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Animal Identification and Beef Quality Assurance Topics Offered in Combined Workshops to Increase Effectiveness and Participation

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Abstract: Nineteen workshops conducted by University of Idaho Extension and industry organizations combined the topics of Beef Quality Assurance (BQA) and the National Animal Identification System (NAIS) to increase workshop attendance and participation. Voluntary certification/re-certification in the Idaho BQA Program and on-site NAIS premises registration were provided at no cost. Of 641 attendees, 86.1% became BQA Certified and 73.9% completed a written evaluation. Using a 5-point Likert-type scale (1 = never, 5 = always), 29.7% indicated that they always followed BQA guidelines prior to the workshop, while 58.6% indicated that they will always follow BQA guidelines due to the workshop.

Introduction

Beef and dairy cattle producers are receiving pressure from domestic and foreign consumers to provide assurances about the practices used in the production of animal products for human consumption (Smith, 2000). This includes methods that are in place, or are being developed, to protect livestock against disease threats (USDA, 2004a). In order to address these consumer confidence issues, two large and voluntary programs are being utilized: one that is led as a grassroots effort by producers and another that is being implemented through a governmental regulatory agency.

The Beef Quality Assurance (BQA) program is overseen nationally by cattle producers via the National Cattlemen's Beef Association (NCBA) and is directed at the state-level by university Extension systems, state beef councils, and/or state cattlemens' associations. In contrast, the National Animal Identification System (NAIS) is being developed by the Veterinary Services branch of the United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service and is being implemented by the Department of Agriculture in each state.

The Idaho BQA Program's mission is to maximize consumer confidence in beef by focusing a cattle producer's attention on daily production practices that influence its safety, wholesomeness, and quality (Ahola & Glaze, 2006). Ultimately, this proactive program is intended to assure consumers that beef marketed by a BQA Certified producer is wholesome and safe according to standards set by the Idaho BQA Program and national uniform BQA guidelines disseminated by NCBA. The Idaho BQA Program offers BQA Certification to producers who voluntarily and proactively agree to take responsibility for the product they are producing. Currently, there are over 40 different state and regional BQA programs (www.bqa.org) that are grassroots-driven and voluntary (Dunn & Odde, 2006).

The NAIS is being designed and implemented as an animal tracking system that will ultimately provide consumers with additional confidence in the safety of animal products (USDA, 2004b). First announced in April 2004, the NAIS framework (Gray, 2004) is being developed to identify all agricultural animals and track them as they come in contact with animals other than cohorts from their premises of origin to prevent, contain, and eliminate disease threats in the U.S. livestock herd. The ultimate goal of the NAIS is to have a system in place for the trace-back of livestock associated with a disease outbreak within 48 hours after discovery of the outbreak (USDA, 2005a, 2005b).

Information about these two programs is in demand by beef producers. For instance, soon after USDA announced the NAIS framework, producers in the Pacific Northwest formed the Northwest Pilot Project (NWPP), a short-term project among seven western state cattle associations to find producer-driven solutions to NAIS implementation (NWPP, 2004; Morrison, Stott, Glaze, & Ahola, 2006). In addition, results of the 2005 National Beef Quality Audit (NBQA) indicated that the beef industry "must have traceability of cattle for age, source, and process verification purposes" to be competitive in a global market, based on input from NBQA Strategy Workshop participants (NCBA, 2006).

The Idaho State Department of Agriculture (ISDA) provides statewide leadership for NAIS implementation in Idaho, and University of Idaho (UI) Extension faculty members provide BQA information and certification opportunities for Idaho cattle producers. However, ISDA generally lacks adequate staff and outreach capabilities to properly train leaders and educate producers about the NAIS. In addition, the Idaho BQA Program has had difficulty garnering adequate participation in BQA Certification events by producers.

Objectives

The topics of BQA and NAIS were combined and offered in workshops throughout Idaho based on the following objectives: 1) to attract greater attendance at producer education programs by combining timely topics of interest, 2) to increase producer knowledge of nationwide programs available to help them improve consumer confidence in animal products, 3) to provide accurate information and dispel myths about the NAIS, and 4) to offer producers an opportunity to voluntarily become BQA Certified in the Idaho BQA Program and/or register their premises in the NAIS.

Methods

Nineteen half-day workshops entitled "Fine-tuning Your Production Practices" were organized and led by UI Extension via an outreach partnership with both the Idaho Beef Council (IBC) and ISDA. Attendees were informed about BQA and the NAIS at locations throughout Idaho from November 2005 through January 2007. The workshops were a collaborative effort among personnel from these three groups, in addition to the Idaho Cattle Association (ICA) and NWPP. Primary sponsorship was provided by IBC, while logistical support (speakers, materials, and promotion of events) was contributed by the other organizations.

