PERCEPTIONS AND ATTITUDES OF COW-CALF PRODUCERS TOWARD EMERGING TECHNOLOGIES AND POLICY ISSUES IN THE BEEF CATTLE INDUSTRY

by

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ABSTRACT

The proposed U.S. National Animal Identification System (US-NAIS) has generated many concerns among beef cattle producers. The goal of the NAIS is to utilize 48-hour traceback in the event of an animal disease outbreak. The traceback would identify all animals that have had contact with the diseased animal, while linking an animal to its premises of origin. According to the Diffusion of Innovation theory, getting a new idea adopted, even when it has clear advantages, is often very difficult. However, by adopting innovations relatively sooner than others in their system, the theory demonstrates marked benefits for innovators and early adopters, as well as a widening of the socioeconomic gap. In this study beef producers demonstrated understanding, acceptance and adaptability to implement the US-NAIS. Participants for the study were selected in the spring of 2006 from a mailing list of cow-calf producers with more than 100 head of cows. *BEEF®* Magazine provided the mailing list and a random sample of 1,000 producers was selected. The results show a knowledge gap between the proposed system and producer understanding. Producers were also divided on support for the proposed system. When ranking their level of support on a scale of 1 to 6, with 1 being strongly supportive and 6 being strongly opposed, 49% of producers showed some level of support and 48% showed some level of opposition, with a mean of 3.53 (s.d. 1.67). Data also highlights a lack of understanding of the regulations and implementation procedures among producers. The results of this study brought considerable insight into the current practices and perceptions of beef cattle producers, and will be used to develop educational materials to improve their understanding of this proposed program.

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Chapter 1. Introduction

The prospect of implementing a National Animal Identification System (NAIS) in the United States has generated much confusion and controversy. The goal of the NAIS is to utilize 48-hour traceback in the event of an animal disease outbreak, identifying all animals that have had contact with the diseased animal while also linking an animal to its premises of origin. The system recommends the identification of each premises or location where animals are born, managed, marketed, or exhibited. The first step in implementing the NAIS is registering each premises in the United States and assigning that location its own unique identification number (USDA, 2005).

The methods and reasons for identifying cattle have a long and varied history (Holland & Bruch, 2004). According to Holland et al., reasons for identifying cattle can be simplified into three classifications of ownership: disease control, performance and commerce. In a 1978 report Holm said there is little doubt the livestock industry would strongly oppose mandatory implementation of an electronic identification system. In addition, Holm said it was in the interest of regulatory agents and manufacturers to market the system recognizing and exploiting the benefits of such a system through convergence of data management (Holm, 1978).

Historically, other motives for identifying livestock have been presented. Mandatory identification was one of the most effective means of addressing and solving the problem of drug and chemical residues in the food (Augsburg, 1990).

The NAIS has led to the advent of new technology and new guidelines with the potential to change the production and marketing landscape of the beef industry. Major shifts are occurring in the way information is accessed by producers, including a diversification of channels through which they receive information (OTA, 1987). Although Internet and information technologies are becoming more accessible in rural areas, there is still a considerable gap between rural and urban regions (Hall, Dunkelberger, Ferreira, Prevatt, & Martin, 2003).

Technology usage by producers is a key issue in the implementation of the NAIS. Producers should begin to consider the proposal and the use of radio frequency technology in their operations (Blasi, Dhuyvetter, Spire, Epp, & Barnhardt, 2003). For beef cattle producers this means applying a quarter-sized radio frequency identification tag in the ear of every animal that leaves their premise. This tag then interacts with radio frequency antennas to monitor the premises in which it is located and thus all other animals it comes into contact with. The tag itself stores only the individual identification number and does not record personal information about the producer, his herd or location. The system requires software and databases to record information received by the tag.

It is important to remember that getting a new idea adopted, even when it has obvious advantages, is often very difficult (Rogers, 1995). The NAIS will challenge many producers to adapt to one or more new technologies. Educating producers about this system will require diligent communication. Consequently, how producers receive information is another important issue in understanding their reaction to a national ID system. A source is an individual or institution that originates a message, while a channel is the means by which a message reaches the receiver. Understanding sources and channels of information utilized by producers allows for the formulation of effective education and communication strategies (Vergot, Israel, & Mayo, 2005).

Successful outreach programs for educating beef cattle producers about alternative production strategies necessitate a basic understanding of current practices and producer attitudes towards acceptance of different practices (Little, Forrest & Lacy, 2000).

1.1 Purpose of Study

This study was designed to examine the thoughts and opinions of cow-calf producers in regard to the implementation of a NAIS and its components. It also sought to better understand the current state of cow-calf production as it relates to the NAIS and implementation of electronic identification of cattle. Gauging producer response on this divisive issue is critical to policy-making and education. The results of this study may be supportive in this pursuit.

1.2 Research Questions

Based upon previous research, the following research questions are presented for study.

1) Are United States cow-calf producers willing and prepared to implement the NAIS?
2) What are producers concerns regarding the program?
3) Are producers currently using this technology, and how do these adaptation patterns relate to Rogers' Diffusion of Innovation Theory?
4) Where are producers obtaining their information? From whom and in what forms do producers receive information they apply in their operations?

2. Review of Literature

The literature relevant to this thesis centers on producer opinion trends and adoption as it relates to the NAIS. Limited survey research has been conducted by university researchers on this issue. Additional research in the areas of sources and channels of information and diffusion theories brings additional insight to the research. The first section of literature summarizes producer opinion and trends. The second section applies diffusion of innovation theory to this area of research. The third section reviews sources and channels of information and the SMCR model. The final section reviews survey methodology as it relates to this research.

2.1 Producer Opinion and Trends

Producer adaptation to technology was recently reviewed by researchers from the University of Kentucky, Auburn University and Clemson University (Hall et al., 2003). These researchers initiated a study to determine the use of personal computers and the Internet by peanut and beef producers. The researchers identified 320 beef "leaders" in Alabama by obtaining a sample of officers from the Alabama Cattlemen's Association. These individuals were then mailed a survey that had approximately a 37-percent response rate for beef producers. The research shows that 25-percent of those sampled were non-adapters having no access to a personal computer. Another 22-percent could access a personal computer but did not have Internet access. Early adopters accounted for 29-percent, while innovators made up the remaining 13-percent. Early adopters and innovators were found most likely to have a college degree and be under the age of 44. This study provides strong insight into the use of technology by cattle producers. However, it does have some limitations due to its low survey response rate and targeting of industry "leaders."

Another concern is how to channel information about the NAIS to producers. A professor and several university extension agents at the University of Florida used survey data to determine producers' preferences for sources and channels of information (Vergot et al., 2005). They concluded that producers rely mostly on other cattle producers, extension agents, veterinarians, and farm supply dealers, respectively, as sources of information. The preferred channels for these producers in order of importance included newsletters, cattle or farm magazines, extension bulletins, and observing other ranchers. The survey achieved a low response rate of 411 of 842 selected, and only 264 reported being the owner or manager of a beef cattle operation due to the structure of the mailing list used. Although this study provides some information about sources and channels of information to beef cattle producers, it is somewhat incomplete due to its low response rate and possible sampling error. This study was also limited to a unique area of the country. It is important to note that these sources and channels may hold true for targeting NAIS information to producers.

Producers have been resistant to the implementation of the NAIS, mainly due to the program's perceived costs of implementation. Yet, there are implied benefits for producers when alternative marketing is considered. Some cattle currently under voluntary verification programs or "source/age-verified" programs have already reaped the benefits of higher returns due to the value-added nature of their verification.

Alternative marketing is not something many producers readily grasp, as was confirmed by professors, veterinarians, and agricultural statisticians at Mississippi State University who conducted a survey of 676 cattle operations in Mississippi (Little, Forrest, & Lacy, 2000). The researchers studied producer understanding and attitudes, as well as willingness to initiate alternative production and marketing strategies. The research showed that larger producers use more intensive and advanced management and marketing procedures. In addition, most producers showed a willingness to change production practices in order to increase profitability. Notably, the producers were less likely to make

changes in alternative marketing practices, including retained ownership, forward contracting, pooling cattle and working in coordination with livestock marketing cooperatives. This survey was very comprehensive, with strong response rates (49.9%) among participants. It also produced interesting findings with respect to producer resistance to alternative marketing. One drawback of the study is its inference scope to Mississippi producers, causing the data to be regionally specific and possibly skewed when compared to the national average of producers.

In the future animal identification may move beyond a marketing advantage to a mandatory national program. Similar programs are already in place in Canada, Australia and the European Union. Canadian researchers have extensively studied animal identification's applications in beef production (McAllister, Gibb, Kemp, Huisma, Olson, Milligan, & Schwartzkopf-Genswein, 2000). They proposed that a traceback system will provide safety and assurance allowing continued strength of commodity in domestic and export markets. It does note the challenges that a national system faces, including the high cost of visual identification, incompatibility of equipment among manufacturers, and the lack of an information network that would allow these animals to be recorded. Interestingly, these problems are exactly what produces in the United States are currently facing upon implementation of the NAIS.

After a case of bovine spongiform encephalopathy (BSE) was discovered in Canada during the spring of 2003, researchers from Iowa State University studied the Canadian system (Lawrence et al., 2003). The researchers noted the particular effectiveness of the established system upon the advent of a discovered case of BSE in Canada. Researchers determined the system worked as it was designed, because it was utilized during the BSE investigation to locate cohorts from the infected herd. The panel noted that while identification will not prevent disease it could speed containment and rebuild consumer confidence in the safety of the beef supply. The authors also discussed the renewed interest of the United States in implementing a similar program, following the Canadian BSE case.

With the renewed interest of the United States in developing the NAIS there has been a global shift toward traceback and identification. Japan, the United States' largest beef importer, refused U.S. beef products following a BSE case discovered in Washington State in December, 2003. Japan has had several outbreaks of BSE and has seen consumer confidence wane. Japanese researchers have determined that consumers will pay a premium of up to 50-percent for beef labeled free of BSE (McCluskey, Grimsrud, Ouchi, & Wahl, 2005). The survey, conducted in Nagano, Japan, may be somewhat skewed because it was performed by a consumer cooperative that targets more quality-conscious consumers, thus the product premium may be slightly inflated for this demographic. Interestingly, the study showed little variation of attitudes across demographics such as age, gender, education, and income. This suggests that the fear of BSE is widespread across much of the population. While this survey only represents a small area of Japan the results still provide insight on consumer attitudes driving the need for animal identification.

Despite the perceived benefits of a national identification system, some producers still have concerns regarding the new technology and the release of information to the government or third-party organization. There are also concerns about the usability, reliability and national standards of the technology and equipment required to make the program run smoothly in real-world environments.

Theoretical Background

2.2 Diffusion of Innovation

Gaining acceptance of a new idea, even with its obvious advantages, is often very difficult. Many innovations require a lengthy period of many years from when they become available to the time they are widely adopted (Rogers, 1995). Rogers said, "Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system." It is a particular type of communication regarding the spread of new ideas.

Much study has been given to the diffusion of innovation theory and how an innovation is cultivated. There are four main elements of diffusion of new ideas over time. These elements are: (1) an innovation or an idea, practice, or object perceived as new (2) which is communicated through certain channels, (3) over time, (4) among the members of a social system (Rogers, 1995).

The general diffusion model is an S-shaped curve referred to as an ogive or a logistic curve (Figure 1). The curve corresponds to a process in which a few members initially adopt an innovation, and then over time more members adopt it until a level of saturation is reached. The curve is S-shaped because adoption is initially slow and then it accelerates at an increasing rate, reaching a maximum rate of diffusion when approximately one half of the population has adopted it. After the halfway point, there are fewer potential adopters left in the population and the rate of adoption decreases causing the curve to level off (Rogers, 1995).

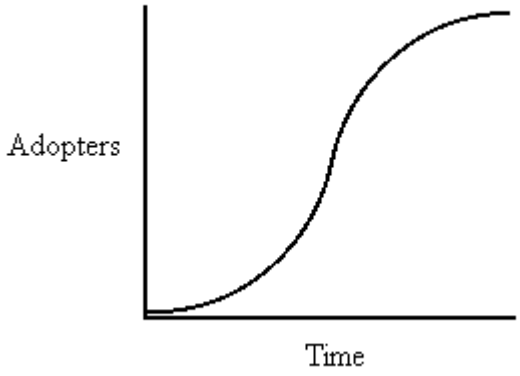

Figure 1: Diffusion curve (Rogers, 1995)

In *Diffusion of Innovations,* Rogers (1995) categorized adopters on the basis of innovativeness. Innovativeness was measured by the time at which an individual adopts an innovation. Rogers (1995) suggested five categories of individuals; innovators, early adopters, early majority, late majority and

laggards. A second curve we can examine is the adopter's curve (Figure 2), which represents the number of new adopters per time period (Valente, 1993).

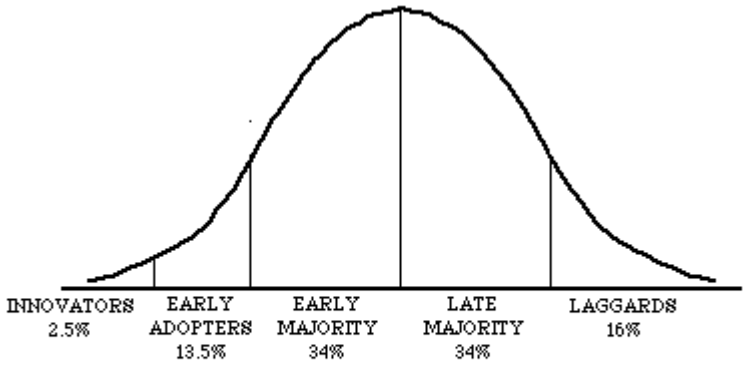

Figure 2: Adopters Curve (Rogers, 1995)

Innovators are the boldest and most obsessive group. These individuals are intrepid visionaries who have the insight to match an emerging technology to a strategic opportunity (Moore, 1999). Their interests lead them out of a local circle and into more cosmopolitan social structures (Rogers, 1995). These individuals often have the financial resources to absorb the risk they assume in their ventures.

