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Agriculture Awareness Campaign Content Analysis Report

Agriculture Institute of Florida

Written by Joy Goodwin

Center for Public Issues Education
IN AGRICULTURE AND NATURAL RESOURCES
UF|IFAS

Contents

Introduction

In the summer of 2011, the Agriculture Institute of Florida (AIF) approached the UF/IFAS Center for Public Issues Education in Agriculture and Natural Resources (PIE Center) about continuing research on agricultural perceptions and messages. AIF also sought to understand what information was currently communicated within agriculture awareness campaigns and if these campaigns were successful. Based on an audit of existing agriculture awareness campaigns, AIF planned to test some of the information in focus groups in fall of 2011.

Methodology

To determine content used in existing agriculture awareness campaigns, a content analysis was performed on the websites of agriculture awareness campaigns in all 50 states. The sample of agriculture awareness campaigns was obtained by using the search terms "agriculture awareness, 'Alabama.'" "Alabama" was replaced for each respective state search. The first five agriculture awareness campaigns in the resulting state search were added to the sample. Links were excluded if they were not related to agriculture, were PDF documents, were news stories or press releases, were duplications of links that had already been included, or links that appeared in the search results after the second page.

The initial sample included 166 agriculture awareness links. Several states had less than five links to contribute to the sample, and Delaware did not yield any relevant results to include in the sample. During the coding of the websites, an additional 15 links were dropped from the sample due to broken links, irrelevant content, PDF's as well as duplicates that were overlooked in the initial sample. The final sample included 151 websites.

The websites were analyzed using a coding sheet developed by a panel of experts. A coding sheet leads the researcher through the analysis process and is where data about the content is recorded. In addition to the coding sheet, a coding guide was developed to ensure that consistent coding was used throughout the sample. To obtain inter-coder reliability two coders underwent coder training and coded a randomly selected 10% of the sample. Cohen's Kappa a reliability measure was run on each variable to ensure coder consistency. Coders were re-trained twice before a desirable reliability was achieved for all variables. All variables had a Kappa score of .64 or higher, with an average Kappa score of .90. Once reliability was reached, the remaining sample was divided evenly among the coders. After coding had been completed, data were entered into SPSS version 18.0 and analyzed for basic descriptive statistics.

Results

Type of Website

To determine if the agricultural campaigns were housed on individual websites or within other websites, the researchers noted when a campaign came up on a home page and when it came up on a second tier page. The findings show that the majority of the campaigns were housed within other websites on second tier pages.
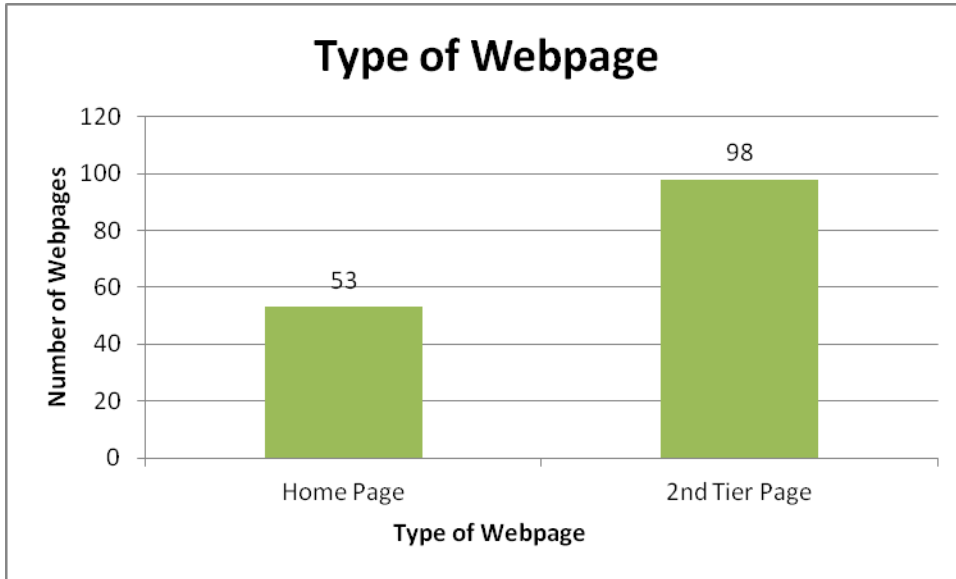

