media organizations, nonprofit groups, and universities posted a small percentage. Of those individuals who indicated their occupations, the majority (23.1%) were involved in media and communications. These findings indicate that those blogging about agricultural topics tend to be well informed about communications and agriculture. It should be noted, however, that one individual, who indicated being a professional communicator, published four of the blogs studied.

Many blogs cover current topics and issues that are in the news (Blood, 2002). Blogs can also have an effect on the current news agenda (Drezner & Farrell, 2004). Current events and news were discussed in most blogs studied here. The majority of blogs covered agricultural issues such as energy and biodiesel. Discussion of livestock, crops, farm life, and agriculture policy was also common. The researchers feel that it is important to note that during the time of this analysis, the holiday season was approaching and travel and fuel were hot topics in the traditional news agenda. These news stories could have spurred conversations about energy and alternative fuels.

The blogs studied covered a wide range of issues and seemed to have a variety of purposes. With more readers turning to blogs for their news and information (Johnson & Kaye, 2004), it is important for blogs to provide discussions on a variety of issues related to agriculture. As "citizen journalists," these authors are covering the in-depth issues of the day. With the mean length of their entries being 474 words—almost 200 more words than found by Herring and colleagues (2004) in their study—these authors are offering up broad discussions. The majority of authors are also taking their blogging seriously, by writing in formal sentences and offering quotes and sources to back up their claims.

However, authors were not utilizing news links heavily in their communication. While links were prevalent on the home pages of the blogs studied, only 32.7% of the links went to news sources. These findings are similar to a study of general blogs that found only 36% linked to outside news sources (Herring et al., 2004). The literature states that many bloggers do not see themselves as journalists (Lenhart & Fox, 2006) and thus may not see a need to provide links to further information.

## Recommendations

"How the blogosphere looked at the turn of the century is not, in many respects, how it looked five years later or how it will look 10 years from now" (Tremayne, 2007, p. vii). Continued research on the state of blogging in agriculture, its utility in reaching rural audiences, and its importance to telling the rural story must be conducted. Further studies should examine the various groups charged with communicating about agriculture and their use of blogging. Researchers must look at the users of such blogs to find out why and how they use the information in them. The bloggers themselves should also be analyzed to determine why they blog, how they decide what to include in their entries, and their perceptions of themselves as journalists. As stated earlier, due to the changing nature of blogging and the lack of a full blog directory, researchers should repeat this study frequently to see how the landscape is changing. Beyond research, these findings offer significant

implications for professionals and educators alike. The occurrence of these blogs and the fact that several of them have been online for a number of years indicate that there is a blogging audience interested in finding agricultural information in the blogosphere. As noted in other publications in the agricultural world, blogging is a new communication tool that should be closely considered and adopted to disseminate agricultural information and news. With more individuals using blogs to find information, agricultural communicators cannot ignore blogging.

Findings of this study indicate that agricultural blogs might have some similarities to blogs in other genres. However, the blogs also differ greatly from those studied previously. Communicators must take into account the demographics of the bloggers. Based on this study's findings on blogrolls and the presence of links to other blogs, if males over 30 are blogging about agriculture, one could assume that they are also reading other blogs. Communicators must take advantage of this and utilize blogs to reach these audiences. Extension can also capitalize on this trend by teaching rural audiences how to blog and get their information out to the thousands of blog readers in the world.

Educators must also take note of this new tool and integrate blogging into their journalism curricula. With a portion of the bloggers studied here describing themselves as journalists, it is obvious that the trend of "j-blogs" is not only in the mainstream news media. Students must be prepared to use blogging technology to communicate effectively. Future communicators need to be aware of who is blogging about agriculture and rural life if they are to ensure the accuracy of public perception about agriculture.

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### Keywords

blog, Internet, agriculture blogs, content analysis

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