Early adopters are more integrated within the community, and frequently hold positions of respect within their social circles. They must keep with the most current technologies and fear they will be less respected by their peer groups and communities if they do not. It is in an effort to maintain their status that they adopt early. Potential adopters look to early adopters for advice and information regarding new technologies (Rogers, 1995).

Early majority adopt an innovation just before the rest of the population. They are a large group of adopters, accounting for one-third of the social system. They follow with deliberate willingness when adopting but rarely lead a new innovation (Rogers, 1995).

Similarly, the late majority account for one-third of a social system. These individuals are skeptical and wait until an innovation is decidedly accepted before making the leap. This is often driven by a fear of losing money and an aversion to risk. The pressure of their peers is the largest motivator of adoption (Rogers, 1995).

Finally the laggards are the last to adopt a new innovation. Regarded as the most traditional individuals they regard the past as the greatest guide for the future. These individuals often have limited resources and must be certain an idea will not fail in order to adopt it (Rogers, 1995).

These trends of diffusion were first witnessed by Ryan and Gross (1943) in the diffusion of hybrid seed corn. This pioneering study tracked the innovation of hybrid seed corn through a selection of communities in Iowa. Interestingly, this group of farmers who are generally considered more "conservative" adapted quickly to the usage of hybrid corn. Ryan and Gross (1943) concluded that the behavior of one individual in an interacting population affects the behavior of his fellows. Moreover, the acceptance by one or more farmers offers new stimulus to those who have not yet accepted an innovation.

Researchers at the University of Tennessee (Holland et. al., 2004) conducted a study of cattle producers in the spring of 2004, to obtain thoughts and opinions on electronic identification. The self-administered survey was distributed following an educational meeting in nine counties. One hundred fifty-eight producers responded to the survey with an average herd size of 75. Eighty percent of producers said they already used some form of identification within their cowherd. Of those who identified cattle, the most common methods included plastic ear tag (77.4%), tattoos (14.2%), and brands (5.4%). 1.8 percent said they were currently using 'EID'. Producers were asked to rate their knowledge of proposed EID systems on a scale of 1 to 10, with 1 being no understanding and 10 being perfect understanding. The mean was 4.23, with 13 percent responding with an 8 or higher, and 35 percent responding with a 3 or lower (Holland et al.., 2004).

Producers were also asked to indicate whether they felt a national identification system for cattle was important to consumer acceptance of beef. Sixty-two percent rated the importance to consumers as an eight or higher, with a mean of 7.94 (Holland et al.., 2004).

Respondents also ranked their overall support of a national identification system. Fifty-two percent ranked there support for the program as an eight or higher with a mean of 7.07. With less than four (3.8) percent responding as a three or lower (Holland et al.., 2005).

The producers in this survey were targeted for participation in these meetings by coordinators who thought they may be appropriate candidates for a developing marketing alliance. Due to the nature in which these producers were selected, the results are likely skewed. In addition, this survey is relatively small and focuses on a relatively small region in a single state.

Several stages are considered in the innovation-decision process, which is a component in diffusion theory. Based on McGuire (1989) there are five stages in the innovation-decision process. The first is the knowledge stage in which individuals become aware of an innovation and are able to recall information. This is followed by persuasion in which an individual begins to accept and discuss the innovation. They also begin to formulate a positive image of the innovation and begin to support it. The third phase as described by McGuire (1989) is the decision stage. Here an individual purposefully seeks out additional information and intends to try the new innovation. This is followed by implementation. The implementation stage involves the use of the innovation on a regular basis, and the continued use of the innovation. Finally, in the confirmation stage, the benefits of the innovation are recognized and it is promoted to others (McGuire, 1998). Another researcher has characterized similar stages of change referred to as 1) Precontemplation, 2) Contemplation, 3) Preparation, 4)Action, and 5) Maintenance (Prochaska et. al., 1992).

2.3 Sources and Channels of Information

Sources and channels of information are also important to consider when understanding the diffusion of innovation. Ryan and Gross (1943) determined that Iowa corn producers relied heavily on the influence of their neighbors and friends as well as commercial representatives or salesman.

Communications theorist David Berlo developed the SMCR model when he reduced the Shannon-Weaver linear model to four parts (Griffin, 1997). The four basic parts of Berlo's model include the source, message, channel and receiver (Berlo, 1960).

The success of a model's source rests on several factors outlined by Berlo (1960). The first is the source's ability to communicate, how well this individual or group can write, draw, speak, think or gesture. Another important aspect is the source's attitude. Attitude towards the subject matter, one's self, and the receiver can affect the sources overall ability to communicate. Knowledge plays an equally important role as the source attempts to convey their message. The source's understanding of the subject matter and the audience is important at this stage of the model. Finally the social and cultural background of the source will ultimately play a role in the model as we consider the source's education, background, friends, salary and culture (Lee, 1967).

The message portion of the model explores the code, context and treatment of information. The message is often viewed as the "packaging" of a message. The source determines the content of the message, or what they will convey. Once the content is determined a code will be selected. A basic example of code is language. Finally the treatment of the message is selected. This involves how the message will appear such as through speech or written elements. While the message is an important element of the SMCR model, it is not something we will study in this survey.

Berlo's channel involves the five senses. The channel is the method through which the message is transmitted (Lee, 1967). By utilizing the receiver's sight, hearing, touching, smelling and tasting ability, the message can be obtained through the prescribed media. Channels are virtually unlimited and include

media such as radio, newspaper, Internet, billboard, email or a personal letter. Within this study we will observe which channels of information are most useful to cow-calf producers.

The receiver makes up the final component of Berlo's model. The receiver serves as the audience for your message after receiving it through a channel. Berlo has kept the factors of receivers and sources similar. I believe this is where Berlo really considers the human element of his model. Receivers need to have the communication skills and knowledge to properly interpret the message. Similarly their attitudes, cultural background, and social system all affect their interpretation of the message.

In a 1997 study of cow-calf producers the Animal and Plant Health Inspection Service (APHIS) determined that veterinarians were a key information source for beef producers (USDA, 1997). Two-thirds of producers cited a veterinarian as a "very important" source of information in their operation. Producers in the study also valued other cattle producers as a source of information in their operations.

A 2005 survey of 347 cow-calf producers and 326 feedlot managers in Iowa studied popular channels of information utilized by cattle producers with more than 100 beef cows or 500 feedlot cattle (Lawrence & Schuknecht, 2005). On a scale of 1 to 6, with 1 being most important and 6 being least important, producers felt e-mail was the most important channel of information when dealing with both management (mean of 4.77) and marketing (mean of 4.68) information. Other popular channels of management information included electronic news services (4.18) and Internet (4.09), respectively. Less popular channels of management information were meetings/workshops (2.97), radio/television (2.92) and magazines and newsletters (1.96).

Other popular marketing information channels were Internet (3.87), electronic news services (3.68) and meetings/workshops (3.59). Less popular marketing information channels were magazines and newsletters (2.62), followed by radio/television (2.36).

Some criticism has been given to Berlo's model. One disagreement is that the five senses argument does not compensate for a natural type of intuition that humans have, or as some would refer

to it, a sixth sense. This could include communication through pheromones (Underwood, 2003). Another criticism of the model is its lack of feedback. It is one-directional when discussed in the text. Despite its age the SMCR still remains one of the most essential elements of communication theory today.

The Shannon-Weaver model (1949) of communication was designed to be more technically minded. This model relies on six components; source, encoder, message, channel, decoder and receiver. Similar to the Berlo model, Shannon-Weaver recognized that the source produced a message sent via channel to the receiver. In contrast the Shannon-Weaver model recognized the encoding and decoding of the message that occurred between the source and receiver. The model also accounts for noise, or interference to the signal and communication process (Shannon & Weaver, 1949).

2.4 Survey Methods

Surveys are prominent icons in the evaluation research landscape (Henry, 1996). Surveys can be an important means of assessing information in an effort to enhance public knowledge. Surveys are regarded so highly in some cultures that they are banned or embargoed before elections in several countries (Henry, 1996).

In 1978 Don Dillman introduced the Tailored Design Method (TDM) (Dillman, 2000), which, he described as "interconnected procedures for creating high-quality mail surveys with a greatly improved potential for obtaining acceptable response rates. The TDM was based upon considerations of social exchange, that is, how to increase perceived rewards for responding, decrease perceived costs, and promote trust in beneficial outcomes from the survey." Detailed explanation of four carefully timed mailings was provided for designing and implementing surveys (Dillman, 2000).

At this time a trend toward self-administered surveys was also growing. An enormous amount of time and consequently money could be saved by moving from a traditional interview style of collecting data to self-administered mail surveys (Dillman, 2000).

The tailored design method involves a great deal of preparation and monitoring to ensure all aspects of implementation are controlled. It particularly focuses on a series of multiple contacts. Multiple contacts have been proven to be more effective than any other technique for increasing mail survey response rates (Scott, 1961).

Confidentiality assurances included in surveys regarding sensitive issues also significantly increase both response rate and data quality (Singer, Von Thurn, and Miller, 1995).

A total error approach to survey design strives for a balance of design features that can maximize the validity of survey data (Braverman, 1996). Several types of survey error must be considered including coverage error, sampling error, respondent error, and instrument error.

2.5. Conclusion

The research objective of this research is to better understand producer needs, comprehension, and level of preparedness to implement the NAIS. Due to the emotional nature of this issue within the beef industry, we would also like to assess the attitudes and opinions of producers regarding the NAIS.

The enormous amount of contrasting rhetoric regarding the NAIS from producer organizations has made a national survey necessary to determine the collective wants and needs of the United States beef producer. The goal of this research was to provide answers to an industry in transition and utilize this information to better educate producers about the program.

3. Methods

3.1 Population

The survey population of this study is American large-scale beef cow-calf producers. The sampling frame comprised beef cattle producers who own or manage more than 100 head of cows. Producers with more than 100 head of cows are listed on the Primedea Business Mailing List. This is the mailing list for several free beef cattle publications exclusively distributed to producers with more than 100 head of cows, and is considered a comprehensive listing of this group because of its free distribution. Producers were selected by stratified random sample by state cattle populations.

Producers were notified that all information provided would remain confidential, and that responses would only be distributed as summaries to avoid personal identification. In accordance with Kansas State University Institutional Review Board policy, producers were also made aware that their participation was completely voluntary and that they may cease participation at anytime. The Kansas State University Human Subjects Committee determined this project exempt (Appendix H).

3.2 Implementation

The survey was self-administered. Three mailings were sent to each participant over a 45-day time period according to several principles of the Tailored Design Method (TDM) (Dillman, 2000). Non-respondents received an additional fourth mailing to further encourage response, also in accordance with the TDM. Mailings included: 1) pre-notice letter, 2) survey packet and cover letter, 3) postcard thank you/reminder, and 4) replacement questionnaire with monetary incentive.

The pre-notice letter contained several elements of the TDM. Information was mailed on K-State Research and Extension Letterhead and in similar envelopes. Participants were addressed by first name when receiving the survey. They were made aware that they were selected to participate in the survey, when it would be taking place, and why the issue was deserving of their interest and input. Instructions

to opt out, a statement of confidentiality and statement of informed consent were also provided in the mailing in accordance with Kansas State University institutional review board procedures. Participants were also thanked for their participation.

The survey packet and cover letter were mailed seven days following the initial contact. This letter reminded them of the importance of their participation, instructed them how to opt out, and notified respondents of informed consent and confidentiality. It also instructed them on survey completion and return, and thanked them for their participation. It included a survey on a two-sided single sheet of paper, as well as a business reply envelope. Surveys were numbered as a way of determining non-respondents. This information was not used for any other purpose in accordance with confidentiality agreements.

According to Dillman's methodologies, eight days following the initiation of the survey a thank you/reminder postcard was mailed to participants. This card serves two-important purposes; 1) to thank those who have participated in the survey; 2) to remind those who have not yet participated to do so. Using a postcard for this method is purposeful as it provides contrasting stimulus from previous letter mailings. The postcard also notifies participants that they should have received a survey, in the event that it had not been received by the participant.

A replacement questionnaire was mailed 30 days following the initial contact. It provided a similar cover letter and a token one dollar monetary incentive to complete the enclosed replacement survey. The token incentive is traditionally included in the first mailing to establish trust among participants. Due to financial limitations, in this experiment it was provided in the final mailing. Approximately 600 replacement questionnaires were mailed.

All correspondence was drafted and printed at Kansas State University. It was shipped to Penton Media, Inc. for distribution to their selected participants from their BEEF Magazine mailing list. Surveys were returned to Penton Media, Inc. Data collection ceased 45 days following the mailing of the survey.

3.3 Survey Instrument

The survey instrument was developed at Kansas State University to assess behavior and attitudes of cow-calf producers in relation to the National Animal Identification System. A committee of six academic professionals conducted validity testing on the instrument prior to distribution. The instrument comprised 28 questions.

Several types of questions where utilized to decrease respondent error. This survey is cross-sectional. The cross-sectional design gathers data at one point in time.

3.4 Validity Testing

Trained data collectors at Kansas State University conducted a brief telephone survey of non-respondents. All calls made by data collectors were scripted to insure consistency among collectors. One hundred producers were randomly selected from the remaining 500 non-respondents and were telephoned. These participants were first asked a qualifying question to determine if they were still active in cow-calf production. Eligible participants were then asked five questions from the original survey. Questions selected were considered to be of the most interest by investigators. The goal of this process was to determine the degree of non-respondent error that occurred. Data collected showed a difference among producers who responded to questions regarding purchasing tags, capability to adapt to NAIS, support for NAIS, and confidentiality of information concerns. No significant difference was noted in the areas of premise registration and concern over cost (Appendix G).

3.5 Data Collection

Data were collected by Penton Media, Inc. using SPSS+ PC. Data were analyzed by both Penton Media, Inc. and Kansas State University's Department of Animal Science and Industry.

