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Ag Resource Tools & Media Coverage: A Study of Newspaper Coverage of Cotton in Texas

Abstract
Many Extension professionals work with journalists in order to get their message out to various stakeholders. Some develop agricultural resource tools for the media. The study reported here examined coverage of cotton articles from 534 Texas newspapers following the dissemination of the CottonLink© media resource tool. An overall increase was found in the number of articles, newspapers, and circulation size after the dissemination of the CottonLink© media resource tool, while a decrease was found in the number of judgment sentences during the study. Additional research is recommended.

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Introduction

Many Extension program planners work closely with the media and communication professionals in order to promote their projects to their stakeholders. Some produce resource material specifically for journalists to serve as background and source information. In 2002, funding was provided by the International Cotton Research Center to study cotton coverage in the print media. An advisory committee was selected and consisted of area cotton producers, ginners, and other experts in the

cotton industry as well as print media professionals. As part of this project, baseline data from newspapers was gathered between September 2002 and February 2003 to establish the extent of cotton-related news publication in Texas newspapers (Beesley, 2003).

The goal of the *CottonLink©* tool was to provide print journalists with a more detailed understanding of the cotton industry as well as access to credible cotton-related sources. Formatted as a CD-ROM, the guide contained information about the history of cotton, a photo gallery, and the names and contact information of expert sources in a variety of areas of the cotton industry. Photos for *CottonLink©* were provided by various sources including Cotton Inc., John Deere, and departmental archives from various research studies.

In August 2003, the *CottonLink©* CD was delivered to every newspaper in Texas. Delivery of *CottonLink©* included mailing 511 CDs to newspapers with small circulations. Agricultural communications faculty hand-delivered 23 CDs to those publications with larger circulation sizes, such as the *Dallas Morning News, Houston Chronicle, El Paso Times, Fort Worth Star-Telegram,* and the *San Antonio Express News*. In June 2006 the *CottonLink©* project was expanded to include a website to provide journalists with additional resources. Please see <www.cottonlink.org> for more information.

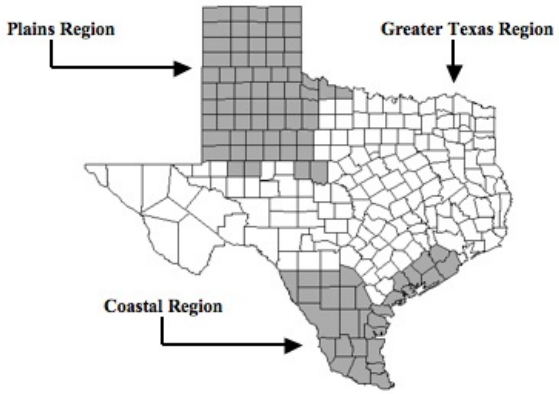
Media

Despite the increased competition from the Internet and television, newspapers remain an important and reliable source for news (Bonk, Griggs, & Tynes, 1999). Texas has a newspaper circulation of more than 4.2 million, which supports the need to research media coverage on agriculturally related topics and determine the levels of bias used in print media (Texas Press Association, 2003). Assuming an individual newspaper can be read by more than one person in each household, this print news source has the potential of reaching the majority of the Texas population. According to the last census, the population of Texas is 20,851,820 (U.S. Census Bureau, 2003).

Cotton

Texas is the second leading producer of agricultural products in the United States, and agricultural products contribute approximately $14 billion to the state's economy annually (Texas Department of Agriculture, n.d.). The Texas economy is supplemented by approximately $5.2 billion annually created by the economic impact of the state's cotton industry (Smith & Anisco, 2000). About 5.6 million acres of cotton were planted throughout Texas in 2003 (National Cotton Council, 2002.). Most of the cotton production in Texas is concentrated in the Plains region of the state, although the Coastal region is also a high cotton-producing area (Figure 1). The 25 counties comprising the Plains region have produced an average of 2.65 million bales of cotton per year from 1999 to 2003 (Plains Cotton Growers, Inc., n.d.).

Figure 1.
Primary Cotton-Producing Regions of Texas (Doerfert, Beesley, Haygood, Akers, Bullock, & Davis, 2004)



Purpose and Objectives

The study reported here evaluated Texas print media coverage of cotton after the distribution of *CottonLink©*, a media resource guide, and compared the results to those obtained by Beesley (2003). The following objectives were developed to guide the study:

- Identify all articles written about cotton in Texas newspapers for 6 selected months according to circulation size and geographic region, and compare the results to the Beesley (2003) study completed prior to CottonLink© distribution.
- Classify cotton articles into categories, and compare the results to the Beesley (2003) study completed prior to CottonLink© distribution.