URL Extension

The researchers coded for URL extensions to see what types of websites are housing agricultural campaigns. The results show that 86 (57%) of the campaigns were housed on websites with .org extensions, while 35 (23.2%) were housed on websites with .com extensions.
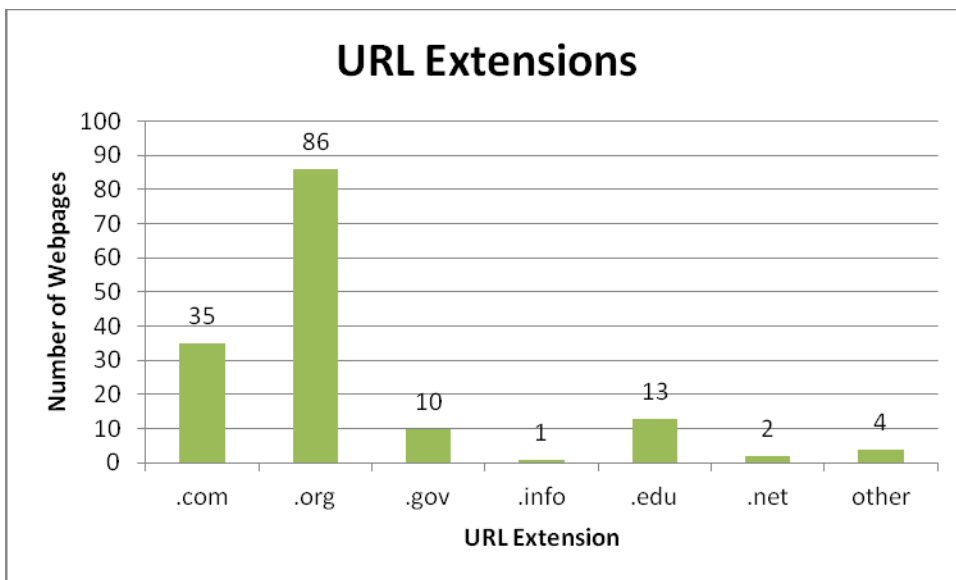
Webpage Media and Interactive Elements

To assess what the campaigns were doing to interact and communicate with their audiences the researchers coded for media and interactive elements. Of the 151 campaign web pages, 110 (72.8%) included a logo. The results show that a limited number of the campaign web pages are using social media, facebook (*n*=63, 41.7%), twitter (*n*=50, 33.1%), YouTube (*n*=19, 12.6%). Other media and interactive elements were limited as seen in the graph below.
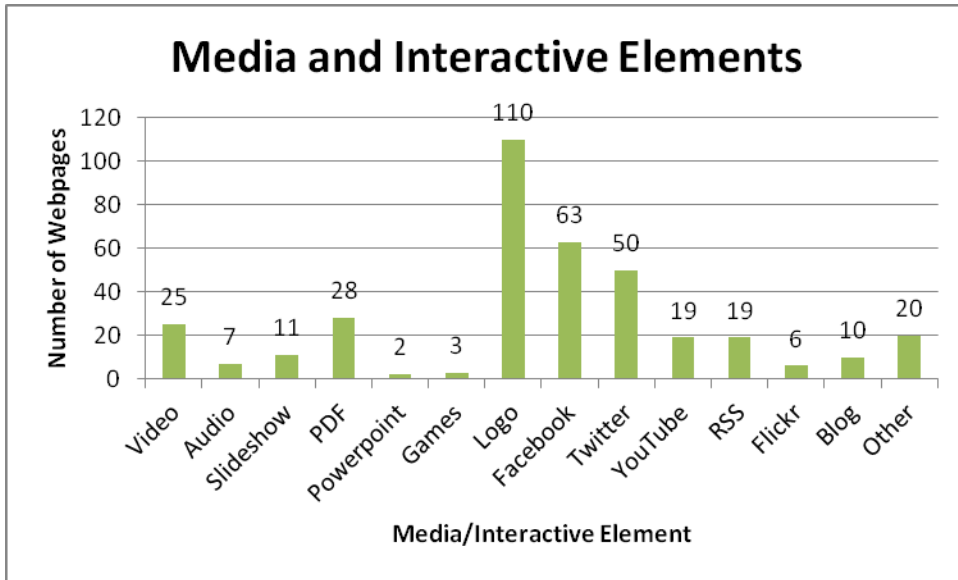
Photographs on Webpage

