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## Information needs regarding the national animal identification system in the livestock auction market industry

### Abstract

The National Animal Identification System (NAIS) is a federal-level voluntary program that uses a streamlined information system designed to help animal health officials and producers respond to animal health threats in a timely manner.<sup>2</sup> Electronic individual animal identification systems likely will be the popular choice among cattle producers who adopt individual animal identification systems. Because auction markets are the first market for many cattle, livestock markets are a natural place to implement animal identification scanning and recording. Therefore, it is important to understand livestock market operators' knowledge, concerns, views, and adoption of the NAIS and electronic animal identification systems. If livestock market operators do not understand the NAIS or animal identification systems they might misconstrue or misunderstand information on these systems. In addition, it is important to identify livestock market operators' concerns about electronic animal identification systems so issues can be addressed.

### Keywords

Cattlemen's Day, 2008; Kansas Agricultural Experiment Station contribution; no. 08-212-S; Report of progress (Kansas State University. Agricultural Experiment Station and Cooperative Extension Service); 995; Beef; Cattle; National Animal Identification System (NAIS)

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**INFORMATION NEEDS REGARDING  
THE NATIONAL ANIMAL IDENTIFICATION SYSTEM  
IN THE LIVESTOCK AUCTION MARKET INDUSTRY**

*K. Bolte<sup>1</sup>, K. Dhuyvetter<sup>1</sup>, and T. Schroeder<sup>1</sup>*

**Introduction**

The National Animal Identification System (NAIS) is a federal-level voluntary program that uses a streamlined information system designed to help animal health officials and producers respond to animal health threats in a timely manner.<sup>2</sup> Electronic individual animal identification systems likely will be the popular choice among cattle producers who adopt individual animal identification systems. Because auction markets are the first market for many cattle, livestock markets are a natural place to implement animal identification scanning and recording. Therefore, it is important to understand livestock market operators' knowledge, concerns, views, and adoption of the NAIS and electronic animal identification systems. If livestock market operators do not understand the NAIS or animal identification systems they might misconstrue or misunderstand information on these systems. In addition, it is important to identify livestock market operators' concerns about electronic animal identification systems so issues can be addressed.

**Experimental Procedures**

A national survey of livestock markets was conducted to determine operators' knowl-

edge and concerns about the NAIS and its anticipated effect on their businesses. The survey questioned managers regarding their knowledge of the NAIS program standards, understanding of how to adopt and costs of adoption, views of the program, and concerns about the NAIS.

Livestock market operators were asked to rank their knowledge of the NAIS program standards, understanding of how to adopt the NAIS practices, and understanding of costs of the NAIS. Livestock market operators were asked whether they viewed the NAIS as a *threat, neither a threat or opportunity, or opportunity* to their businesses. The level of concern each livestock market had about an adverse change in speed of sale due to the NAIS adoption was investigated. Livestock market operators also were asked whether they have adopted electronic reader systems.

Survey results reveal livestock market operators moderately understand NAIS program standards, costs associated with adopting NAIS, and how to adopt NAIS practices. Forty-two percent of survey respondents indicated intermediate or less understanding of the NAIS program standards, 51% indicated they did not fully understand what would need to be done to adopt NAIS practices, and 56% did

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<sup>2</sup>NAIS Home Page. USDA APHIS. Accessed May 2007. <http://animalid.aphis.usda.gov/nais/index.shtml>

not understand costs involved with adopting NAIS. More importantly, 50% of livestock market operators indicated that they view the NAIS as a *threat* to their businesses; only 20% view it as an *opportunity*. Only 14% of livestock market survey respondents had adopted radio frequency identification (RFID) reader systems.

To determine how individual characteristics of livestock markets relate to levels of NAIS knowledge, views, and concern, statistical analysis was conducted on the survey responses. This analysis determined whether systematic characteristics of auction markets were related to survey respondents' answers to particular questions. Knowledge of how certain factors relate to responses to specific questions can be used to better target information dissemination programs to market operators.

## Results and Discussion

Livestock market operators who currently have or plan to add a RFID tagging service in the future are likely to have more knowledge of NAIS program standards, more knowledge of how to adopt NAIS practices, and a greater understanding of probable costs involved with adoption of the NAIS. Managers of facilities that sell a large volume of livestock annually tend to have a higher level of understanding of how to adopt NAIS practices and are more knowledgeable about NAIS program standards than operators of small-volume facilities (Figures 1 and 2). Furthermore, managers of facilities that have operating RFID reader systems tend to be more informed about how to adopt NAIS practices and of costs associated with adopting the NAIS. This suggests that smaller auction market operators, facilities that do not plan to add a RFID tagging service in the future, and facilities that do not currently have operating RFID reader systems are important targets for information dissemination.