Analysis of open-ended questions was conducted at Kansas State University. Two researchers reviewed individual comments and recorded key words and phrases from respondents based on there level of support for the NAIS. Comments were analyzed to determine the presence of trends, as well as oversight in questionnaire construction.

4. Results

4.1 Demographics

A total effective mailing of 972 resulted in 522 completed surveys for an effective response rate of 53.7%. The majority, 77.8% of respondents were over the age of 45 with an average age of 56 years (Table 1). Cow-calf producers reported a mean of 160 head (Table 2) with the majority (73.4%) of producers reporting their operation as primarily crossbred cows (Table 3). Ninety-three percent had been in business 11 years or more with the largest group (33%) owning or managing cattle for more than 40 years (Table 4). Producers from 41 states responded to the survey (Table 5).

The information gathered in the study focused on four key areas: Sources and Channels of Information, Technology Usage, Radio Frequency Identification and the National Animal Identification System.

Table 1: Age of Respondents:

	N Valid	*N Missing*	*Mean*	*Std. Deviation*
Age	506	16	56.29	13.481

Table 2: How many head of cattle do you own or manage?

	N Valid	*N Missing*	*Mean*
Cows	487	35	307.03
Calves/stockers/feeders marketed per year	395	127	1,285.49

Table 3: The cattle in my cow-calf operation are primarily:

	Number Reporting	*Percent Reporting*
Purebred	101	19.3%
Crossbred	383	73.4%
No answer	38	7.3%
Total	**522**	**100.0%**

Number = 522

Table 4: Years producer has owned or managed cattle

	Number Reporting	*Percent Reporting*
5 years or less	9	1.7%
6-10 years	18	3.4%
11-20 years	70	13.4%
21-30 years	108	20.7%
31-40 years	137	26.2%
Over 40 years	172	33.0%
No answer	8	1.5%
Total	**522**	**100.0%**

Number = 522

Table 5: Location of Operation

	Number Reporting	*Percent Reporting*		*Number Reporting*	*Percent Reporting*		*Number Reporting*	*Percent Reporting*
MO	50	9.6%	VA	13	2.5%	NC	4	0.8%
TX	50	9.6%	KY	12	2.3%	SC	4	0.8%
NE	48	9.2%	MN	11	2.1%	AZ	3	0.6%
KS	36	6.9%	AR	10	1.9%	FL	3	0.6%
SD	33	6.3%	OR	10	1.9%	MI	3	0.6%
MT	32	6.1%	AL	9	1.7%	MS	3	0.6%
OK	27	5.2%	ID	7	1.3%	NV	3	0.6%
IA	22	4.2%	UT	7	1.3%	WV	3	0.6%
ND	22	4.2%	WI	7	1.3%	NY	2	0.4%
CO	18	3.4%	IN	6	1.1%	PA	2	0.4%
TN	15	2.9%	LA	6	1.1%	WA	2	0.4%
WY	15	2.9%	OH	6	1.1%	NJ	1	0.2%
CA	14	2.7%	GA	5	1.0%	VT	1	0.2%
NM	13	2.5%	IL	4	0.8%	No answer	10	1.9%
Total	**522**	**100.0%**						

Number = 522

*Percents may reflect multiple answers

4.2 Sources and Channels

Sources of information utilized by producer data showed the importance of veterinarians as a source. Producers cited veterinarians as their number one source of information in their beef operation (Table 6). This supports the USDA's National Animal Health Monitoring Systems (NAHMS) research in 1997 in which two-thirds of producers listed veterinarians as their most trusted source of information. Other cattle producers and farm and feed dealers were also popular responses, followed by Extension

agents, beef industry organizations and university specialists. Private consultants were the least selected source of information.

Table 6: How often do you use the following sources of information in your beef operation?
(0 = Never use and 5 = Always use)

	Frequency								
	0	*1*	*2*	*3*	*4*	*5*	*NA*	Mean	S.D.
Veterinarian	7	18	62	102	157	158	18	3.70	1.211
Other cattle producers	26	31	56	138	140	71	60	3.19	1.335
Farm and Feed dealers	27	45	80	129	125	69	47	3.03	1.381
County Extension agent	78	88	79	104	74	40	59	2.28	1.560
Beef industry organization	96	63	64	88	71	31	109	2.16	1.624
University specialists	105	70	65	83	77	38	84	2.16	1.665
Private consultant	235	59	40	33	27	15	113	1.03	1.477

Number = 522

More than 63% of cattle producers reported membership in a beef cattle organization. State or Local Cattlemen's groups made up the largest response with 47.3% reporting membership. Breed Associations and the National Cattlemen's Beef Association were the second highest reported categories, with each group receiving 20.3% of responses. Nine percent of respondents cited membership with the Rancher's and Cattlemen's Action Legal Fund (Table 7). The top five breed associations reported by producers where the American Angus Association, American Hereford Association, American Simmental Association, Red Angus of America, and American Charlois Association, respectively.

Table 7: Organizational Involvement

	Frequency	*Percent**
State or Local Cattlemen's group	247	47.3%
Breed Association	106	20.3%
National Cattlemen's Beef Association	106	20.3%
Ranchers and Cattlemen's Action Legal Fund	47	9.0%
Other	32	6.1%
No answer	190	36.4%

Number = 522

*Percents may reflect multiple answers

The most popular channels of information were cattle magazines and other cattle producers. Newspapers, university extension bulletins and county extension newsletters were also popular responses. Field days, Internet and radio were less popular channels of information among respondents, with television being the least reported channel of information (Table 8). It is important to note that magazine usage of this group is somewhat higher than that of similar surveys (Lawrence & Schuknecht, 2005); this is likely due to the sampling procedures of this survey as these producers are from a magazine mailing list.

Table 8: How often do you use the following channels of information in your beef operation?
(0 = Never use and 5 = Always use)

	Frequency								
	0	*1*	*2*	*3*	*4*	*5*	*NA*	Mean	S. D.
Cattle Magazines	13	25	51	133	164	117	19	3.51	1.237
Other Cattle Producers	20	29	75	145	138	66	49	3.16	1.269
Newspapers	57	72	105	106	80	43	59	2.45	1.485
University Extension bulletins	69	71	78	115	83	40	66	2.42	1.536
County Extension newsletters	85	66	93	107	71	51	49	2.35	1.593
Field days and demos.	86	94	90	103	60	15	74	2.00	1.432
Internet	149	59	54	75	71	43	71	1.98	1.764
Radio	113	94	98	73	43	32	69	1.86	1.538
Television	119	103	102	76	27	23	72	1.68	1.435

Number = 522

4.3 Technology

Data collected indicate that more than half (54.8%) of respondents noted using a personal computer (PC) within their cattle operation. This shows a significant increase from the NAHMS '97 survey in which 13% of all operations reported using a computer for record keeping within their operation. The information collected in this research still reveals a large portion of producers (43.7%) have no PC available in their operation.

Of those who use a PC, 59.1% use it once a day or more. The majority, 80.8%, use a PC several times a week or more (Table 9). The largest group of respondents, 29.4%, used a computer several times a day or more. An equal number of participants, 21.7% said they used a computer once a day or several times a week.

Table 9: How often do you use your computer?

	Frequency	*Percent*
Several times a day	84	29.4%
Once a day	62	21.7%
Several times a week	62	21.7%
Several times a month	53	18.5%
Once a month or less	21	7.3%
No answer	4	1.4%

N = 286 – Computer users only

Seventy-four percent of users used their computer for email access, 68.2% for financial management, and 65.4% for maintaining livestock records (Table 10). More than half also cited using their computer for inventory purposes. Machinery and labor records both ranked lower as uses for PCs.

Table 10: For which of the following activities do you use your computer?

	Frequency	*Percent**
E-mail	212	74.1%
Financial management	195	68.2%
Livestock records	187	65.4%
Inventory	146	51.0%
Machinery records	68	23.8%
Labor records	59	20.6%
Other	38	13.3%
No answer	5	1.7%

N = 286 – Computer users only
*Percents may reflect multiple answers

More than three-quarters of producers reported that their newest computer was less than 3 years old. One-quarter said their newest computer was less than a year old. Of those producers who used a PC, 88.5% had Internet access for use within their operation. Therefore, we conclude that 48% of the 522 respondents have Internet access for use in their operation.

4.4 Radio Frequency Identification

It is believed that many of the implementation concerns of NAIS stem from the USDA's Bovine Identification Working Groups recommendations to use Electronic Identification (EID). The group has proposed Radio Frequency Identification (RFID) as the means to individually identify cattle. This prompted us to include questions regarding RFID and current identification systems in the survey instrument.

A large majority of producers (94.1%) reported using some type of animal identification system (Table 11).

Table 11: Which of the following animal identification systems do you currently use?

	Frequency	*Percent**
Visual ear tag	441	84.5%
Brand	293	56.1%
Tattoo	117	22.4%
Electronic ear tag	40	7.7%
Other	22	4.2%
None	25	4.8%
No answer	6	1.1%

*Percents may reflect multiple answers

In 2005, 7.7% of respondents purchased electronic ear tags for identification purposes but, 16.5% of producers responding said they planned to purchase electronic ear tags in 2006. This could indicate an early majority following the initial 7.7% of early adopters. It also shows an interest among producers to adapt to the Bovine Identification Working Groups recommendations. These data illustrate the diffusion of innovation as producers adjust to new technology, and demonstrate an effort to adapt to the program by purchasing tags.

A small number of producers (5.4%) reported current use of electronic identification and monitoring in their herds.

4.5 National Animal Identification

The introduction of a National Animal Identification System (NAIS) into the United States has generated much confusion and controversy. The goal of the NAIS is to utilize 48-hour traceback in the event of an animal disease outbreak, identifying all animals that have had contact with the diseased animal, while also linking an animal to its premises of origin.

The first step in implementing the proposed NAIS is to obtain a premise registration number. Of those surveyed, almost one-third (32.8%) had received a premise ID number.

Producers were asked to rate their concerns regarding four issues surrounding the implementation of a national ID plan. Liability to the producer was the greatest concern of respondents. It was followed by cost to the producer, reliability of technology, and liability to the producer, respectively (Table 12).

Table 12: Please rate your concerns regarding the following issues surrounding the implementation of a national animal identification plan:
(1 = not concerned, 2 = somewhat concerned, 3 = concerned and 4 = very concerned)

	N Valid	*Mean*	*Std. Deviation*
Liability to producer	496	3.12	.965
Cost to producer	513	3.02	.976
Reliability of technology	489	2.95	.943
Confidentiality of information	487	2.94	1.050

Participants also evaluated the importance of a national animal identification system in relation to several key areas of beef cattle production. Disease monitoring and regaining foreign markets were the greatest perceived benefits of a national animal identification system. The majority of producers did not feel such a system was important to increase profitability in their operation (Table 13).

Table 13: How important do you feel a national animal identification system is to the following?:
(1 = not important and 6 = critical)

	N Valid	*Mean*	*Std. Deviation*
Monitoring disease	498	4.13	1.627
Regaining foreign markets	493	4.09	1.680
Increasing consumer confidence	495	3.95	1.709
Enhancing food safety	493	3.71	1.731
Managing the supply chain	481	3.23	1.711
Increased profitability	490	3.03	1.674

Producers were asked to rate their level of agreement with several statements regarding the necessity and practicality of the proposed NAIS on a scale of 1 to 6, with 1 being strongly disagree and 6 being strongly agree. Forty-one percent of producers agreed to some degree that the NAIS is necessary. Almost 30% felt the implementation of such a program was overdue. More than 59%, however, felt the implementation timeline was not practical.

Respondents were asked also to rate their level of understanding regarding the proposed NAIS, also on a scale of 1 to 6, with 1 being no understanding and 6 being complete understanding. The majority of producers showed some degree of understanding of the program. Similarly, they were asked to rate their familiarity with electronic ID systems available to producers (Table 14). While most producers felt they were aware of available systems and technology, the margin is small with a mean of 3.29 (s.d.=1.419). The capability of these producers to implement and adopt the NAIS was also evaluated on a scale of 1 to 6, with 1 being incapable and 6 being completely capable. The majority of producers felt they were capable of adopting the program (Table 14).

Table 14: Familiarity with and capability to adopt NAIS
(1 = no understanding and 6 = complete understanding)

	N Valid	*Mean*	*Std. Deviation*
Familiarity with NAIS	512	3.63	1.302
Familiarity with electronic id systems	511	3.29	1.419
Capability to adopt NAIS	504	3.87	1.649

Support of a national identification system for cattle was evaluated on a 1 to 6 scale, with 1 being strongly supportive and 6 being strongly opposed. This question showed the most variation among the group with about 49% supportive and about 48% opposed to some degree. Data showed a mean of 3.53 with a standard deviation of 1.672. One trend to note is the even distribution of producers across all possible responses (Table 15).

Table 15: Generally speaking, are you in favor of a national identification system for cattle?
(1 = strongly supportive and 6 = strongly opposed)

	Frequency	*Percent*
1 - Strongly supportive	75	14.9%
2 – Supportive	72	14.2%
3 - Somewhat supportive	103	20.3%
4 - Somewhat opposed	82	16.3%
5 – Opposed	75	14.8%
6 - Strongly opposed	83	16.5%

N = 506 * Mean = 3.53, s.d. = 1.672

Respondents where asked an open-ended question regarding why they were or were not in favor of a national identification system for cattle (Table 16). Those who responded 1-strongly supportive (14.9%), most frequently cited the system's importance to consumer confidence, disease monitoring and foreign markets. Level 2-supportive respondents (14.2%) ranked disease monitoring and foreign markets highest. The 3-somewhat supportive respondents (20.3%) most frequently commented on cost, disease monitoring and technology. Level 4-somewhat opposed respondents (16.3%) cited cost most frequently. The 5-opposed group (14.8%) also most frequently cited cost. Level 6-strongly opposed respondents (16.5%) responded cost and government involvement most frequently.

