

An Evaluation of the Beef Cattle Industry's Use of Communication Channels to Obtain Information Regarding Food Safety

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Need for Research

There are an estimated 76 million cases of food borne illness, 325 thousand hospitalizations, and five thousand deaths from food-borne diseases each year (Mead et al., 1999). Although not all of these illnesses are attributed to beef, food and animal scientists have been exploring methods of reducing pre-harvest pathogen shedding in cattle. Scientists are becoming more knowledgeable about the epidemiology and are developing interventions that beef cattle producers can implement to control potentially harmful pathogens and future outbreaks.

Scientists hope to assist in decreasing the number of food-borne illnesses by informing the public and educating consumers about basic food safety principles and practices. The purpose of this study was to determine the most effective communication channel(s) for delivering information regarding food safety to individuals involved in the beef cattle industry and to determine how frequently this information should be provided. The research objectives of this study were to:

3. Determine the preferred information channel of each respondent for receiving information regarding food safety.
4. Determine the frequency the respondents reported seeking out information regarding food safety.

Theoretical Framework

The communication theory proposed by Berlo focused on a source, message, channel, and receiver (Berlo, 1960). Berlo explained that the choice of a channel is often the most important factor in the effectiveness of communication. Fourteen communication channels were identified by a group of agricultural communicators at a university for this study. Those channels were comprised of the following: magazine, Internet (free), technical publication, newsletter, seminar (less than three days), radio, television, field day, Internet (fee-based), newspaper, seminar (longer than three days), computer software, farm demonstrations, and farm tours.

Methodology

This was a quantitative, descriptive correlational study. The data for this research study were collected at the 2006 National Cattlemen's Beef Association's (NCBA) annual conference in Denver, Colorado, on February 1-2, 2006.

Researchers used a convenience sample limited to a desired population to obtain data. According to NCBA conference officials, 5,500 people attended the conference (M. Rossman, personal communication, September 16, 2006). Researchers exceeded the recommended Krejcie and Morgan (1970) sample size ($n = 381$) and obtained 567 total.

The survey used to collect information was a researcher-developed instrument. The instrument was used to collect data for multiple research projects. The content and face validity of this instrument were established by having a panel of experts review the instrument. To determine the reliability of this research-developed instrument, it was pilot tested on a group of 30 graduate-level food and animal science students in the South Plains area of Texas, none of whom attended the conference. The calculated reliability for the information section was .89.

Findings

For objective one, the respondents selected their preferred information sources from the list of 14 channels. The most frequently selected information channel was "magazine" (31.1%, $n = 163$). The second most frequently selected information channel was "free Internet" (23.5%, $n = 123$). The third most frequently selected information channel was "technical publication" (11.1%, $n = 58$).

For objective two, the respondents were asked to select how often they seek out information related to food safety from a list of choices comprised of the following: yearly, monthly, weekly, daily, and never. The most frequently selected time was "monthly" (40.6%, $n = 230$). The second most frequently selected time was "weekly" (33.9%, $n = 192$). Only eight respondents (1.4%) reported never seeking out information regarding food safety.

Recommendations

The researchers recommend that food safety messages for individuals in the beef industry be focused on the communication channels, magazine and free Internet. Almost 90% of the respondents reported seeking out food safety information at least once a month. Therefore, researchers recommend that food safety experts consider publishing information on a monthly basis. Researchers suggest an effective method of delivering food safety information would be via a free, monthly publication using the Internet.

When a convenience sample is obtained, it is not considered representative of an entire population and should be replicated (Fraenkel & Wallen, 2006). While the researchers are confident in the results of their study, they do recommend that this study be replicated so results can be generalized to a larger population.

References

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