When researchers coded for the presence of photographs on the campaign pages they found that 118 (78.1%) contained photographs.
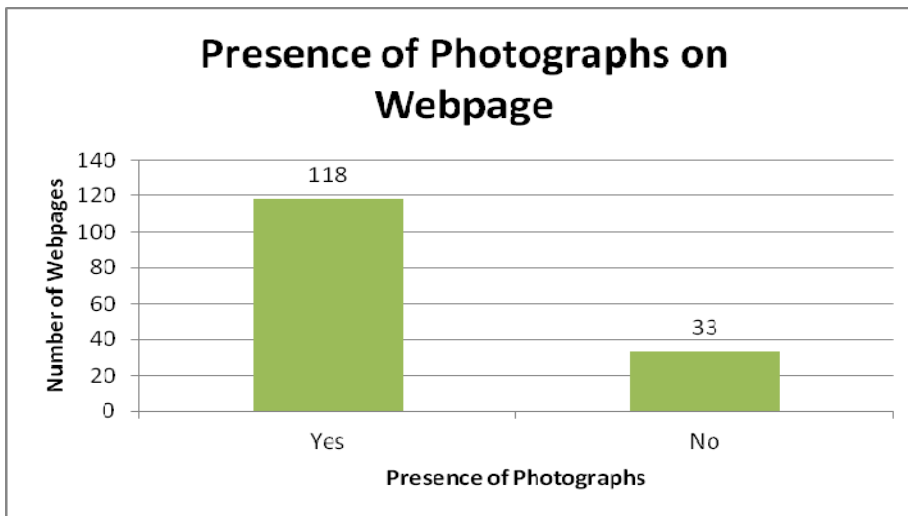
Content of Visuals/Images/Graphics/Photographs

Visual content of a webpage can impact how an individual views and perceives the information on a webpage. The researchers coded for various content in all visual elements on each campaign webpage

People

The results show that the when people were included on the campaign web pages they commonly pictured non-farming adults ($n =47$, 31.1%). The total number of visuals showing non-farming individuals ($n= 88$, 58.3%) outweighed the total number showing farming individuals ($n=55$, 36.4%). Additionally, only 26 (17.2%) of the campaigns included visuals of families.
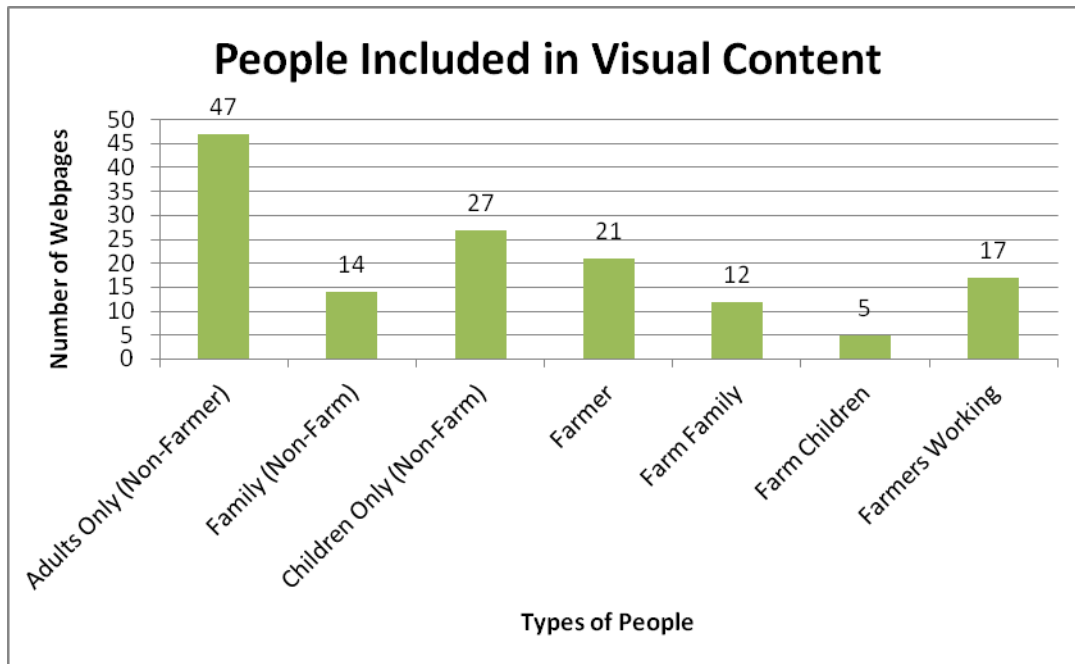
Traditional Agriculture