In total, open-ended question respondents most frequently cited issues of cost, disease control and foreign markets as reasons supporting their decision about support or opposition of the program.

Table 16: Why or why not? (Generally speaking, are you in favor of a national identification system for cattle?)

Respondent Category	Theme	Quote
Strongly Supportive (1)	- Maintaining consumer confidence - Needed for disease monitoring and control - Importance to regaining foreign markets/international confidence - Personal Accountability	- "Absolutely necessary to regain markets and meet customer expectations." - "We feel with this system if a problem occurs we will be able to track it fast and eliminate the problem before it enters the food chain."
Supportive (2)	- Needed for disease monitoring and control - Importance in regaining foreign markets	- "NAIS would open markets both at home and overseas. It would also help a great deal in tracing cattle that are not branded."
Somewhat Supportive (3)	- Concern regarding program cost - Needed for disease monitoring and control - Usability of technology concern	- "The first thing I worry about is the cost because it seems when someone gets an idea it always falls to the producer to pay for it and we can't get higher process for cattle to cover the losses. The second will be sale barns ability to read tags."
Somewhat Opposed (4)	- Cost concern	- "I believe it will increase our costs without any return in profit.'
Opposed (5)	- Cost concern - Confidentiality of Information concern	- "I don't see a benefit economically for cow/calf operations." - "Because I feel this is a producer tracking number, not a premise tracking number."
Strongly Opposed (6)	- Cost concern - Government Interference - Confidentiality of information concern	- " I feel your program is a joke and a good way of giving government more control and reason to break the small cattlemen."

4.6 Non-Response Error

Data were collected from 38 telephone survey respondents at a 38% response rate. A two-tailed T-test was used to compare the results of the mail survey to that of the phone survey (Appendix G).

Statistically significant differences were found in categories of: tags purchased by producers in 2005 (t=-2.682), producer capability to adopt NAIS (t=5.073), general NAIS support (t=-2.569) and concern regarding confidentiality of information (t=-3.812). No significant correlation was found among respondents in areas of completed premise registration (t=-0.389) and concern regarding cost of implementation (t= - 1.428).

5. Discussion

5.1 Research Questions

Question 1. Are United States cow-calf producers willing and prepared to implement the NAIS?

Support for NAIS among respondents is split, with 49.4% supportive to some degree and 47.6% to some degree opposed to such a system (Table 17). Therefore, it is possible to conclude that almost half of producers are willing to implement the system and are supportive of the plan.

Technology usage is increasing in our industry. In this survey 54.8% utilized a computer within their operation. This shows an increase from the United States Department of Agriculture's Animal and Plant Health Inspection Service, National Animal Health Monitoring System "Beef '98" survey in which 14% of producers had computers available in their operations (NAHMS, 1998). Of those respondents who had a computer available in their operation, 80.8% used it several times a week or more.

Producers were asked, "How capable do you feel your operation is to adopting the NAIS?" On a scale of 1 to 6, with 1 being incapable and 6 being completely capable, producers had a mean of 3.87 and a standard deviation of 1.649. Graph 1 illustrates the majority of producers feel they are capable of adopting the system.

While the majority of producers feel capable about their ability to participate many seem to be held back from implementation by their personal bias toward the program. An increase in computer and internet usage suggests that many producers would be capable of participating in the program if they had the desire to.

Question 2. What are producers concerns regarding the program?

An analysis of responses to open-ended questions illustrated several concerns in relation to producer's support or opposition for the implementation of a national ID system. Producers showed

greatest concern over cost-related issues. This was followed by an interest in managing diseases. The third most-reported concern among producers was an interest in regaining foreign markets.

Producers were also asked to rate several concerns surrounding the implementation of a national ID system. Producers ranked cost to producer, confidentiality of information, reliability of technology, and liability to producer similarly (Table 12).

Question 3. Are producers currently using this technology, and how do these adaptation patterns relate to Roger's Diffusion of Innovation theory?

Producers, when asked if they had purchased electronic ear tags for identification purposes in 2005, of which 7.3% responded yes. When asked if they had purchased or planned to purchase tags in 2006, 16.5% said they had purchased or planned to purchase these tags. This shows a doubling of producers who are using or are planning to use this technology in their operation.

When comparing this information to Rogers Adopters curve, one may assume that this system was in an innovators stage during and prior to 2005. Assuming that we are at 16.5% adoption rate, we could also assume, this innovation was in the early adopter phase, approaching the early majority, at the time these data were collected.

Question 4. Where are producers obtaining their information? From whom and in what forms do producers receive information they apply in their operations?

Similar to previous research, participants in this study cited veterinarians as the most frequently used source of information within their operation. Other cattle producers and farm and feed dealers were also popular responses. The day-to-day transaction among these individuals and those producers surveyed could be a reason for the noted break between these individuals and other groups. The break in the data was followed by extension agents, beef industry organizations and university specialists. These

individuals likely have less daily contact with producers than the aforementioned group. Private consultants were the least selected source of information. Those who relied on private consultants utilized them extensively. It is estimated their use overall however is low due to the higher cost in obtaining a consultants services.

The most popular channels of information were cattle magazines and other cattle producers followed by a significant break in channel usage. Newspapers, university extension bulletins and county extension newsletters were also somewhat popular responses. Field days, Internet and radio were less popular channels of information among respondents, with television being the least reported channel of information. It is important to note the large variation in the internet usage respondent group, implying that there are several producers surveyed who rely heavily upon the Internet as a channel of information.

Overall other cattle producers are an important source and channel of information within this group. As a result, producers in this group may not be receiving information directly from a credible source on new issues and technology. It is important to consider this "word of mouth" communication when working to educate producers on new systems or changes.

5.2 Limitations

Targeting producers with more than 100 head of cows is not entirely representative of the beef industry. The average beef cow herd is 40 head, but operations with 100 or more beef cows comprise 9 percent of all beef operations and 51 percent of the beef cow inventory (USDA, 2002). As a result the population studied was focused on larger scale cattle operations and does not give equal coverage to all cow-calf producers.

Additionally, by utilizing a magazine mailing list, we are targeting a specific type of producer who is more inclined to read publications within their industry. This type of person may respond differently from those who do not have access to the information in this publication and who do not rely upon magazines as a channel of information.

Finally, it is important to note that at the time the survey was administered, the National Animal Identification System was to be implemented by the USDA as a mandatory program. Following the survey administration, the plan was changed from mandatory to voluntary. In light of this change, public opinion regarding the system may have changed considerably.

5.3 Future Research

Because of the USDA's policy change from a mandatory to voluntary program, it would be useful to compare data of a current survey with this research. Moreover, research on the comparison of mandatory and voluntary programs would give much needed information to the industry. Many argue that the system will not be successful if it is not part of a mandatory program requiring compliance. Because this data represents a snapshot in time, a follow-up survey would give more insight into the diffusion of innovation and evolution of practices of cow-calf producers.

It is also important as we consider the implementation of this system for research to be conducted regarding subsidizing the system. If cost-concerned producers were given support in implementation they may be more inclined to participate voluntarily.

5.4 Implications

Data show an interest in producers to understand and adapt to the proposed NAIS. The advancements in computer usage of producers in the past nine years since the NAHMS study shows promise for our industries' ability to adapt to new technology. This adaptation will be necessary if such a system is to be implemented.

Producers also report being knowledgeable about the system and are positive about their ability to adapt. It is important to remember, however, that these same producers have strong concerns about the importance of this system and show great variability in their answers as viewed in the standard deviation of many responses.

This deviation suggests what the final table illustrates. There is no unanimous support for the implementation of the NAIS. In the next phase of this study, further analysis of the data will determine what factors cause this distribution in support. By better understanding the demographics of these responses, we can work toward a goal of understanding and providing education that meets the needs of this group.

Synthesis of producer written responses to the survey show a clear distinction among producers who are in favor of, or opposed, to the NAIS. Those who showed support for the plan generally cited issues of national concern in their decision making including; protecting food safety, increasing and maintaining consumer confidence, aiding in disease control, and regaining foreign markets. Those individuals who showed opposition to the NAIS reported more personal reasons for their views including; cost to the producer, violation of confidentiality of information, and government interference in production.

APPENDIX A

SURVEY RESULTS PREPARED BY *BEEF* MAGAZINE

SOURCES AND CHANNELS OF INFORMATION:

1) Are you a member of any of the following organizations?

	Number Reporting	*Percent Reporting*
State or Local Cattlemen's group	247	47.3%
Breed Association	106	20.3%
National Cattlemen's Beef Association (NCBA)	106	20.3%
Ranchers and Cattlemen's Action Legal Fund (R-CALF)	47	9.0%
Other	32	6.1%
No answer	190	36.4%
Total	**522**	**100.0%**

Number = 522

*Percents may reflect multiple answers

Others listed (As reported):

Farm Bureau (5)	NCHA, ACHA
AQHA (3)	ND BQA (Beef quality assoc.)
Texas & Southwestern Cattle (2)	NM Beef council
ALFA	SD Angus Assn
Farm/ranch journals	SD Farmers Union
Grazing lands conservation initiative	Southwestern Cattle Raisers Assoc
IBIC	TCFA
John Deere Furrow	Tehama County Cattlewomen and CA Cattlewomen
KLA	Texas Farm Bureau
MDA	WA State Cattlemens assn
MNFU	WY stock growers
National Livestock Assoc	Wyoming Farm Bureau

Breed associations listed (As reported):

American Angus Association (66)	Beefmaster Breeders United
American Hereford Association (10)	Black Hereford
American Simmental Association (10)	Brafurd
Red Angus of America (8)	British White
Charolais Association (7)	Holstein
American Gelbvieh Association (4)	Maine Anjou
Limousin (3)	NASF
Salers (3)	NM Hereford Assn
American Brahman Association (2)	Ohio Holstein
American Chianina Association (2)	Polled Hereford
Black Angus (2)	Santa Gertrudis
SGBI (2)	Texas Hereford

2) How often do you use the following sources of information in your beef operation?
(0 = Never use and 5 = Always use)

	Frequency								Std.
	0	*1*	*2*	*3*	*4*	*5*	*NA*	Mean	Deviation
Veterinarian	7	18	62	102	157	158	18	3.70	1.211
Other cattle producers	26	31	56	138	140	71	60	3.19	1.335
Farm and Feed dealers	27	45	80	129	125	69	47	3.03	1.381
County Extension agent	78	88	79	104	74	40	59	2.28	1.560
Beef industry organization	96	63	64	88	71	31	109	2.16	1.624
University specialists	105	70	65	83	77	38	84	2.16	1.665
Private consultant	235	59	40	33	27	15	113	1.03	1.477

NA = No Answer

3) How often do you use the following channels of information in your beef operation?
(0 = Never use and 5 = Always use)

	Frequency								
	0	*1*	*2*	*3*	*4*	*5*	*NA*	Mean	S. D.
Cattle Magazines	13	25	51	133	164	117	19	3.51	1.237
Other Cattle Producers	20	29	75	145	138	66	49	3.16	1.269
Newspapers	57	72	105	106	80	43	59	2.45	1.485
University Extension bulletins	69	71	78	115	83	40	66	2.42	1.536
County Extension newsletters	85	66	93	107	71	51	49	2.35	1.593
Field days and demos.	86	94	90	103	60	15	74	2.00	1.432
Internet	149	59	54	75	71	43	71	1.98	1.764
Radio	113	94	98	73	43	32	69	1.86	1.538
Television	119	103	102	76	27	23	72	1.68	1.435

NA = No Answer
Number = 522

TECHNOLOGY:

4) Do you use a personal computer within your cattle operation?

	Number Reporting	*Percent Reporting*
Yes	286	54.8%
No	228	43.7%
No answer	8	1.5%
Total	**522**	**100.0%**

Number = 522

5) How often do you use your computer?

	Number Reporting	*Percent Reporting*
Several times a day	84	29.4%
Once a day	62	21.7%
Several time a week	62	21.7%
Several times a month	53	18.5%
Once a month or less	21	7.3%
No answer	4	1.4%
Total	**286**	**100.0%**

Number = 286 – Computer users only

6) For which of the following activities do you use your computer?

	Number Reporting	*Percent Reporting*
E-mail	212	74.1%
Financial management	195	68.2%
Livestock records	187	65.4%
Inventory	146	51.0%
Machinery records	68	23.8%
Labor records	59	20.6%
Other	38	13.3%
No answer	5	1.7%
Total	**286**	**100.0%**

Number = 286 – Computer users only
Percents may reflect multiple answers

Others listed:

Market info (6)	Commodity markets
Research (3)	Communication with others
Information (2)	Co-op news
Internet (2)	Correspondence
News (2)	Letter writing
Weather (2)	Livestock auctions
Billing feedlot customers	Market prices; cattle info; cattle assns
Bloodlines	Political/testimony
Breeding stock	Ranch supply purchases online
Bull sale sires	Rangeland records
Cattle market purchase	Taxes

7) How old is your newest computer?

	Number Reporting	*Percent Reporting*
Less than 1 year	73	25.5%
1 to 3 years	144	50.3%
4 to 6 years	56	19.6%
More than 7 years	11	3.8%
No answer	2	.7%
Total	**286**	**100.0%**

Number = 286 – Computer users only

8) Do you have access to the Internet for use within your cattle operation?

	Number Reporting	*Percent Reporting*
Yes	253	88.5%
No	29	10.1%
No answer	4	1.4%
Total	**286**	**100.0%**

Number = 286 – Computer users only

NATIONAL ANIMAL IDENTIFICATION SYSTEM (NAIS):

9) Which of the following animal identification systems do you currently use?

	Number Reporting	*Percent Reporting*
Visual ear tag	441	84.5%
Brand	293	56.1%
Tattoo	117	22.4%
Electronic ear tag	40	7.7%
Other	22	4.2%
None	25	4.8%
No answer	6	1.1%
Total	**522**	**100.0%**

Number = 522

Percents may reflect multiple answers

Others listed:

ear mark (7)
ear notch (6)
bangs tag (3)
freeze brand (3)
brisket tags
small steel tag
some tattoo & tags

10) For what do you use your ear tags?