- Categorize the sentences in hard news and feature articles using the Hayakawa-Lowry News Bias categories for determining bias of judgment statements, and compare the results to the Beesley (2003) study completed prior to CottonLink© distribution.

Methods

The study was a content analysis follow-up as well as descriptive analysis. As described by Ary, Jacobs, and Razavieh (1996), descriptive research asks questions concerning the nature, incidence, or distribution of educational variables and relationships among these variables (Gall, Gall, & Borg, 2003). The study examined Texas newspapers coverage of cotton and the level of bias after the *CottonLink©* CD was distributed in August 2003; therefore, a content analysis follow-up was deemed most appropriate.

Data Collection

The CottonLink© project advisory committee helped to identify key words (cotton, cotton textile, boll weevil, and cotton production) that were used by the Texas Press Clipping Service. Articles were collected 7 days a week during the selected 6-month period from September 1, 2003 to February 28, 2004. It should not be assumed that these results would be the same during other months of the year.

The Texas Press Clipping Service was hired to collect news articles from 534 Texas newspapers for the study. The Texas Press Clipping Service reviews 95% of the newspapers published in the state of Texas. Thus, it should be understood that the 5% not covered could be reporting cotton-related articles that would not be included in this study. The 6-month data collection period of the study mirrors the time frame used by the Beesley (2003) study during the previous cotton production season.

Data Analysis

For objectives 1 and 2, the 1,356 cotton-related articles were coded into six different categories by the primary researchers:

a. Hard news,

b. Features,

c. Columns,

d. Editorials,

e. Industry-provided, and

f. Filler.

Hard news is described as the climax or most important points that are given in the first paragraph, called the "lead." Throughout the story, the facts are arranged in the order of decreasing importance. "Ordering ideas in a news story is known as the inverted pyramid" (Burnett & Tucker, 2001, p. 96). A feature story is defined as "a journalistic form through which news can be given depth, meaning, and perspective" (Fox, 1993, p. 128), while a column is "a regular editorial feature in a newspaper or magazine, usually with a by-line" (Nelson, 1972, p.225). An editorial can be explained as "a short essay, usually unsigned, stating the stand of the publication on some current event or issue" (Nelson, 1972, p.225). Information about an industry that is distributed to the media by a public relations specialist that works within the industry is known as "industry-provided articles." Nelson (1972) defined fillers as "a short paragraph or story used to fill a hole at the bottom of a column of type" (p. 225).

For objective 3, only those articles coded as hard news and feature articles were used (N = 292). A random sample (n = 169) was selected to complete the content analysis using the Hayakawa-Lowry News Bias analysis categories. The Hayakawa-Lowry News Bias analysis was originally created by S.I. Hayakawa (1940) to analyze sentences in print media. In this original coding system, sentences were sorted into one of three categories (a) report sentences, (b) inference sentences, and (c) judgment sentences.

Hayakawa's method was built upon by Lowry (1971) when he thought it was important to consider reporter bias and attribution of the information. Lowry developed six categories to add to Hayakawa's method, for a total of nine categories, which include:

a. Report attributed sentences,

b. Report unattributed sentences,

c. Inference labeled sentences,

d. Inference unlabeled sentences,

e. Judgment attributed, favorable sentences,

f. Judgment attributed, unfavorable sentences,

g. Judgment unattributed, favorable sentences,

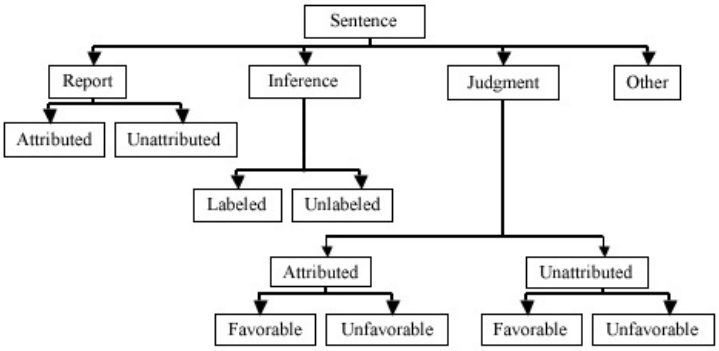
h. Judgment unattributed, unfavorable sentences, and

i. Other sentences (Figure 2).

A panel of three experts from agricultural communications academic units, trained in the Hayakawa-Lowry method of content analysis, coded the articles. These individuals have conducted this type of analysis many times. To insure inter-coder reliability, the articles were coded independently by each expert. When discrepancies in coding decisions were found, the panel members and the researchers met to review the sentences in question and work as a group to achieve consensus.