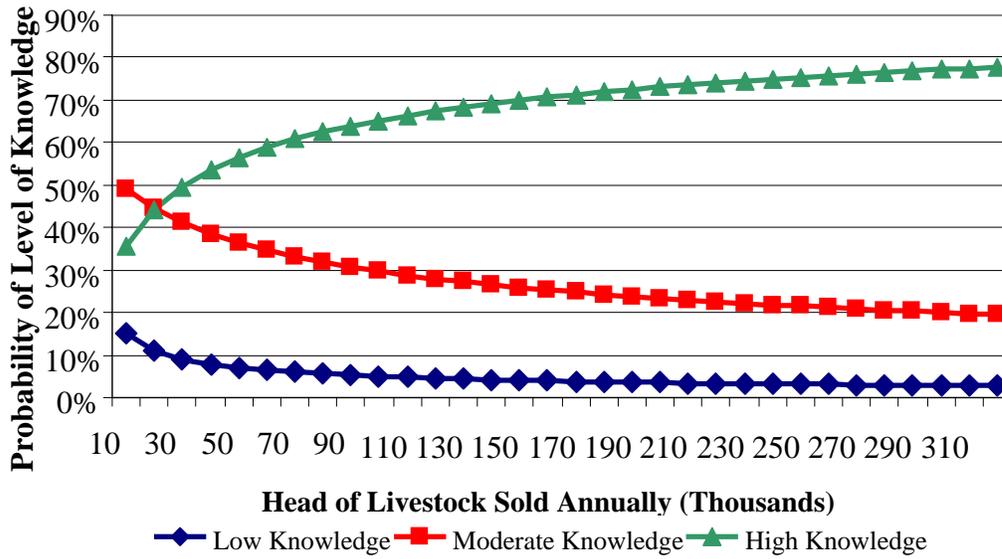
As expected, given that NAIS is currently a voluntary program, livestock market operators that have operating RFID reader systems and those who have registered operators who have their premises are more likely to perceive the NAIS as an *opportunity* to their businesses compared with operators who have not completed these activities. Auction markets that see having electronic animal identification systems as an opportunity have been early adopters of the system. Markets that have not adopted electronic animal identification information technology likely will not adopt such technology without a change in perception.

Livestock market managers tend to be highly concerned about adoption of individual electronic animal identification systems adversely impacting sale speed. The more volume the auction sells, the greater the manager's concern about animal identification systems slowing speed of commerce (Figure 3). However, the effect on the sale speed in livestock markets that have already adopted electronic animal identification and tracking systems is generally less than what those who have not adopted this technology perceive it to be.

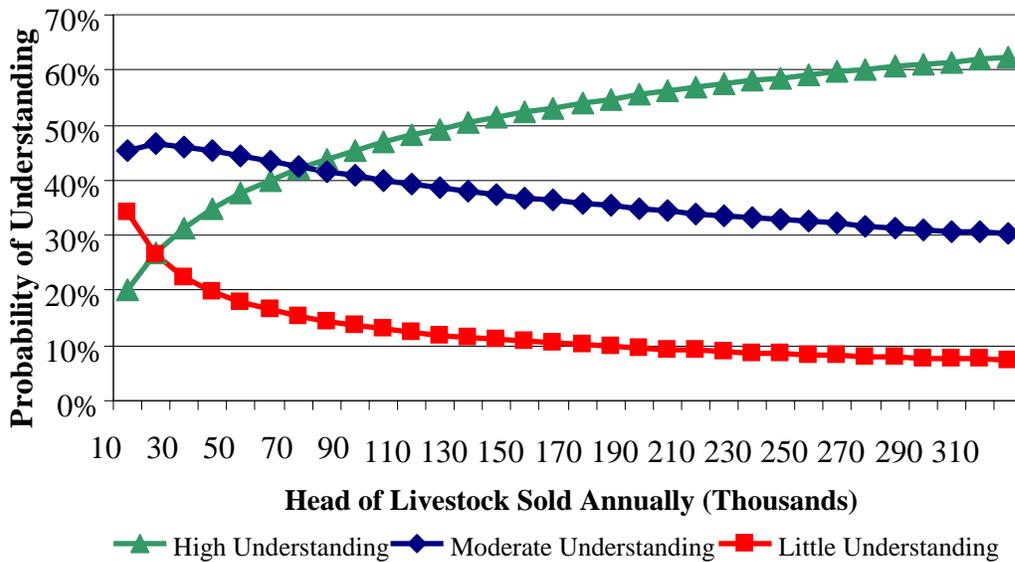
Facilities where premises are registered are more likely to adopt RFID technology than facilities that have not registered premises. Large-volume markets are more likely to adopt RFID technology than small-volume markets (Figure 4). Also, livestock markets that plan to provide a RFID tagging service in the future are more probable than those facilities that do not plan to add a RFID tagging service in the future.