When assessing the visual content of campaign web pages, the researchers also looked for traditional agricultural components. The findings show that the most common traditional agriculture components included in the visuals were positive food products (n =48, 31.8%) and fields (n=46, 30.5%). The more stereotypical components of traditional agriculture such as barns (n =26, 17.2%), silos (n =14, 9.3%), and tractors or other farm implements (n =22, 14.6%) were seen less frequently.
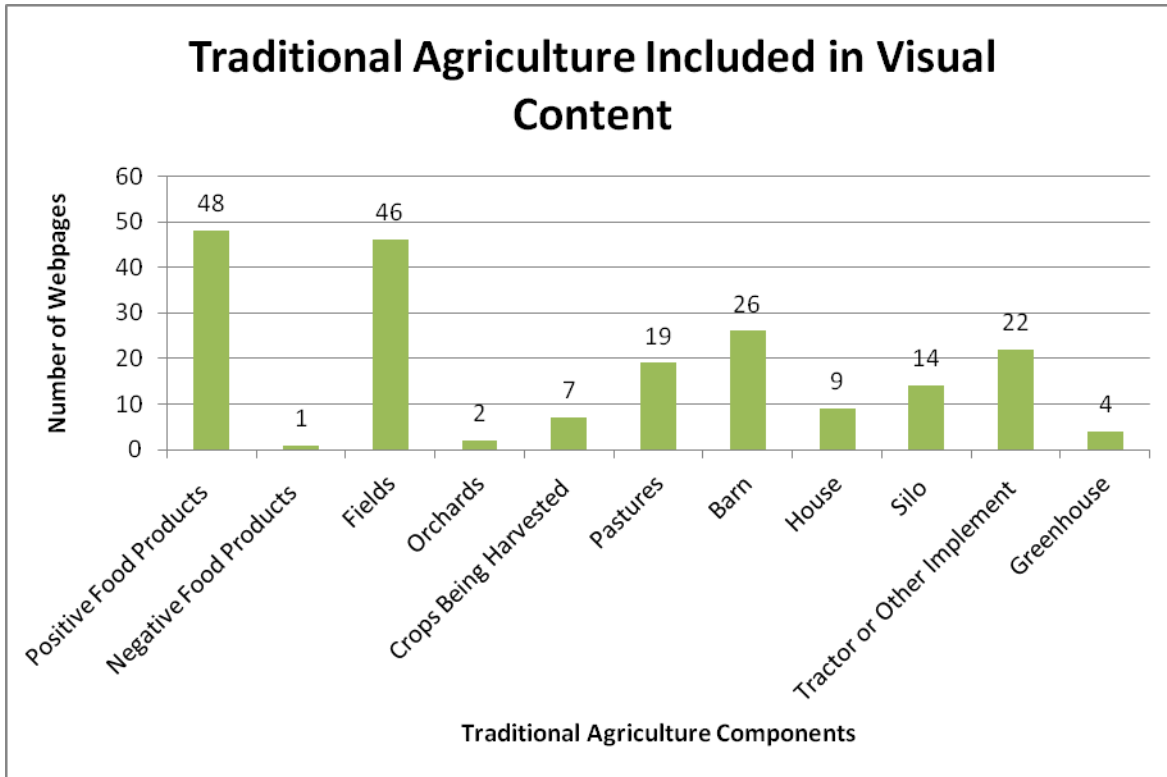
Environmental & Natural Resources

Environmental and natural resource issues have been gaining attention and interest among the public. Therefore, the researchers looked for visuals related to the environment and natural resources among the campaign websites. The results show that the inclusion of these visuals was limited. Water visuals were only found on 15 (9.9%) of the web pages.
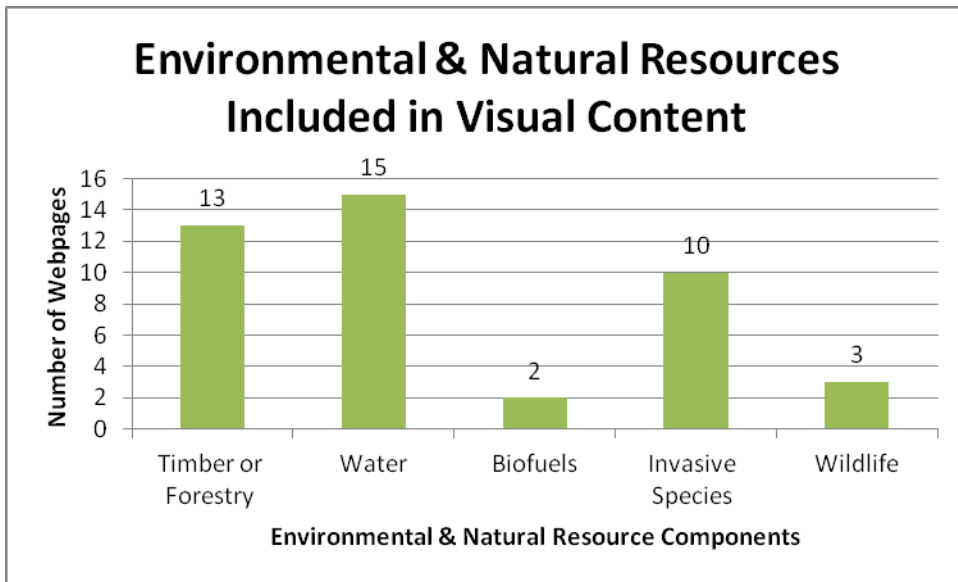
Animals