	Number Reporting	*Percent Reporting*
Identification	459	87.9%
Insecticide treatment	118	22.6%
I do not use ear tags	42	8.0%
No answer	10	1.9%
Total	**522**	**100.0%**

Number = 522

Percents may reflect multiple answers

11) In 2005, did you purchase any electronic ear tags for identification purposes?

	Number Reporting	*Percent Reporting*
Yes	38	7.3%
No	479	91.8%
No answer	5	1.0%
Total	**522**	**100.0%**

Number = 522

12) Have you purchased, or do you plan to purchase any electronic tags for identification purposes in 2006?

	Number Reporting	*Percent Reporting*
Yes	86	16.5%
No	410	78.5%
No answer	26	5.0%
Total	**522**	**100.0%**

Number = 522

13) Do you use any electronic identification/monitoring on your cattle?

	Number Reporting	*Percent Reporting*
Yes	28	5.4%
No	487	93.3%
No answer	7	1.3%
Total	**522**	**100.0%**

Number = 522

14) Have you received or registered your operation for a premise identification number?

	Number Reporting	*Percent Reporting*
Yes	171	32.8%
No	341	65.3%
No answer	10	1.9%
Total	**522**	**100.0%**

Number = 522

15) Please rate your concerns regarding the following issues surrounding the implementation of a national animal identification plan: *(1 = not concerned, 2 = somewhat concerned, 3 = concerned and 4 = very concerned)*

	N Valid	*N Missing*	*Mean*	*Median*	*Std. Deviation*
Cost to producer	513	9	3.02	3.00	.976
Confidentiality of information	487	35	2.94	3.00	1.050
Reliability of technology	489	33	2.95	3.00	.943
Liability to producer	496	26	3.12	3.00	.965

Cost to producer

	Number Reporting	*Percent Reporting*
Not concerned	41	7.9%
Somewhat concerned	115	22.0%
Concerned	148	28.4%
Very concerned	209	40.0%
No answer	9	1.7%
Total	**522**	**100.0%**

Number = 522

Reliability of technology

	Number Reporting	*Percent Reporting*
Not concerned	40	7.7%
Somewhat concerned	110	21.1%
Concerned	174	33.3%
Very concerned	165	31.6%
No answer	33	6.3%
Total	**522**	**100.0%**

Number = 522

Confidentiality of information

	Number Reporting	*Percent Reporting*
Not concerned	61	11.7%
Somewhat concerned	101	19.3%
Concerned	132	25.3%
Very concerned	193	37.0%
No answer	35	6.7%
Total	**522**	**100.0%**

Number = 522

Liability to producer

	Number Reporting	*Percent Reporting*
Not concerned	39	7.5%
Somewhat concerned	87	16.7%
Concerned	145	27.8%
Very concerned	225	43.1%
No answer	26	5.0%
Total	**522**	**100.0%**

Number = 522

16) How important do you feel a national animal identification system is to the following:
(1 = not important and 6 = critical)

	N Valid	*N Missing*	*Mean*	*Median*	*Std. Deviation*
Monitoring disease	498	24	4.13	4.00	1.627
Increasing consumer confidence	495	27	3.95	4.00	1.709
Increased profitability	490	32	3.03	3.00	1.674
Regaining foreign markets	493	29	4.09	4.00	1.680
Managing the supply chain	481	41	3.23	3.00	1.711
Enhancing food safety	493	29	3.71	4.00	1.731

Monitoring disease

	Number Reporting	*Percent Reporting*
1 - Not important	51	9.8%
2	46	8.8%
3	60	11.5%
4	95	18.2%
5	121	23.2%
6 - Critical	125	23.9%
No answer	24	4.6%
Total	**522**	**100.0%**

Number = 522

Increasing consumer confidence

	Number Reporting	*Percent Reporting*
1 - Not important	64	12.3%
2	54	10.3%
3	72	13.8%
4	78	14.9%
5	109	20.9%
6 - Critical	118	22.6%
No answer	27	5.2%
Total	**522**	**100.0%**

Number = 522

Increased profitability

	Number Reporting	*Percent Reporting*
1 - Not important	121	23.2%
2	92	17.6%
3	96	18.4%
4	70	13.4%
5	55	10.5%
6 - Critical	56	10.7%
No answer	32	6.1%
Total	**522**	**100.0%**

Number = 522

Regaining foreign markets

	Number Reporting	*Percent Reporting*
1 - Not important	60	11.5%
2	42	8.0%
3	64	12.3%
4	81	15.5%
5	121	23.2%
6 - Critical	125	23.9%
No answer	29	5.6%
Total	**522**	**100.0%**

Number = 522

Managing the supply chain

	Number Reporting	*Percent Reporting*
1 - Not important	109	20.9%
2	72	13.8%
3	92	17.6%
4	78	14.9%
5	65	12.5%
6 - Critical	65	12.5%
No answer	41	7.9%
Total	**522**	**100.0%**

Number = 522

Enhancing food safety

	Number Reporting	*Percent Reporting*
1 - Not important	76	14.6%
2	66	12.6%
3	76	14.6%
4	81	15.5%
5	95	18.2%
6 - Critical	99	19.0%
No answer	29	5.6%
Total	**522**	**100.0%**

Number = 522

17) Please rate the following statements about the national animal identification system (NAIS) in order of agreement: *(1 = strongly disagree and 6 = strongly agree)*

	N Valid	*N Missing*	*Mean*	*Median*	*Std. Deviation*
NAIS is necessary	495	27	3.35	3.00	1.683
NAIS implementation timeline is practical	466	56	2.97	3.00	1.492
The implementation of NAIS is overdue	471	51	2.97	3.00	1.723

NAIS is necessary

	Number Reporting	*Percent Reporting*
1 - Strongly disagree	96	18.4%
2	64	12.3%
3	121	23.2%
4	73	14.0%
5	66	12.6%
6 - Strongly agree	75	14.4%
No answer	27	5.2%
Total	**522**	**100.0%**

Number = 522

The implementation of NAIS is overdue

	Number Reporting	*Percent Reporting*
1 - Strongly disagree	127	24.3%
2	89	17.0%
3	101	19.3%
4	44	8.4%
5	47	9.0%
6 - Strongly agree	63	12.1%
No answer	51	9.8%
Total	**522**	**100.0%**

Number = 522

NAIS implementation timeline is practical

	Number Reporting	*Percent Reporting*
1 - Strongly disagree	98	18.8%
2	86	16.5%
3	126	24.1%
4	74	14.2%
5	51	9.8%
6 - Strongly agree	31	5.9%
No answer	56	10.7%
Total	**522**	**100.0%**

Number = 522

18) How familiar are you with the proposed National Animal Identification System?
(1 = no understanding and 6 = complete understanding)

	N Valid	*N Missing*	*Mean*	*Median*	*Std. Deviation*
Familiarity with NAIS	512	10	3.63	4.00	1.302

	Number Reporting	*Percent Reporting*
1 - No understanding	32	6.1%
2	73	14.0%
3	121	23.2%
4	148	28.4%
5	105	20.1%
6 - Complete understanding	33	6.3%
No answer	10	1.9%
Total	**522**	**100.0%**

Number = 522

19) How familiar are you with the electronic identification systems available to producers?
(1 = no understanding and 6 = complete understanding)

	N Valid	*N Missing*	*Mean*	*Median*	*Std. Deviation*
Familiarity with electronic id systems	511	11	3.29	3.00	1.419

	Number Reporting	*Percent Reporting*
1 - No understanding	67	12.8%
2	90	17.2%
3	126	24.1%
4	108	20.7%
5	95	18.2%
6 - Complete understanding	25	4.8%
No answer	11	2.1%
Total	**522**	**100.0%**

Number = 522

20) How capable do you feel your operation is to adopting the NAIS? *(1 = incapable and 6 = completely capable)*

	N Valid	*N Missing*	*Mean*	*Median*	*Std. Deviation*
Capability to adopt NAIS	504	18	3.87	4.00	1.649

	Number Reporting	*Percent Reporting*
1 - Incapable	51	9.8%
2	71	13.6%
3	91	17.4%
4	84	16.1%
5	95	18.2%
6 - Completely capable	112	21.5%
No answer	18	3.4%
Total	**522**	**100.0%**

Number = 522

21) Generally speaking, are you in favor of a national identification system for cattle?
(1 = strongly supportive and 6 = strongly opposed)

	N Valid	*N Missing*	*Mean*	*Median*	*Std. Deviation*
Level of support for NAIS	506	16	3.53	3.00	1.672

	Number Reporting	*Percent Reporting*
1 - Strongly supportive	78	14.9%
2	74	14.2%
3	106	20.3%
4	85	16.3%
5	77	14.8%
6 - Strongly opposed	86	16.5%
No answer	16	3.1%
Total	**522**	**100.0%**

Number = 522

22) Referring to the previous question, why do you feel this way ? (Comments are presented as written).

1 – Strongly supportive:

- Absolutely necessary to regain markets and meet customer expectations
- All items in question 16
- As a producer and feed store owner, my concern it that this plan is good but the small producer as I am will be affected by the cost. Also I'm concerned about the producer who buys feed elsewhere to raise cattle and you or I knows where it comes from
- As consumers both domestic and abroad become further removed from the farm, it's important for their confidence in the safety of our product
- Because here in MT we have the best cattle herds in the nation. Canada has a BSE problem. Their beef should be labeled if it's in our super markets etc
- consumer confidence and disease trace back
- consumer must have confidence that US beef is safe
- Disease control, bio-terrorism, export competition, consumer confidence
- disease control, consumer confidence
- disease control, country of origin, keeping US consumers eating US beef
- food safety and consumer confidence
- food safety, foreign markets
- food safety, prevent theft
- for all the above. Other countries use it with success
- for protection of own cattle & cattle of nation & foreign market
- for tracking disease back to the origin. Must have it to compete with other countries who already have their system in place
- Foreign trade, fair to consumers, more honesty among traders and sales
- government interference with private practice
- Here in MT we raise exceptional cattle. Buyers pay premium prices. Proof of origin shows as where these fine cattle are coming from
- I brand my cows and I feel this could identify my cows back to me wherever they go
- I feel it is very important to have a safer supply chain
- I feel that any animal will be better traced thru its life cycles which will allow the producers & nation better able to follow grades of beef thru genetics & safety of beef thru health standards, improving the already best beef in the world (US)
- I feel we need this for the integrity of our business
- I think it is a good idea, but the electronic ID tag isn't 100% proof as a brand or tattoo. Tags come out of ears
- If we want to compete with other countries, we need an ID program in place. It is needed to manage & improve your overhead.
- In the end, NAIS should provide all consumers, commercial or individual, a secure quality product
- It is inevitable to be competitive in the food business. Consumers demand it and producers must provide what consumers want or you have no market
- It seems the best way to force the problem producers to take responsibility for the problems they cause and limit the damage to responsible producers
- It should favorable support exports. Beef safety helped. Possible consumer confidence helped and improve consumption
- Keeping foreign markets. Keep the consumer confident of the quality
- marketing my cattle
- modern tech is necessary
- Need to be rewarded for raising good cattle that are safe in the food system
- nobody business
- public safety
- Quality control is required in any business
- reasons mentioned in question 16

22) Referring to the previous question, why do you feel this way? *(continued…)*

1 – Strongly supportive

- Something has to be done to inform the public where their food comes from and a way to isolate BSE herds from other producers so they aren't so affected
- the ability to trace cattle disease is very important. We feel with this system if a problem occurs we will be able to track it fast and eliminate the problem before it enters the food chain
- We have been practicing most of the requirements for the ID system for several years for our own information, even electronic tags ID will help improve the beef image
- We must have it. It should be in place now.
- we must police our own products or the government will
- We need the system to ensure a good product to the consuming public
- We need this for age verification & disease outbreaks
- We need to be responsible for what we produce
- We need to identify the animals in our food chain and trace illnesses to the farm or ranch they originate on
- We need to keep cattle identified the best we can
- We tattoo and brand every animal and know birth dates and any information you need
- The US consumer has the right to know where their meat supply is coming from and we the producer has the right to know how much beef is being imported.
- This would also help with cattle rustlers as this is a big problem in our area
- To help expand farming markets
- to help the beef industry
- to keep track of what's happening to beef
- to monitor disease especially any case of BSE, consumer confidence. Did foreign markets and personal security and info
- To reopen foreign markets & receive cut out data on slaughter animals
- Traceability and consumer confidence. Increased marketing opportunities
- very important for disease control and consumer confidence and foreign markets
- We are still a free market and if the government stayed out then it would be fine.
- We feel it is necessary

22) Referring to the previous question, why do you feel this way? *(continued…)*

2

- An exact number of cattle rather than an estimated number for packers to use to their benefit. I think it's great for consumer confidence, however I doubt it will increase my profits.
- because of imported cattle
- disease control, retention of foreign markets, better identify best seed stock provider
- export markets & world wide competition
- For disease control & ownership, & quality assurance
- help our beef industry for the US
- I am in favor if I can track my cattle to market to get kill data & etc. I want to be able to use this information for my operation as well as for disease
- I do not think the NAIS will work for every operation
- I don't think it will benefit one way or another
- I feel it is a good idea
- I feel with the world changing we need a way to track diseases fast so they can be better controlled
- I have no problem being accountable with the beef I produce & would like to benefit directly because of it.
- I have not been sold that it is truly needed or that it can be put in place in a way that it will work properly
- I want the people who are not professional and just have cattle for a hobby or write off to get out of the business. However, I do not want the government breathing down my neck because they screw up a lot, e.g. exports to Japan w/BSE
- If FMD or some other highly contagious disease struck the US beef industry, I would want to do my part to get it contained. Also, the slackers & poor producers need to be accountable for cutting corners
- If USDA is handling it, they can't take care of anything. I have little faith in how they handled mad cattle disease. The aren't interested in the cattle producers welfare
- If you take care of your cattle, you don't need it. (That's my thought)
- It is a good way to show national or worldly who's cattle and what is good or bad about them
- Mad cow is a very good reason to be able to identify the producers who raised this animal. Disease, food safety and improving genetics are good reasons to implement an identification process
- marketing & best price
- monitor disease; regain foreign markets
- NAIS will hopefully help open foreign markets
- NAIS would open new markets both at home and overseas. It would also help a great deal in tracing cattle that are not branded
- necessary
- Necessary for access to foreign markets
- need for regaining foreign market
- not set up for the system
- old fashioned
- Once our operation starts to phase in electronic car tags, I hope that someone does not change things and we would have to start over at additional expense
- only concern confidentiality of information & how it will be used
- so downer or diseased cows will not go into the meat sellable to consumers
- Something will need to convince other countries & consumers we are serious about protecting the food chain
- The thought is great; however, the information collected needs to be available to all cattle producers to help increase pricing and profitability of our industry
- The US consumer will pay for a better product if they know where it comes from. I want people to know they can eat my beef & a safe product

22) Referring to the previous question, why do you feel this way? *(continued…)*

2

- to be able to market to foreign countries also to better track my own cattle
- to strengthen our over seas market
- Too expensive to purchase, administer & maintain
- Trace back provides the consumer confidence
- trace back point of origin
- Unless the meat is marked where it came from in the butcher shop, it doesn't have a whole lot of value other than for foreign buyers. Or a disease break out, which we haven't had yet
- We brand our cattle and I feel this is a permanent and a low cost of ID
- We id all our calves anyway
- We need NAIS for traceback of BSE, foot & mouth, etc. We don't need this information getting in the hands of processors to manipulate the market.
- who does all the paperwork?
- With the world markets we are in today and threats of disease, we need a good tracking mechanism.