Workshop speakers included UI Extension faculty, ISDA personnel, and allied industry participants (industry veterinarians and representatives from pharmaceutical companies and other allied businesses). Attending producers were given an opportunity to become voluntary certified or re-certified in the Idaho BQA Program through UI Extension and/or register their premises in the NAIS (the first of three components of the NAIS) through the ISDA, both at no cost.

Whenever possible, workshops were held in a hands-on and interactive manner in order to increase participation in and effectiveness of the workshops. Many workshops involved live cattle demonstrations to demonstrate BQA techniques and animal identification technologies. Workshops included an introductory speaker who addressed industry issues, including international trade, marketing, animal health, disease risk, and consumer confidence related to product quality and concerns over recent foreign and domestic disease outbreaks. Following the introduction, attendees were divided into four groups and rotated among four "stations" that lasted approximately 30 to 40 minutes each. Two stations included BQA information, while two addressed NAIS-related topics. Station titles and topics included the following.

1. **Proper BQA Management Techniques and Procedures**. At this station, a UI Extension specialist and local veterinarian and/or pharmaceutical representative informed attendees about the series of National Beef Quality Audits that has documented major widespread quality defects in U.S. beef. The proper administration of injections was emphasized and demonstrated. In addition, the importance of reading labels and keeping records in relation to animal health product use was discussed, as well as the importance of having a valid Veterinarian-Client-Patient Relationship prior to administering any pharmaceuticals.

2. **Maintenance of Cowherd Health and Bio-security**. Licensed veterinarians discussed animal health and bio-security on a beef cattle operation. In addition to defining bio-security and emphasizing its importance to both a producer and the industry, the speaker reviewed the effects of typical diseases on productivity, including Bovine Viral Diarrhea, Johne's disease, and bovine respiratory disease. Finally, attendees were provided with recommendations for disease prevention, including vaccination protocols for calves at weaning.

3. **Implementation of the NAIS in Idaho**. Speakers including a UI Extension specialist and ISDA staff member provided an overview of USDA's proposed structure for the NAIS. This included introducing its three components: premises registration, animal identification, and animal tracing. The discussion focused primarily on the premises registration aspect of the NAIS, including the definition of a premises and how a producer could register their premises, as well as information about the 15-digit tags currently available. Very limited information about how animal movements would be reported to USDA in the future was shared and only included information released by USDA. The sharing of any predictions or forecasts as to aspects of the NAIS not yet released by USDA was avoided.

4. **Individual Animal Identification Options and NAIS Compliance**. At this station, an allied industry representative or county Extension educator discussed the 15-digit Animal Identification Number system proposed by USDA to uniquely identify livestock. In addition, methods to identify cattle with this number were demonstrated, including electronic identification (EID) ear tags, and the electronic equipment capable of capturing the 15-digit number. The differences between traceability (for an animal health program) and source verification (for marketing purposes) was clarified; however, options for adding value were discussed.

Many of the events were held at livestock auction markets because most are centrally located and viewed as a gathering place by producers. In addition, live cattle were readily available, as well as chutes and other facilities to work cattle for the live animal demonstrations. Attendees were provided a meal (lunch or supper) at each event, most of the cost being covered by a $10 per person registration fee.

Attendees were asked to sign in at the start each workshop, and a 1-page evaluation form was distributed to all attendees prior to the end of each workshop (with the exception of two workshops). On the 12-question evaluation form, attendees ranked the four presentations, rated the importance of BQA and NAIS to the cattle industry, indicated compliance with BQA guidelines (both previously and as a result of the workshop), indicated the benefit of having on-site NAIS premises registration, and specified if they would recommend the workshop to others. All categorical data were evaluated via SAS (Version 9.1, SAS Institute, 2008) for frequencies via PROC SURVEYMEANS and means comparisons were made using PROC GENMOD.

A completed evaluation form served as a meal ticket and was collected prior to attendees being served a meal. The evaluation form asked participants to rate the quality of each presentation, overall importance of BQA and NAIS, and general feedback about these two programs and the overall workshop. Attendees who registered their premises on-site (via paper forms or live Internet access) and/or completed an Idaho BQA Certification Test and Contract were eligible to receive donated door prizes.