The final set of visuals that the researchers looked for was visuals containing animals. Of the campaign web pages, 43 (28.5%) included visuals of animals in a free roaming environment, while only 2 (1.3%) included visual of confined animals. Of the visuals that included animals, 15 (9.9%) showed anthropomorphized (giving human characteristics to animals) animals.
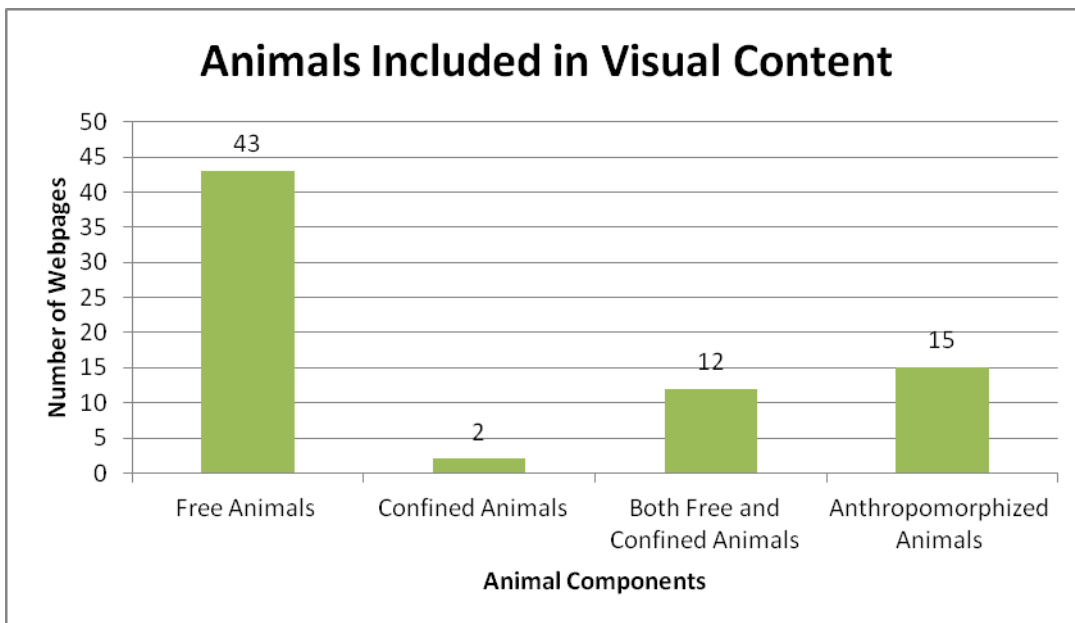
Emotional Appeals used in Webpage Content

To assess how the content of the campaign web pages might be appealing to the public, the researchers looked for emotional and logical appeals. Appeals are persuasive components of writing that draw attention from the mind and emotions of an audience. The common emotional appeals used in persuasive writing are seen below. Throughout all of the campaign websites a total of 116 emotional appeals were used. The threat appeal was used most often ($n=26$, 17.2%), while the humor appeal was only used 3 (2.0%) times.
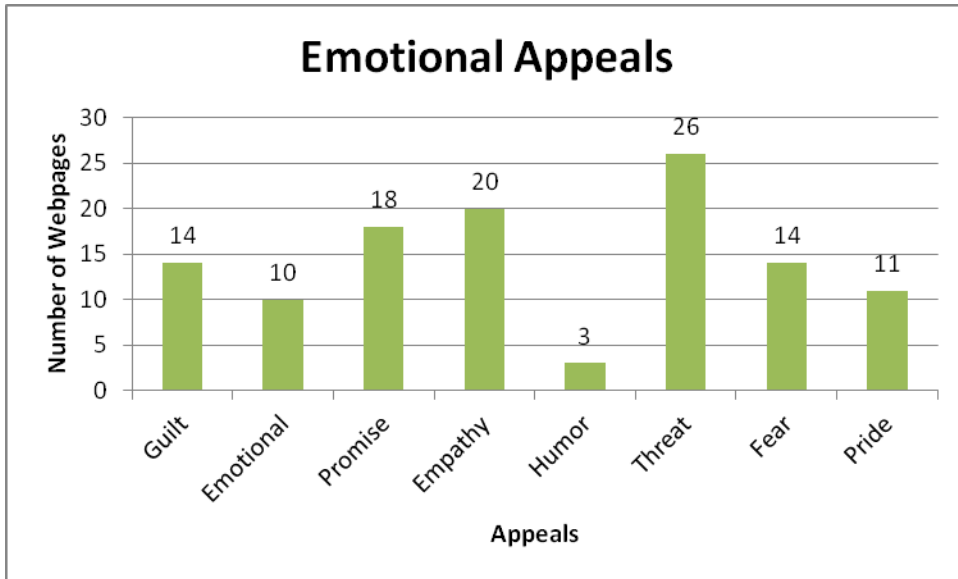
Emotional Appeals