3

- A knowledgeable cattle producer watches out for diseases/does not willingly sell "sick" animals
- A NAIS would be ok, if used for disease control and controlled by a private firm and not by the government or ANCA, and your account is private and not accessible without your permission. But it's going to be expensive and I don't think we will get rewarded.
- Any animal that goes through stockyard should be tags. And a record of who sold and who purchased
- Because I think it could work against us if things aren't perfect
- Because it will end up as a political mess with too many greedy groups out for all they can skim off the small cattle producers
- because of governments freedom on information legislation requirements, I do not think an individual producers information will be kept confidential. No matter how many promises are initially made!
- cost & reliability
- Do not believe a "one system fits all" program will be effective
- don't know enough about it to have any confidence in it
- Everyone will not cooperate so I don't feel it will be 100% successful
- For ones own use of profitability it is critical to have your cows & calves tagged. How it is used at state & fed level is concerning but that info needs to be available to them if needed
- good to keep track of animals for the safety of the consumer
- Have not been informed enough about it
- Have to have tracking to check on disease
- How practical is it & expense to owner
- I am kind of on the fence with this issue as with a lot of things. I think there is an over reaction to the BSE thing & the cost is going to be put on the producers, not the consumer like it is in every other industry
- I am neutral at this point because there isn't a lot of strong findings to support such a system. I think the concept is good, but am concerned about implementation and return on investment for producer.
- I am prepared to do what I have to, but I am only going to do what I am required & only as soon as I am required to do it, unless proven to be more profitable to my operation.
- I don't believe our government is capable of managing an effective, efficient system. I am concerned about the access other government agencies will have to the data. I don't think it is realistic to think there will be widespread compliance.

22) Referring to the previous question, why do you feel this way? *(continued…)*

3

- If it is handled right and not get half way through it and it get changed or doesn't work
- If we marked the cattle coming in to this country then everything else would be raised in this country for country of origin purposes
- In order to maintain consumer confidence and to help keep our markets strong we have to be proactive in our endeavor to produce a quality product
- It is needed
- It may help in some areas
- Keep hearing the tags come off too easy to be of much help
- Mixed opinion on NAIS, monitoring disease is probably big concern as well as consumer confidence, but supply chain is managed by the packers, foreign markets is managed by government, need more beef check-off all the way down to the grocers.
- Most producers currently use some form of animal ID, but with bio-terrorism a possible threat, why take a chance?
- My operation is a family thing. We raise our own replacement heifers. We barely make expenses year to year
- neutral-have little information
- No choice the government will force the issue
- Not much has been proven either way. Could be very beneficial but concerned about loss of privacy
- one would be theft
- Our government has to get behind the cattle producers. Farmers with support for our products more than an identification system will do to improve our bottom line
- Politics may have more to do with the issue than reality. However, if it will bolster confidence domestically as well as globally, it may be of mutual benefit to all concerned
- Privacy could be invaded
- Speaking as a small cattle producer, I don't think it would be practical for my operation, but I can see the benefits for a large operation covering thousands of acres.
- The benefit does not fall with the producer but the cost does
- The cow/calf operation is going to carry the cost of NAIS
- The expense and the time involved are my biggest concerns
- The first thing I worry about is the cost because it seems when someone gets an idea it always falls on the producer to pay for it and we can't get higher prices for our cattle to cover the loss. The second will be sale barns be able to read tags effect
- The NAIS is a knee-jerk reaction to a relatively minor problem. Who knows what new problems this will cause
- The public and/or foreign countries are probably going to demand a NAIS system. I believe it is more important to put laws in place that prevent the diseases from happening.
- The systems seem to be a mess at this point
- This system has a high level of error. As system is needed
- Too costly & not practical for use in cattle in rough country
- Too much unknown about how to do it
- track disease
- We need to have a way to track cattle for disease purposes and we need to implement country of origin labeling
- We probably need some tracking
- What are the ramifications down the road
- I don't think enough research has been done on this at the time
- I don't want to do it but it is probably necessary
- I feel the stocker & feedlot should be held responsible after the cow calf man sells his calves
- I have a brand registered with the state of NE that could be traced back to me. I live in a creek area, buckbrush, chokecherries. Maybe a super-tag would stay on

22) Referring to the previous question, why do you feel this way? *(continued…)*

3

- I think it would be valuable but it needs to be simple and inexpensive. I'm afraid it will be neither
- I think it's time to be able to pinpoint any disease outbreak
- I think that a NAIS will help the cattle industry if everyone complies
- I think that it is important to be able to trace cattle for disease purposes and to gain foreign confidence in US cattle
- I wonder about costs and how labor intensive it is going to be
- if done properly, it could be a good thing
- If it is handled right and not get half way through it and it get changed or doesn't work
- If we marked the cattle coming in to this country then everything else would be raised in this country for country of origin purposes
- In order to maintain consumer confidence and to help keep our markets strong we have to be proactive in our endeavor to produce a quality product
- It is needed
- It may help in some areas
- Keep hearing the tags come off too easy to be of much help
- Mixed opinion on NAIS, monitoring disease is probably big concern as well as consumer confidence, but supply chain is managed by the packers, foreign markets is managed by government, need more beef check-off all the way down to the grocers.
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- My operation is a family thing. We raise our own replacement heifers. We barely make expenses year to year
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- The systems seem to be a mess at this point
- This system has a high level of error. As system is needed
- Too costly & not practical for use in cattle in rough country
- Too much unknown about how to do it

22) Referring to the previous question, why do you feel this way? *(continued…)*

3

- track disease
- We need to have a way to track cattle for disease purposes and we need to implement country of origin labeling
- We probably need some tracking
- What are the ramifications down the road

4

- because it depends on who pays for it & the cost
- cost and reliability of tags
- cost to producer & reliability are in question
- cost to producer outweighs benefits
- depending on cost and work involved
- depending on cost, trouble, amount of return
- extra cost to me
- good way to keep track of the cattle
- I am afraid that it will push a lot of small operations out of business due to lack of facilities to implement this system
- I am not convinced that it is really necessary
- I am supportive of it, but am concerned regarding liability issues
- I believe it will increase our cost without any return in profit
- I believe we need the system to control the spread of disease
- I don't think the ID system will help much. (just the livestock supply people) something more to sell. If the bangs program is kept up all females will have ID by tattoo. All registered cattle are ID by recorded papers & tattoo. The identification of others by stockyards and feed lot records.
- I feel it would be good thing if the cost was low and all the information didn't get lost in the shuffle
- I feel it's a must for us to stay in business
- I feel our cattle in the US are well cared for and managed. It's the cattle being imported to the US that really needs to be identified. These cattle need identification from operation to operation
- I feel that the brand I put on my cattle should be identification enough. I also feel the cost is going to get way out of hand
- I feel that the system will be consumer driven (consumer demanded)
- I have nothing to hide. My cattle are healthy and I follow BQA guidelines. What upsets me is that BSE resulted from feeding animals to other animals. All this for the almighty dollar. Disgusting!!
- I hope it will enable us to develop new and retain our old customers. i.e. Japan
- I support it, but not by the government. Do it right
- I think like anything else the government jumps on 100%--the cart is always put before the horse. I want to know that our cattle feed is 100% free of animals by products & I want all cattle & beef imports stopped especially from countries that don't come up to our BSE standards. Mandatory country of origin labels – then talk to me about NAIS.
- I think would be good-another source of information
- If they make everyone do it and enforce it, it will be great. But if their not careful we'll create more crooks in the cattle business.
- If we ship healthy cattle to a feed lot and they get sick because of another shipment of different cattle-who is to blame? Cattle producers take it in the shorts every time
- I'm always looking for a better means of ID my cattle. New computer technology would be good.
- Imported meat & cattle is what needs to be identified, not home raised American beef

22) Referring to the previous question, why do you feel this way? *(continued…)*

4

- In MT, we each have a registered brand & feel this is better than any electronic tag
- In theory it is good, but I fear it will be mismanaged or not used to potential
- It will be hard to mandate this system
- It will come to pass. Create another bureaucracy with the inherent problems Japan and other countries use as a form of trade discrimination
- Keep Canada meat out-or make them use a tag
- keep sick cattle off market
- like all things, the paper work is terrible, the confidentiality will very quickly be nonexistent
- lots of labor & expense to the producer
- Needed to regain foreign market
- not a problem
- Not necessary for health but useful for management
- Not sure if it will help, and someone will beat the system
- Not sure it will really benefit the producer
- privacy
- product safety, margins will improve with increased exports
- to increase profit opportunities in foreign markets and for disease traceability
- to regain consumer confidence
- Too costly to implement, no guarantees that all cattle will be identified within this system. What about mom and pop operations with a few cows?
- too much regulation-regulations always increase cost more than stated. And the added cost only increase as they are here to stay once established. Produces overpaid bureaucrats.
- we must first get cool, and all other organizations on the same page
- we need country of origin first

22) Referring to the previous question, why do you feel this way? *(continued…)*

5

- A trace back means is absolutely necessary. My primary concern is the technology glitches and incompatibility that are sure to surface.
- Animal ID is for tracability of cattle with disease (48 hours). Thus it should remain in the hands of state vets & state board of animal health, not private organizations.
- because of the future
- Because I feel that this is a producer tracking member not a premise tracking number
- Because we have ways of tracking cattle already & this is a little overkill if we are going to have to pay for it. It will probably be more expensive than thought & hurts the little producer
- Concern ID will be used against small producer. Used to advantage of packers
- Cost to producer should be shared by packer
- Country of origin labeling would be a big step in the right direction before this implementation of NAIS. I believe most consumers are confident in US beef that is raised and processed in the US. Not the stuff transported across the borders to be slaughtered here.
- do not fully understand
- extra work & trouble for the producers. Most cattle come from small places in the southeast & won't be tagged anyways
- For health reasons. For quick identification and isolation of disease outbreaks
- for the trade and domestic use of the origin of the meat and by products of all animals
- From what I have read, too darn complicated-too much government intrusion
- Have not learned all I should have
- I am only in favor of NAIS if it leads to a country of origin doctrine. If not, what use is it?
- I believe that we already have brands and that should be enough to trace animals to their farm or ranch of origin
- I brand and ear tag my cattle, that should be good enough.
- I calve in May & don't monitor birthing
- I do not feel that this will be a program that will be 100% enforced and it only takes one sick animal to upset the entire system
- I don't like the time and cost of it
- I don't see a benefit, economically for cow/calf operations
- I don't see that it will benefit the producer enough to offset the costs involved in implementing NAIS. A more practical and beneficial plan would be to label all beef that is not born, raised, & fed in the USA. We have the safest beef in the world. We need to label it as such and keep it that way.
- I feel it is government mandate. They just want to know who has what where and when & how things are being done out here. I already have ID my brand
- I feel that a "whole herd" identification makes more sense than individual ID. Producer certification on home raised cattle should suffice
- I feel that the information has too much potential for being misused
- I need to know who will be able to get to the information. How will we be able to protect ourselves when they try to trace back when the cattle were clean and healthy when they left the ranch, and they will try to say it was our fault
- I see it as an additional cost, additional hassle, and I can't see where it will benefit anyone except those selling the ID tags. What will this do that branding doesn't
- I think it is a necessary evil. It preserves markets & consumer confidence, but does nothing else that can't be done for less cost another way
- I think it's government job security
- I think we are heading the right direction, talk of t he NAIS has made producers think and be more informed. Independence is still necessary and economics will rule
- Information never makes any affect
- It is going to create more work and cost and problems