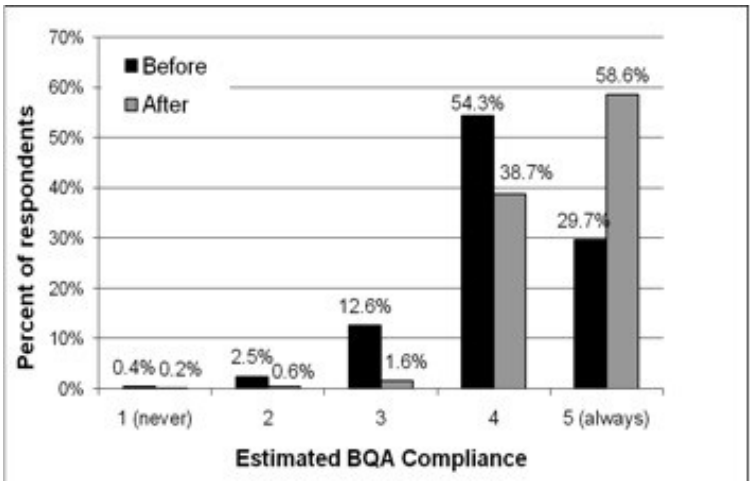
Results

A total of 641 people attended the 19 workshops. Six workshops had 50 or more attendees. Overall, 73.9% of attendees who signed in completed the evaluation form. Response rates ranged from 52.2 to 100.0% across meetings. Of attendees who signed-in at the workshops, 86.1% became BQA Certified in the Idaho program for 3 years, which resulted in 552 BQA Certified producers.

Based on written evaluation responses to the question "How important do you feel BQA is to the cattle industry?" or "How important do you feel the NAIS is to the cattle industry?" and using a Likert-type scale of 1 to 5 (1 = not important, 5 = very important), producers felt that BQA was more important ($P < 0.001$) than the NAIS (BQA = 4.60; NAIS = 3.93). Attendees were also asked to evaluate how well they liked (or disliked) each of the four presentations. Using a scale of 1 to 4 (1 = least liked, 4 = most liked), producers numerically ranked Biosecurity/Cowherd Health the highest (average score of 3.17), followed by NAIS Implementation in Idaho (3.03), Individual Animal Identification Options (3.00), and BQA Techniques and Procedures (2.84). However, means were not different ($P > 0.26$) among the four presentations.

Ideally, documentation of a "change in behavior" as a result of these workshops would have provided objective data to indicate the actual impact of the workshops on the rate at which Idaho cattle producers follow BQA guidelines. However, due to an inability to evaluate changes in behavior by attendees (because no follow-up evaluations were conducted after the workshops), documentation of a "change in knowledge" was conducted. Using a Likert-type scale (1 = never, 5 = always), attendees were asked "Do you feel that you currently comply with BQA guidelines?" and "As a result of this workshop, how often will you follow BQA guidelines?" In response, producers indicated that they will follow BQA guidelines more often ($P < 0.001$) than they did prior to the workshop, as evidenced by a change from 4.10 to 4.55 to the two questions above, respectively. More specifically, the percent of producers who "always" followed (or "always" will follow) BQA guidelines increased ($P < 0.001$) from 29.7 to 58.6% (Figure 1). The percent of producers who responded with a 1 (never), 2, or 3 to the question "Do you feel that you currently comply with BQA guidelines?" or "As a result of this workshop, how often will you follow BQA guidelines?" reduced ($P < 0.001$) from 15.5 to 2.3% as a result of the workshop.

Figure 1.
Estimated Change in Knowledge Among Workshop Attendees, Based on Responses to the Questions: "Do You Feel That You Currently Comply with BQA Guidelines (1 = never, 5 = always; before)?," and "As a Result of This Workshop, How Often Will You Follow BQA Guidelines (1 = never, 5 = always; after)?".



Finally, 98.2% of attendees who completed a written evaluation indicated that they "would recommend this workshop to others." Although data for the rate of premises registration were not collected, it was estimated that approximately half of workshop participants registered their premises on-site with ISDA. Also, based on evaluations, 88.8% of participants indicated that it was valuable to have ISDA staff participate in the workshops to address NAIS concerns and offer on-site premises registration.

Conclusions and Implications

Idaho cattle producers have access to two nationwide programs to help assure consumers about practices used in the production of beef cattle products for human consumption—the Idaho BQA Program and the NAIS. However, inadequate attendance at previous BQA events and a shortage of ISDA resources to provide adequate outreach about NAIS was addressed through the combination of these topics in 19 unique producer workshops across Idaho. Producer attendance was high (641 people signed-in), and participation at the workshops was strong, as evidenced by 86.1% becoming BQA Certified, 73.9% completing an evaluation form, and 98.2% indicating they would recommend the workshop to others. Based on written evaluations, attendees indicated that BQA was more important to the cattle industry than NAIS and also suggested that they will increase their compliance with BQA guidelines as a result of the workshops.

The overwhelming success of this outreach effort can provide Extension professionals with ideas and suggestions for the development and implementation of similar outreach for the BQA and NAIS topic areas. Based on results of this project, several benefits are evident, including the following.

1. Combining two major and timely topics together can attract participation in producer education events.

2. Collaboration among industry organizations can provide event promotion and resources including speakers.

3. Offering on-site BQA certification and NAIS premises registration is effective at stimulating producer participation.

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