Number of Webpages

Appeal	Value
Guilt	14
Emotional	10
Promise	18
Empathy	20
Humor	3
Threat	26
Fear	14
Pride	11

Appeals

Logical Appeals used in Webpage Content

As mentioned above logical appeals are also used in persuasive writing. The total ($n=286$) logical appeals used in the campaign websites more than doubled the total ($n=116$) of emotional appeals used. The informative appeal was used most often with 146 (96.7%) of the web pages using this appeal. The gain appeal was also used in 82 (54.3%) of the web pages.

Logical Appeals

Number of Websites

Appeal	Value
Rhetorical Question	9
Self Reference	3
Gain	82
Loss	28
Informative	146
Social Modeling	16
Irony	2

Appeals
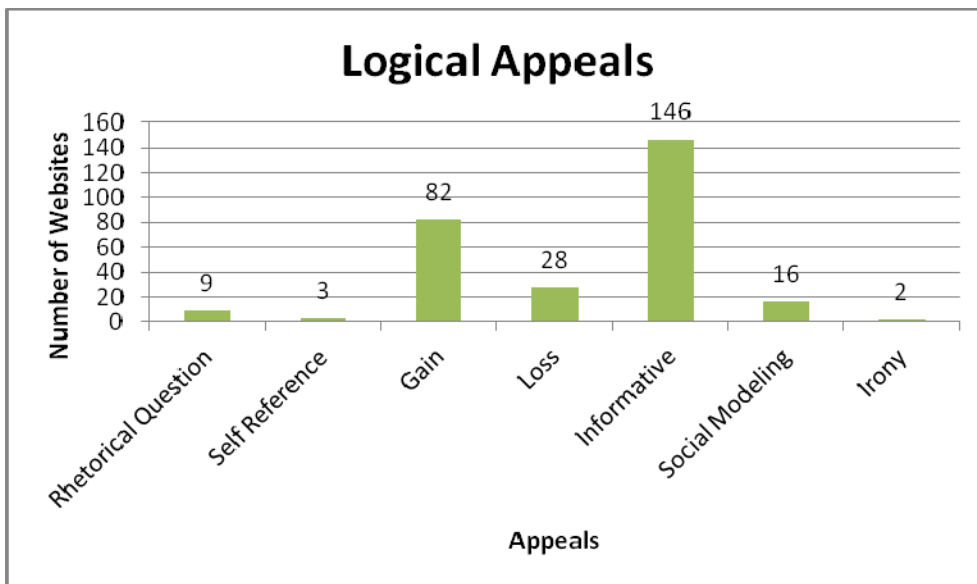
Frames Used in Webpage Content

Frames are used in writing to add significance and understanding to certain pieces of information. The frames that were included in this study were based on previous research and common agricultural topics. The agricultural education/awareness frame appeared the most ($n=104$, 68.9%), followed by the economic ($n=77$, 51.0%) and environmental frame ($n=65$, 43.0%). The opportunity for all ($n=18$, 11.9%), animal welfare ($n=16$, 10.6%), and food safety ($n=13$, 8.6%) frames were used the least.
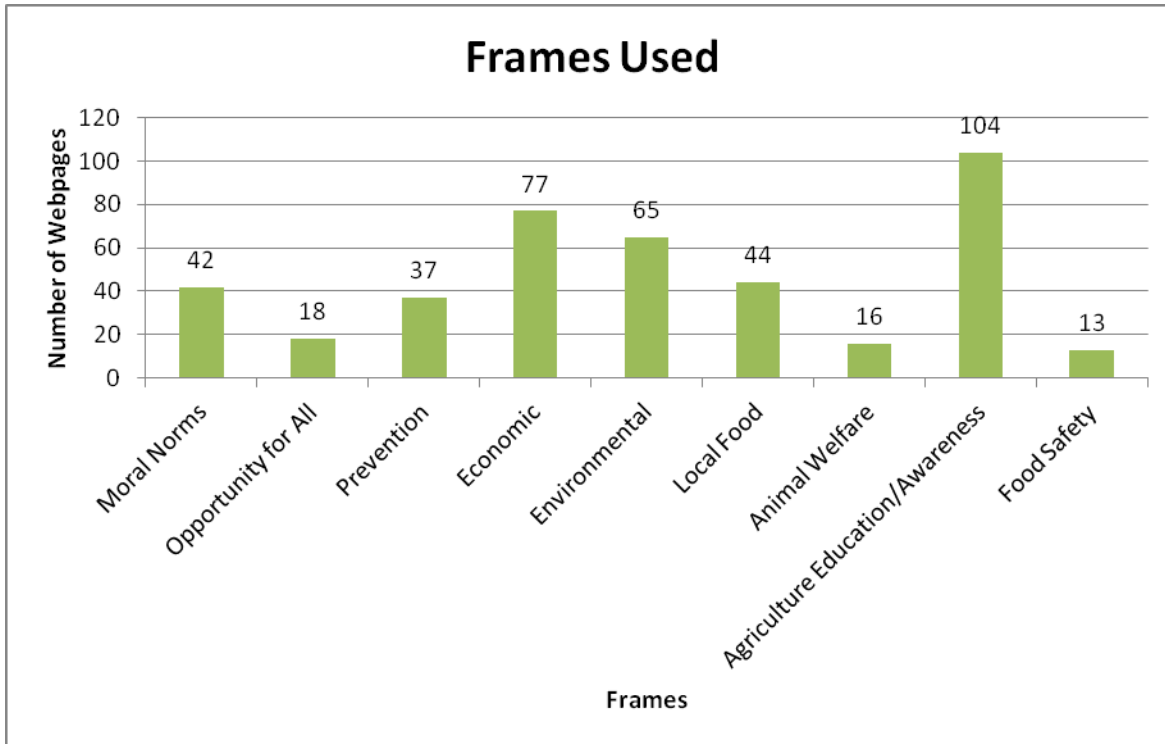
Webpage Analytics