Results were entered into the same Microsoft® Excel spreadsheet that was used in the 2003 Beesley study, thus facilitating comparison on the results. Descriptive statistics were generated and are reported here.

Figure 2.
Hayakawa-Lowry Method (as cited in Haygood, Hagins, Akers, & Kieth, 2002)

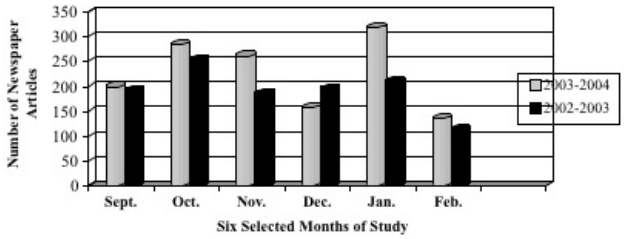


Findings

Objective One

Objective one sought to identify all articles written about cotton in 534 Texas newspapers for six selected months according to circulation size and geographic region and compare these findings to the Beesley pre-*CottonLink*© study. When compared to Beesley's (2003) study, there was an overall increase in the number of news articles written during the 2003-2004 study. A 17.5% (202 clippings) increase was found over the pre-*CottonLink*© study (1,356 articles compared with 1,154 cotton-related). When comparing these studies by month, there was a 19.9% decrease in December, the only month to not show an increase. The other months ranged from a 3.6% increase in September to 52.6% increase in January (Figure 3).

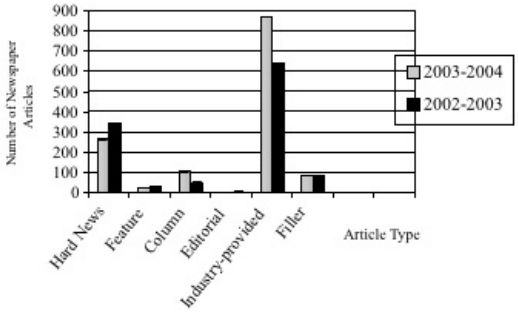
Figure 3.
Comparison of Texas Newspaper Coverage of Cotton by Month Between Current Study and Beasley (2003) Study



Objective Two

Objective two sought to classify cotton-related articles into categories. Coverage of hard news decreased during the current study, which collected 265 articles compared to the 345 hard news articles collected the previous year (Figure 4). A slight decrease was also found with feature stories. Twenty-seven features were collected in 2003-2004, while 31 were collected in the previous year's study. An increase was found in the number of columns for the current study, 106 columns compared to 51 the previous year. There was also a slight decrease in the number of editorials published in the current study. During the current study, three editorials were written, compared to six published during the time period of the previous study. Industry-provided articles saw the largest increase, from 641 in 2002-2003 to 869 during 2003-2004. A slight increase was also found in the number of filler stories used. Eighty-six filler stories were published during 2003-2004, while only 82 were published in 2002-2003. Figure 4 represents the comparison of newspapers by article type.

Figure 4.
Comparison of Texas Newspapers by Article Type



Objective Three

Objective three sought to categorize the sentences in hard news and feature articles using the Hayakawa-Lowry News Bias categories and to determine the level of bias in the judgment statements. The researchers found a decrease in judgment attributed, favorable; judgment attributed, unfavorable; judgment unattributed, favorable; and judgment unattributed, unfavorable when compared to Beesley's (2003) study. Judgment sentences involve reporters inserting their personal bias into a story. Table 1 below depicts a comparison between the numbers of sentences for each category based on the Hayakawa News Bias analysis.

Table 1.
Total Number of Sentences in Each Category of the Hayakawa-Lowry News Bias Analysis

Sentence Category	Beesley (2003)		Current Study		Change
	Number of Sentences	Percent of Total	Number of Sentences	Percent of Total	
Report, attributed	1,170	25.6	1,359	31.3	↑
Report, unattributed	1,681	36.8	1,430	32.9	↓
Inference, labeled	282	6.2	432	10.0	↑
Inference, unlabeled	281	6.2	326	7.5	↑
Judgment attributed, favorable	460	10.1	421	9.7	↓
Judgment attributed, unfavorable	278	6.1	170	3.9	↓
Judgment	145	3.2	75	1.7	↓

unattributed, favorable					
Judgment unattributed, unfavorable	132	2.8	45	1.0	↓
Other sentences	137	3.0	85	2.0	↓
Total	4,566	100.0	4,343	100.0	

Conclusions

In the previous study by Beesley (2003), cotton coverage in the Texas print media was measured for objectivity and accuracy. Following Beesley's study, the *CottonLink©* media resource tool was disseminated in August 2003 to 534 Texas newspapers. The study sought to determine if *CottonLink©* had an effect on the overall coverage of cotton in the Texas print media. Replicating the methods followed by Beesley's (2003) study, news articles on cotton published from September 2003 to February 2004 were collected, identifying 1,356 articles that corresponded to cotton.