22) Referring to the previous question, why do you feel this way? *(continued…)*

5

- It's time for consumers of our beef to know where it is coming from. That and I feel we raise the best beef here in the USA and we should be confident in labeling our product
- more labor & expense
- More work & expense for ranchers. More expense tax payers. How much is this survey costing us? Please respond. Very little confidence that this will work
- Most of the operations here are small and operate on a marginal profit if any. We already brand our cattle which is permanent. Tags can be lost or damaged
- No matter how well something words, somewhere, someone will be able to get around it to use for their profit & the demise of the system, and the reliability of retention of tags
- Not in favor trying to fix something that is not broke. I am 71 and have own and sold cattle since I was a kid. Can't see that there is a need for changes that someone has thought up
- not necessary in a small operation in a small town
- Not practical for large producers
- provides consumer confidence and food safety
- record keeping nightmare
- Security of my information/what we recall, need in COOL. NAIS is a packer & government program
- The cattle industry needs source verification in order to be more appealing to consumers thru the cool program which I feel is even more important to implement.
- The only ID system needed is for cattle that are imported from other countries
- The US needs to let cattle producers know more on how to get the NAIS done. And how to get our livestock tagged. Can not get any information on how to buy the electronic buttons
- There are positive sides. Big concern is like with corn, due to the LDP & loan program. anyone can tell the amount of corn produced per country. Now if the packer knows "numbers, age, etc" is the market like corn going to drop below the cost of product
- to help keep beef safe & keep a strong market
- too much info above to anyone about your affairs - too easily accessed
- Tracking disease outbreaks & getting back carcass values on my calves
- tracking disease, complying with market demands
- USDA refuses to label imported beef. USDA lets Japan ship us beef at all ages and cuts yet they have the most BSE infected cow herd in the world today
- We have gotten by without one this long, and this will be no easy matter to take on. BSE is found in older cows and most people know the origin of their cows
- We keep our livestock within the area and don't take them out of state and the only thing or concern is bull lease. Also our government should keep the border close for cattle coming to USA. We will all do good
- We need to implement the NAIS to compete and lead globally. Our consumers are starting to demand it, but I think instead of being mandatory we should keep it voluntary so people who want to do it can profit from it.
- when purchasing cows it will be easy to verify age

22) Referring to the previous question, why do you feel this way? *(continued…)*

6 – Strongly opposed

- 1.Will not achieve stated objective. 2. Invasion of privacy 3. Completely impractical for range operation. 4. Unfair for producer to bear the costs including the burden of additional labor
- A better way to control cattle thieves
- A national ID system is another expense that will be passed on the cow/calf operator. It is extra work for the overworked, underpaid cow/calf operators
- All of # 15 concerns
- all this is going to do is cost money
- Brands have worked for years and are still working. I feel your program is a joke and a good way of just giving government more control and reason to break the small cattlemen
- Bureaucratic for extra jobs and money and control. Individual brands is good enough.
- Cattle from foreign countries aren't monitored very good at all when they enter the US. They can feed them feeds American farmers can't, they can fertilize their pastures with waste products, spray their crops with pesticides & insecticides US farmers can't. Until there is labeling for country of origin I will oppose National Identification!
- Currently there are no regulations to identify cattle coming across the borders and there aren't plans under the new system to identify cattle coming from across the borders. Currently I use branding & ear tags to identify my cattle & the national sys.
- disease traceability & quality assurance records
- Diseases should be stopped at the border. Technology is not ready. We had to test some cows for TB last spring which all had bangs vaccinated. ear tags as calves, 2/3 of tags were missing
- foreign cattle yes, US cattle no
- I agree with Derry Brownfield in this issue 100%
- I am elderly and my cattle are in several locations and I think that would probably put me out of business trying to do a lot of these things
- I brand & ear notch. I can tell you what pasture & bulls were in w/cows
- I buy feeders through broker in OH, Who buys from a one man buying station in WV. Cattle grossed in SV to 700# move to OH sold-feed lot in OH or sent to NE to feedlot
- I can support herd identification. I do not support individual animal identification. It would be too expensive for me to do.
- I do not think it will be a benefit that will work if it is managed by the fed government
- I don't think it is really going to help the producer. Country of origin labeling & packer cooperation will help alleviate the problems
- I feel it will be overly burdensome and costly and totally impractical for my range type operation. It will also be used to disadvantage cattle producers socio-economically
- I feel like the NAIS is just another unnecessary regulation being placed on US farmers and ranchers
- I feel this is a way for the government to know just what everyone has. And this is just another way to control our markets
- I feel that imported cattle should have traceback ID and be labeled country of origin in the grocery meat department just like fruits & vegetables
- I have cows calving every day of the year on 8000 acres. I have limited corrals and no employees. My experience with the electronic tags-they have been inaccurate. 1986-1994
- I think this will just let the packer direct all claims back at the producer even if it is not the producers fault
- individual brand is sufficient
- It is costly, impractical, communistic, against religious ideals and will be abused by state and federal agencies. Range operations will be forced out of business by NAIS

22) Referring to the previous question, why do you feel this way? *(continued…)*

6 – Strongly opposed

- It is too much problem. We brand 1,400 calves with our brand and sell them to one person
- It will be more trouble than it is worth to the producer/stockyards etc
- It will be used to make cow. calf operators total liability for everything
- It will be used to manipulate the markets, reduce individual producer property rights, increase producer costs, reduce market value of livestock, hold producers liable for conditions beyond their control
- It will instill consumer confidence in the cattle industry. This issue is clouded by politics in our export markets and we are at the mercy of the publicans, they will leverage us no matter what we do
- It's another government bureaucracy that takes a share of our profit
- It's going to make it very difficult for small USDA processors like the one I deal with to comply; just another way for big parker corp working with the government to squeeze out the little guy.
- more government control
- More of our freedom as a producer is taken away and free enterprise suffers because everyone is told what they can and can't do- so the individual has no say in operation
- Most all producers I talk with are afraid of privacy & we do not want anybody or everyone knowing our business or personal finances, etc. This is all I have against it
- no need at the producer level, detection of unhealthy cattle should be at the auction or feedlot/slaughterhouse
- Our cattle in America are clean. What we need is for all foreign meat live, boxed, frozen must be marked as to state of origin or country of origin
- Our herd is our livelihood. Who would monitor it closer than those who benefit from it. I think cool is a better way to label
- Our steers all go each year to the same farmer owned feedlot and all carry our ear tags. Heifers sold out of our herd all go by private treaty to other cow-calf operators. Our cattle are all traceable to our farm. We have no interest in the Japan market
- privacy
- Producer losing control & privacy
- Ranch information will be available to anyone/or organizations i.e. PETA
- So far there has been no advantage or reason shown for this. Every case of disease in animals has been traced back to origin. Every slaughter plan knows where every animal came from originally
- strongly opposed
- The market needs it and demands it. We need to stand behind our product, and tracking them is important and necessary
- The producer will be forced to pay all the costs and will have all the liability for someone else's mistakes
- The USA doesn't have country of origin labeling for food. So why all of a sudden, the big concern with animal identification.
- There is no cost benefit
- They have ways of following the calves already
- This is a free country!! I don't need government monitoring everything. Anyone heard of the grass-based sustainable food system lately? Exactly. Get back to small family farms that are 30% of the population and this will be a non-issue. Tell me how to farm and we have problems.
- This is just another form of government control that we don't need. It's nothing but trouble for the cattleman
- too costly & inconvenient
- Too costly, time consuming. Stress on livestock. Incapable of implementation. Impractical by implementation and time table
- too many unknowns, no responsibility to anyone except producer, too much red tape
- Too much intervention into private industry. Too many questions unanswered
- unreasonable burden on farmer

22) Referring to the previous question, why do you feel this way? *(continued…)*

6 – Strongly opposed

- USDA took a month or more just to report on the Japan screw up and they want us to do things in 48 hrs. What a joke. We brand our cows. That's enough
- Waste of everything, i.e. money, time and the problems will still occur plus new ones
- We already brand our cattle. It is not the US raised beef that needs to be identified. All of the cattle & beef imported into this country needs to be identified & paid for by the people bringing it into the US
- We have been doing fine
- We will continue to open our borders to all kinds of imported beef while burdening domestic producers with the bill
- What is wrong with our brand, they can't cut off a brand.

9 – No answer

- As long as the government tags to run it, it won't work
- Branding is a national identification system. If electronic tags can improve the current system, benefit the industry, be cost effective and prevent the US herds & markets from further destruction by foreign cattle, the progress should be made in improving the NAIS.
- close up holes of those coming into US. Be sure they meet rules & regulations
- I've known meat inspectors who "look the other way." I know auto inspectors who are crooked. I see how "identity theft" is rampant. I see privacy out of control. It will be misused.
- times change & for the safety of our product it is necessary

YOU AND YOUR OPERATION:

23) I have actively owned or managed cattle for:

	Number Reporting	*Percent Reporting*
5 years or less	9	1.7%
6-10 years	18	3.4%
11-20 years	70	13.4%
21-30 years	108	20.7%
31-40 years	137	26.2%
Over 40 years	172	33.0%
No answer	8	1.5%
Total	**522**	**100.0%**

Number = 522

24) What is your age?

	N Valid	*N Missing*	*Mean*	*Median*	*Std. Deviation*
Age	506	16	56.29	56.50	13.481

	Number Reporting	*Percent Reporting*
Under 25	3	.6%
25 to 34	23	4.4%
35 to 44	74	14.2%
45 to 54	131	25.1%
55 to 64	136	26.1%
65 or older	139	26.6%
No answer	16	3.1%
Total	**522**	**100.0%**

Number = 522

25) In which of the following production phases does your operation participate in?

	Number Reporting	*Percent Reporting*
Cow-calf	496	95.0%
Stocker	149	28.5%
Feeder	132	25.3%
No answer	6	1.1%
Total	**522**	**100.0%**

Number = 522

Percents may reflect multiple answers

26) How many head of cattle do you own or manage?

	N Valid	*N Missing*	*Mean*	*Median*	*Std. Deviation*
Cows	487	35	307.03	160.00	694.364
Calves/stockers/feeders marketed per year	395	127	1,285.49	170.00	17,610.160

	Cows		**Calves/stockers/ feeders marketed per year**	
	Number Reporting	*Percent Reporting*	*Number Reporting*	*Percent Reporting*
Under 50 head	20	3.8%	19	3.6%
50 to 99 head	58	11.1%	63	12.1%
100 to 199 head	190	36.4%	135	25.9%
200 to 499 head	157	30.1%	108	20.7%
500 to 999 head	37	7.1%	34	6.5%
1,000 to 2,499 head	19	3.6%	23	4.4%
2,500 head or more	5	1.0%	12	2.3%
No answer	36	6.9%	128	24.5%
Total	**522**	**100.0%**	**522**	**100.0%**

Number = 522

27) The cattle in my cow-calf operation are primarily:

	Number Reporting	*Percent Reporting*
Purebred	101	19.3%
Crossbred	383	73.4%
No answer	38	7.3%
Total	**522**	**100.0%**

Number = 522

28) In what state or states is your operation located?

	Number Reporting	*Percent Reporting*		*Number Reporting*	*Percent Reporting*		*Number Reporting*	*Percent Reporting*
MO	50	9.6%	VA	13	2.5%	NC	4	0.8%
TX	50	9.6%	KY	12	2.3%	SC	4	0.8%
NE	48	9.2%	MN	11	2.1%	AZ	3	0.6%
KS	36	6.9%	AR	10	1.9%	FL	3	0.6%
SD	33	6.3%	OR	10	1.9%	MI	3	0.6%
MT	32	6.1%	AL	9	1.7%	MS	3	0.6%
OK	27	5.2%	ID	7	1.3%	NV	3	0.6%
IA	22	4.2%	UT	7	1.3%	WV	3	0.6%
ND	22	4.2%	WI	7	1.3%	NY	2	0.4%
CO	18	3.4%	IN	6	1.1%	PA	2	0.4%
TN	15	2.9%	LA	6	1.1%	WA	2	0.4%
WY	15	2.9%	OH	6	1.1%	NJ	1	0.2%
CA	14	2.7%	GA	5	1.0%	VT	1	0.2%
NM	13	2.5%	IL	4	0.8%	No Resp.	10	1.9%
Total	**522**	**100.0%**						

Number = 522

Percents may reflect multiple answers

Additional comments (comments are presented as written):

- 5th generation farm. Save gas-let 'em eat grass!!
- 98% of my cattle either go in the feed yard until slaughter or in the pasture as replacements. They don't change hands; why do I need to have electronic ID
- A lot more discussion and cooperation between all entities is going to be required to ensure the ultimate goal is met
- All this is made up for people at a desk drawing a salary. Not for people in the business who pay the bills. Brands are the identification=ownership location
- As for the last ban from Japan, How are NAIS tags going to stop something like that? I believe was a setup by the packers to try to drop market.
- As usual, this program will benefit the large producers & special interest groups & the small to midsize cattlemen will suck hind utter
- Country of origin labeling is needed. Using the present USDA inspection service for foreign meat products. All imported meats would be stamped at the time of import inspection
- Don't use these numbers to show how many cows are in the country and wreck our markets
- Educate the US population on what causes mad cow. Make 100% sure that the cause is stopped. Stop imports. Protect the US herds that produce the best beef in the world. Stop making trade agreements that benefit the rest of the world while cutting American's throats and destroying American farms, ranches and small businesses.
- Everyone tells us how to ID our cattle, but how will the packer pass it on. They don't seem to care now. Who will enforce them and how can we trust them
- Feeding now is passed on profit, more than quality.
- Get it done. Please
- Good luck with the project
- I am a veterinarian running my own operation
- I am also concerned about the cost to the producer
- I am interested in implementing the animal ID program but unwilling to start until a uniform program has been decided upon
- I appreciate the need from a disease standpoint, however it certainly has had ramifications and as producers offer little additional profit
- I believe that if our country did not import or export any feeder or slaughter cattle, we could work through all of these problems without this extra work or expense, and cool would not be a problem either
- I believe that if the electronic tags were properly developed, they could contain more information like-date of birth, breed, etc. That information would be valuable to niche markets like-natural beef, CAB or USA beef
- I buy & sell cows & bulls in fall and spring. We handle 300 or so head a yr this way. I tell no one the exact numbers of cattle I have. Most producers are like this. It is like telling someone how much money you have in your checking account
- I buy from broker also Southern OH who purchased cattle local or sale barn, no trader cattle and sometimes retain ownership-or partner 3 way plus bank. This is a means for packer to obtain more control.
- I do not feel that we can raise enough beef in this country to feed the people of the US. We do not need to export any beef and we should keep close tabs on all cattle & beef imported into the US. All the NAIS amounts to is a complete waste of time & money for American Cattlemen.
- I don't think that regaining markets with Japan is important. They probably will never cooperate
- I feel it will be very expensive and take twice the manpower to do this
- I feel like the politics of this BSE think with Japan & other countries is a much bigger problem than our food safety & identifying all our animals