To quantify the traffic each web page in the sample was receiving, all web pages were run through Google Ad Planner for webpage analytics. Google Ad Planner only shows results for homepages. Therefore, when links in the sample were secondary pages, the corresponding homepages were entered in Google Ad Planner. Webpage analytics were only available for 21 of the 151 web pages, or 13.9%, due to lack of website traffic. The results of the analytics are seen below.

Unique Visitor (Users)

- 740,000 unique visitors was the highest number represented among the 21 web pages. This webpage was titled "Mission 2012 Clean Water," http://web.mit.edu/12.000/www/m2012/finalwebsite/

- 11,000 unique visitors was the lowest number represented among the 21web pages. This webpage was titled "Crop Biotech Update" and was associated with the International Service for the Acquisition of Agri-Biotech Applications, http://www.isaaa.org/kc/cropbiotechupdate/article/default.asp?ID=7731

- Other notable web pages, within the 21 with available analytics, included florida-agriculture.com, the Humane Society of the United States, Farm Sanctuary, Sierra Club, MSPCA, as well as organic, government, and education related websites.

Page View

- 4.2 million page views was the highest number represented among the 21 web pages. This webpage was titled "Mission 2012 Clean Water," http://web.mit.edu/12.000/www/m2012/finalwebsite/

- 32,000 page views was the lowest number represented among the 21 web pages. This webpage was titled "NH Agriculture in the Classroom," http://pubpages.unh.edu/~pcj/aitc.html

Total Visits

- 1.4 million total visits was the highest number represented among the 21 web pages. This webpage was titled "Mission 2012 Clean Water," http://web.mit.edu/12.000/www/m2012/finalwebsite/

- 20,000 total visits was the lowest number represented among the 21 web pages. This webpage was titled "Crop Biotech Update" and was associated with the International Service for the Acquisition of Agri-Biotech Applications, http://www.isaaa.org/kc/cropbiotechupdate/article/default.asp?ID=7731

Average Time on Webpage

- 8 minutes and 10 seconds was the greatest average time spent on a webpage among the 21 web pages. This webpage was titled "Farm Sanctuary," http://www.farmsanctuary.org/about/milestones/

- 2 minutes was the smallest average time spent on a webpage among the 21 web pages. This webpage was titled "NH Agriculture in the Classroom," http://pubpages.unh.edu/~pcj/aitc.html

Demographics of Visitors

- The most common age range of visitors represented among the 21 web pages was ages 35-44. The age range of 45-54 was the second most common age range of visitors.

- $50,000-$74,999 was the most common household income of visitors represented among the 21 web pages.

- Some college was the most common education level of visitors represented among the 21 web pages. .

- Females were the most common gender of visitors represented among the 21 web pages.

Recommendations

The results of this study provide valuable insight to online agricultural campaigns. In addition, it allows for agricultural communicators to understand how to improve future campaigns as well as identify areas for further research.

Website Components

Webpage Type

The study shows that the majority of agriculture campaigns analyzed were housed on second tier web pages within a larger website.