Increase in Cotton-Related Articles

Objective one sought to determine the total number of cotton-related articles published in Texas newspapers for 6 months after the *CottonLink©* CD was disseminated. From September 2003 to February 2004, there were a total of 1,356 cotton-related articles, which was an increase of 17.5% (202 clippings) from the same time period the previous year. When compared with Beesley's 2003 study, an increase in the number of clippings per month was seen in 5 of the 6 months. There was an average of 226 cotton-related articles per month, or an average of 57 articles per week during the study's 6-month time frame.

It should be noted that the total number of Texas newspapers publishing cotton stories increased 31% from 206 during 2003 to 275 during the current study. These newspapers extended the range of coverage across the state and produced a 76% increase in circulation size from 1,828,147 during the previous study to 3,223,280.

Type of Story

Objective two sought to classify or code cotton articles into categories and determine the type of cotton related story. When examined by category, researchers found 265 hard news articles, 27 feature articles, 106 columns, three editorials, 869 industry-provided articles, and 86 filler articles.

The industry-provided category represented more than 64% of the articles during the 6-month time period. This category included all articles from the Texas Department of Agriculture, Texas agricultural cooperatives, and commodity groups, and various agricultural organizations. It appears Texas newspapers are willing to publish articles and information provided by the agricultural industry.

Bias and Tone

Objective three sought to categorize the sentences in hard news and feature articles by using the Hayakawa-Lowry News Bias categories. The researchers found report sentences made up 64.23% (2,789) of all sentences in the hard news and feature articles. Report sentences are the most desirable because they are factual, verifiable, and considered to be unbiased. However, 32.93% (1,430) of the report sentences were not attributed to a source, while 31.29% (1,359) of the sentences did include a source. Inference sentences, which made up 17.57 (758) of the sample, are considered subjective and are not immediately verifiable.

It was evident that reporters are including their own opinions when writing articles about cotton. Reporters used their own expressions or opinions of others, creating judgment sentences, which made up 16.37% (711) of the sentences in the sample. More judgment sentences (83.12%) are attributed to a source than not.

When reporting on cotton, researchers found journalists used more of a favorable bias than unfavorable bias. When evaluating all the judgment sentences in this study, 69.76% were favorable and 30.24% were unfavorable toward cotton.

It is interesting that fewer judgment sentences were found during the current study in comparison to Beesley's 2003 study. A total of 711 judgment sentences were collected in the current study, compared with 1,015 during the previous study. This finding could be the result of increased educational/informational resources provided to journalists by the agricultural industry.

Recommendations

Extension educators often use the media to communicate information about their program or

project. The study reported here provides valuable information about how Texas newspapers reported on cotton issues following the dissemination of an agricultural media resource. Agricultural Extension professionals who develop resource material for the media should consider these findings as they plan their outreach strategy.

Because the most frequently published articles were provided by agricultural organizations, it appears that newspaper journalists readily accept and use industry-provided information. The researchers recommend commodity groups expand or continue their efforts in providing the print media with ready-to-publish material. We would like to point out this is applicable with other commodities outside of cotton.

Extension professionals should consider providing additional commodity-specific educational tools for journalists to increase media coverage and understanding by reporters. Because of the high scientific content of most agricultural issues, educational tools such as tutorials, industry news announcements, and factual research information would be beneficial to journalists.

Based on the results of the study reported here, it is evident that there is bias among journalists when reporting on cotton. However, it appears the *CottonLink©* media resource tool could have had an influence on reducing the amount of bias while increasing the amount of cotton-related news coverage.

Additional research should be conducted to determine if the change in news coverage (quantity and quality) and the creation and dissemination of an agricultural media resource tool were related. A subsequent study could focus on knowledge of the media and their comfort in reporting cotton-based topics. The final study should examine the perception of the general public on cotton related topic.

It would be interesting to replicate this study and not limit it to the same 6 calendar months to see if different results would be achieved during different time periods. Crop schedules may or may not influence news coverage.

While Texas is the state that grows the most cotton, a similar study could be expanded to include other states in the Cotton Belt. Future researchers should also explore the impact of a media resource tool on electronic media coverage. Radio, television, and Internet media might provide interesting feedback about agricultural literacy, bias, and coverage.

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