## Implications

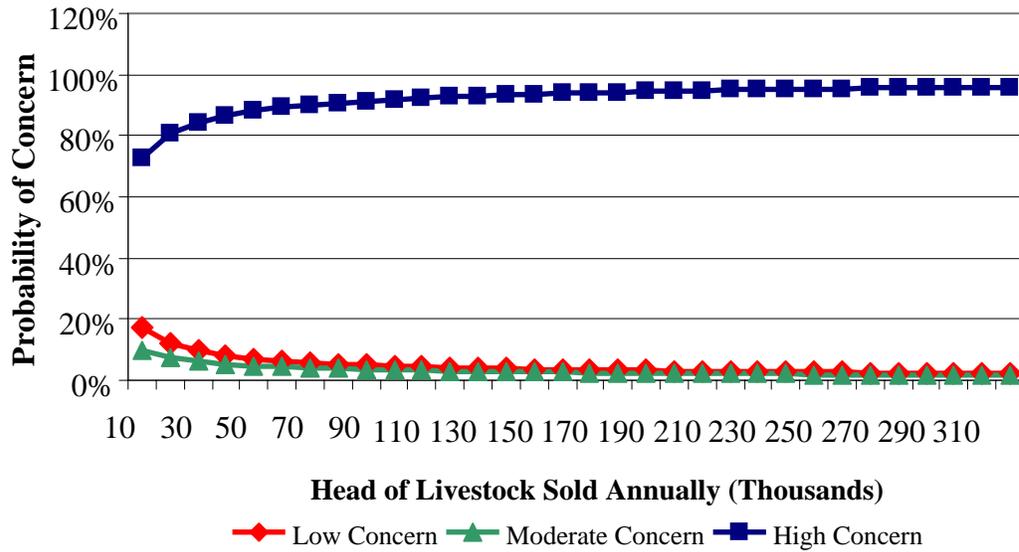
Livestock market operators need additional and on-going information regarding NAIS standards, adoption requirements, and costs. This information will affect operators' adoption rates and views of the NAIS.



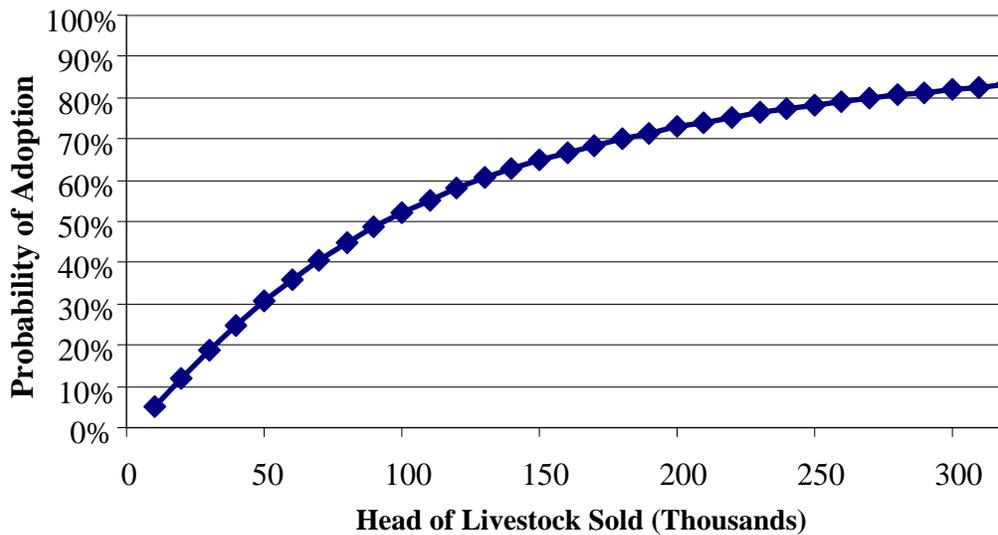
**Figure 1. Probability of Livestock Market Operators' Level of Knowledge of NAIS Program Standards Based on Annual Livestock Sales.**



**Figure 2. Probability of Livestock Market Operators' Level of Understanding of How to Adopt NAIS Practices Based on Annual Livestock Sales.**



**Figure 3. Probability of Livestock Market Operators' Level of Concern about Sale Speed Being Adversely Affected by NAIS Based on Annual Livestock Sales.**



**Figure 4. Probability of Livestock Market Adopting an RFID Reader System Based on Annual Livestock Sales.**