- To gain more online traffic it is recommended that agricultural communicators encourage their organizations to create specific websites for agricultural campaigns.

Social Media and Interactive Elements

The social media involvement observed on the campaign websites was relatively low. In addition to social media, other interactive elements were not being used to their full potential. Logos were used among the majority of the web pages observed in this study.

- Agricultural communicators should be advocates for creating a social media presence among agricultural organizations.

- Encourage effective management of social media resources and links to social media sites throughout an organizations website.

- Identify a target audience before creating a website to ensure that the elements included will appeal to that audience.

- Ensure that logos are attractive, used consistently, and compliment the overall brand of your organization.

Visual Elements

Several of the web pages included photographs or other visual elements. This is an encouraging finding as most audiences are attracted to visuals. However, the quality and effectiveness of the visuals could not be fully assessed in this study. The findings suggest that when visuals showed people, those people were most commonly non-farming adults. The majority of traditional agriculture visuals were fields and positive food products. Environmental and natural resource visuals were lacking and approximately one third of the web pages included animal visuals. Of the animal visuals, the majority were portrayed as living in an open of environment and were not anthropomorphized.

- Include more children and families in visuals as audiences enjoy and feel favorably toward images with families and children.

- Include more images with farmers. Previous research has shown that the public connects with the stereotypic farmer and the ideal farm life.

- Include more stereotypical agricultural visuals in web pages, such as a big red barn. Previous research shows that stereotypical images of agriculture are easy for audiences to relate to and are often seen favorably.

- Increase the number of visuals related to the environment and natural resources.

- Although visuals of free animals are likely favored over confined animals, agricultural communicators should assess the need to be transparent in the agricultural industry.

- Assess the impact of the anthropomorphized animal visuals and the emotional impact they may have on an audience.

Appeals and Frames

Appeals

A variety of both logical and emotional appeals were used in the content and messages seen on the web pages analyzed. However, the number of logical appeals outweighed the emotional appeals. Of the logical appeals that were used, the informative and gain appeals were used most frequently while the other logical appeals were rarely used. Threat and empathy were the most commonly used emotional appeals.

- Explore the use of logical appeals that were infrequently used such as social modeling, self reference, and loss.

- Examine the different emotional appeals and their corresponding effectiveness.

- Increase the number of emotional appeals used in communication about agriculture. Previous research has shown that anti-agriculture campaign use emotional appeals effectively and regularly.

- Asses the type of appeals that are most effective with your target audience.

Frames

 Several frames were used throughout the web pages. The agricultural education/awareness frame was used the most frequently while food safety, animal welfare, and opportunity for all frames were used the least.

- Use frames that attract and are important to the target audience.

- Increase issue-related-framing as the public is more interested in information surrounding issues.

Website Analytics

The website analytic results provide valuable information regarding the success of the agricultural campaigns analyzed. Only 21 (13.9%) out of the 151 web sites had analytics available. Therefore, the agricultural campaigns observed in this study are not receiving adequate website traffic. Additionally, website analytics showed that the lowest average viewing time of the websites in this sample was two minutes. The most common demographics of the individuals viewing these websites were females between the ages of 35-44.

- Agricultural communicators should create and maintain an effective strategic plan for their organizations website to ensure the effectiveness and search engine optimization of their websites.

- Design attractive websites with messages that are easy to comprehend and remember to ensure that the key messages can be absorbed in two minutes or less

- Target website information toward the 35-44 year old age range and the female gender.

Recommendations for Further Research

Based on these findings it is recommended that further research be done to determine how to make online agricultural campaigns more successful.

- To determine the favorability of the campaign websites among the public, participant driven usability testing should be done on a sample of the campaigns web pages tested in this study.

- Continued research on agricultural images and their effect on the public should be sought. Specifically, the issue of agricultural transparency should be studied.

- To determine which types of appeals are most appropriate for audiences of agricultural information, messages using emotional appeals and logical appeals should be tested for effectiveness with different agricultural topics. In addition, the ethical appeal to persuasion should also be tested.

- Following completion of the appeal research mentioned above, further research should be done within each appeal to test the effectiveness of the different sub appeals, such as the emotional sub appeals of threat, empathy, promise, guilt, fear, pride, emotion, and humor.

- Several frames were used in the campaign websites included in this study; however, it is suspected that the frames used were favored by the creators, not the audience. Research should be done to determine which frames audiences prefer and are most interested in.

- In addition to determining which frames agricultural audiences are most interested in, it is also recommended that the frames used in the media to discuss agricultural topics also be analyzed. The frames commonly used in the media are familiar to the public and therefore resonate more with them. By identify frames commonly used in the media, agricultural communicators can identify and use frames that the public is familiar with.