Additional comments:

- I feel participation should be voluntary and those who voluntarily choose not to participate can sell their product in the available market. People who then can manage this in the operation will have an advantage.
- I feel that many producers are hiding behind a paranoia of the Sierra Club and Oprah to keep information secret that they do not want to share with other producers
- I feel the big problem is Canadian cattle coming into this country & packers manipulating the markets
- I have longhorn cattle & while I am totally supportive of NAIS, getting it applied to my little herds will be challenging
- I have seen several equipment demonstrations. All were failures. They could not read tags at speed of commerce
- I have sold my cows and I have leased my land out. This was based on 2005
- I liken this to General Motors. If they have an option on a car you pay for it. If they want to know all of this ID, let the consumer, Wal-Mart, McDonald's government pay for this. Record keeping is going to be a nightmare.
- I only purchase herd bulls. My calves are fed to slaughter wt at my premise. Compliance is not an issue for me. Confidentiality is the problem
- I plan to sell out by 2008. We had a dairy farm since 1870. I have a heart attack and my land is worth 30,000 an acre.
- I purchased EID buttons with matching visual cow tags for replacement Heifers. Visual cow tags will match freeze brand
- I see my cattle once or twice a week. If a calf or cow dies, I may never know in months because coyotes and buzzards would destroy any evidence
- I sell all my beef under my own brand to stores & restaurants and don't feel this IO system will do anything but make more paperwork, harder to buy replacements, and a nightmare for my small USDA slaughterhouse that I deal with.
- I strongly opposed identification system. Will not work & will close too many sale barns. Liability to producer too high & too many farmers will be kill catching baby calves to tag them
- I thing government should stay the hell out of this. Look what they have done for the pork producers.
- I think it needs to be implanted for consumer abroad and within US safety, but I still think there will be costly to myself who might buy cattle and resale cattle on what I call a small scale without family money or oil rigs in my backyard
- I think NAIS is one of the worst ideas yet. We should try a scaled down version and get it to work before creating a system that will slow down the speed of commerce
- I think national ID is very good, but beef exports will always be a political pawn. However anything we can do to improve confidence in our product will benefit us as beef producers
- I think the electronic ID should be optional. to be used by those who want their cattle to end in the international commerce stream and are getting the financial benefit, if any, from that effort. I do agree with the r-calf view that country of origin.
- I think the ID systems is necessary in this day and age for security and food safety
- I think this program is another way of losing our freedom of our way of life
- I was hoping some type of increased profitability or carcass feed back would be possible, but don't think that type of thing will happen
- I will probably sell out when electronic IDs are implemented. The only one making money on such an endeavor are the manufacturers & sellers of the tags. Many small auction yards will probably go under due to the expense and unreliability of these tags.
- I would like to see something other than external eartags, as the survival rate of tags is not satisfactory for cows. I lose about 10% of tags per year.

Additional comments:

- I would support anything positive for the cattle industry-3/4 of the land I use is owned by local industrial plants. Land lease, insurance, expenses-keep me with my head barely above water
- Identification systems to be strong enough so we can locate cattle within a 1/4 mile range and identify.
- If it is mandatory, I will go along
- If this problem is forced onto the producers by the government, they should pay all costs associated with the system
- If you buy a pair of jeans you are told where they were made. The US consumer deserves to know where the beef they put in their children's stomachs comes from.
- I'm afraid of too much government involvement. clogging the system with peoples involvement that aren't working for the better of the cattle industry. They are working for groups or people after the $, not for the better of the cattle industry.
- I'm very opposed to electronic ID. Visual tags and brands may not be as efficient, but would be much more cost effective and easy to adopt, at least at the cow/calf level
- Maybe larger operations need trace back ability. We didn't have to have it for bangs
- My concern is when cattle are taken to sale barn will 2 or 3 stockers be sorted off because of 30-60 days age difference even though they match the group and the bottom line will hurt the producer
- My cow/calf operation is very important to me. It's a business and my income.
- My son and I have no cow/calves. We buy stocker calves in the fall, run them on wheat pasture when there is wheat pasture and sell in Feb or Mar. About 300-400 head. We not have any cattle of any kind during the summer
- NAIS is a hoked-up idea promoted by government control freaks & meat industry moguls. Sending directly to K-State. Anything directly to BEEF will never see the light of day.
- In regard to #23, I have been a farmers daughter and a farmers wife until 2001. Now my son and I are managing the farm since the death of my husband
- In regard to foreign countries not wanting our beef--if the US would not allow their products in US, I believe a change would happen very soon
- Incentive is stifled and you aren't your own boss anymore. The more regulation forced on us takes away freedom and they know exactly how many head out there so we are controlled
- It is imperative that we are able to use identification for more than just disease identification.
- It's fine to have national ID for cattle but it must be for all cattle
- I've done very well with keeping a cow herd, raising calves. Have also full feed lots of cattle.
- Lets get this NAIS implemented ASAP
- Like I said, keep the border closed for cattle coming across
- make this NAIS voluntary. Those that want to do it let them. This should be a free country
- NAIS sound good. But I feel most consumers end up buying good quality priced right no matter where and who raised it. The average consumer does not ask who raised and where the beef came from when sitting in a restaurant and ordering food
- National ID will not increase profits, proper use of data will increase profits. This is not done nationally but on a single farm basis
- Need to get program going
- Our farm is a 1200 cow dairy. We raise all young stock heifers & steers
- People are worried about the government looking into all your business. The cost to the ranches and will it be protected down the line when they start coming back on a trace that occurred somewhere else.

Additional comments:

- People get around everything. Birth dates could be altered to fit the 20 month limit. People lie if it is to their advantage. Who is going to oversee the implementation of the program at ranch level
- Practicality of such a project. Principle good but workability is not good. Producers this project into their operations
- pure bred operation w/some commercial
- Raise my own replacements and rest of steers and cull heifers retained thru feedlot & sold on grid with carcass info received & used for record keeping
- registered cattle
- See approx 50 old & open cows a year
- Seems our borders are wide open for every kind of bad things including people. Animals produce seems most of our farming problems=bugs & weeds. Now diseases come in. Put regulations on them and enforce them
- show cattle
- Since I am a Native American, I strongly believe that tribes should be consulted before any action is taken. Most tribes have issues with tribal sovereignty & feel that our rights are being ignored
- Stop feeding chicken litter to cattle. Why not let the farm service agency implement this program. Only agency that has the technology and know where our cattle in US is
- System won't insure the quality of meat coming out of a packing plant. It might brain wash the consumer a little, but the main thing is to kill healthy cattle. Good inspection of meat
- thanks for your help
- The concept stinks
- The government controls this thing, we supply the cattle, they control what will happen no matter what or how we do it.
- The government is not capable of administering a national program that is effective. This will be one colossal mess when they begin the NAIS. Too many cow-calf guys that don't care about their management.
- The idea is a great one, but human error could financially ruin someone. Confidentiality and privacy protection I have no confidence in at all. It's just like the tracking number I cut off: you don't need to be able to track me here.
- The man who operates my ranch makes ost of the decisions regarding the cattle which we jointly own. Therefore, it is difficult for me to answer some of these questions.
- The national identification program could be a great asset to the American cattleman if it is administered correctly, but we need country of origin labeling first. American cattlemen will be discriminated against because our government will let cattle in this country that can be produced on levels that American cattle can't! First things first.
- The numbers of sick cattle are so small compared to other problems and diseases people have resources should be spent elsewhere
- There has been a push for everyone to vaccinate cattle for 10 years but it hasn't happened. If they would, we could almost eliminate disease. I think farmers hurt us the most.
- This program is being forwarded for the advancement of greed and power and has virtually nothing to do with animal health and food safety. Almost all of our problems are with foreign cattle and beef producers.
- US consumers demand a safe product. If the beef industry strives to improve our product and protect consumers, foreign markets will follow. The US has higher cost production than other countries-we must maintain a higher quality beef and safe product to compete or we may be importing all our beef products from other countries. NAIS must help in achieving this goal – we do not need more government control if this will not be achieved.
- Visited with a federal meat inspector; he thinks it could be the demise of small producers

Additional comments:

- We already have a good animal ID. Our brands can easily be traced back to place of origin.
- We already maintain a fairly good set of records as we raise bulls (both angus & Gelbvieh) and we have to be in the know as to production; pastures, sale of animals, etc
- We are primarily dairy. We raise our bull calves to sell
- We can't even get country of origin enforced, so why should we do this?
- We constantly purchase feed and sell calves, almost on a weekly basis. How will the ID system fit my operation. I'm told it would be a bookkeepers nightmare
- We cow-calf. I feed them, plus buy and sell several times a year.
- We do not need to reinvent the wheel when it comes to ID. Expand existing programs such as brand & bangs tattoo. We don't need anymore cash cows for private organizations to use to generate funds to lobby against our best interests. Keep it voluntary.
- We need identification and origin of all animals
- We need to do this as an industry. USDA ain't worth a damn
- We retain ownership on our calves and at this time there is no benefit to EID. When necessary we will be willing to participate in NAIS
- Why should cattlemen have to be the ones to pay when we raise the safest healthy beef in the world. Make other countries get on a level playing field with us. We have proven we can track any cow already. We even find them after they died 3 yrs before
- With government involvement cost is up and efficiency is down. Check out what happened when they tried to use them in the TB herd buy out.
- You horsed up the ag business by making the big farmer take over the little farmer. That's what you will do to the cattle business. Ranchers are a rare breed--"Honor among men"
- You people are getting paid for this info. You could spread the wealth with us not so well to do.

APPENDIX B

(K-State Letterhead)

March 14, 2006

Address of Recipient
1234 Some Street
Somewhere, US, 12345

Dear Recipient,

We are writing to ask your help in a nationwide survey of cow-calf producers. The study, a joint project by *BEEF* magazine and Kansas State University, will determine the preparedness of producers to implement the National Animal Identification System (NAIS), as well as collect thoughts and opinions regarding the proposed plan.

In a few days you will receive by mail a brief questionnaire for this important research project.

The results of the survey will be used by Kansas State University and *BEEF* magazine to provide the nation with a snapshot of our NAIS preparedness. As a cow-calf producer your voice is extremely important in this assessment.

If you have any questions or comments about this study, we would be happy to hear from you. Also, if you are not a cow-calf producer please contact us so that we may remove you from our survey. You may reach a representative at Kansas State University by calling (785) 532-1171.

Thank you for your time and consideration. It is only with the generous support of people like you that our research can be successful.

Sincerely,

Dr. Dale Blasi
Professor, Animal Science
Kansas State University

Sharon Glaenzer
Graduate Assistant
Kansas State University

Joe Roybal
Editor
BEEF magazine

APPENDIX C

(K-State Letterhead)

March 21, 2006

Address of Recipient
1234 Some Street
Somewhere, US, 12345

Dear Recipient,

We are writing to ask for your thoughts and opinions in a nationwide survey of cow-calf producers. The study is a joint project of *BEEF* magazine and Kansas State University to determine the preparedness and willingness of producers to implement the National Animal Identification System (NAIS).

The results of the enclosed survey will be used by Kansas State University and *BEEF* Magazine to provide the nation with information regarding our NAIS preparedness. Moreover, it will provide other organizations and governments with a collective and concise assessment of the cow-calf industries perspective regarding the implementation of the NAIS.

Your name was carefully selected in order to obtain a representative sample of our nations cow-calf producers; therefore it is crucial that we hear from you. We earnestly hope you will take time from your demanding schedule to participate.

Your answers are completely confidential and will be released only as summaries in which no individual may be identified. Once your survey is returned your name will be removed from the survey mailing list and will no longer associated with your survey in anyway. This survey is voluntary, but your participation is invaluable to the results of this study.

Thank you for participating in this important study.

Sincerely,

Sharon Glaenzer
Graduate Assistant, Kansas State University

Joe Roybal
Editor, BEEF Magazine

BEEF

National Cow-Calf Producer Animal Identification Survey

The following survey is designed as a research tool of Kansas State University. Your participation is voluntary and you may stop at anytime. If you have questions or concerns please feel free to contact the research team, K-State Animal Sciences and Industry, Sharon Glaenzer, 212 Weber Hall, Manhattan, KS 66506, (785) 532-1171. You may also contact Dr. Rick Scheidt, Institutional Review Board Chair, 203 Fairchild, KSU, Manhattan, KS 66506, (785) 532-3224.

Sources and Channels of Information:

1) Are you a member of any of the following organizations? *(Check all that apply)*

1 ❒ National Cattlemen's Beef Association (NCBA)
2 ❒ Ranchers and Cattlemen's Action Legal Fund (R-Calf)
3 ❒ State or Local Cattlemen's group
4 ❒ Breed Association: *(specify)*._____
5 ❒ Other *(specify)*: _____

2) How often do you use the following sources of information in your beef operation?

	Never use					Always use
Beef industry organization	0	1	2	3	4	5
County Extension agent	0	1	2	3	4	5
Veterinarian	0	1	2	3	4	5
Farm and Feed dealers	0	1	2	3	4	5
University specialists	0	1	2	3	4	5
Private consultant	0	1	2	3	4	5
Other cattle producers	0	1	2	3	4	5

3) How often do you use the following channels of information in your beef operation?

	Never use					Always use
County extension newsletters	0	1	2	3	4	5
Cattle magazines	0	1	2	3	4	5
University Extension bulletins	0	1	2	3	4	5
Other cattle producers	0	1	2	3	4	5
Newspapers	0	1	2	3	4	5
Field days and demonstrations	0	1	2	3	4	5
Television	0	1	2	3	4	5
Radio	0	1	2	3	4	5
Internet	0	1	2	3	4	5

Technology

4) Do you use a personal computer within your cattle operation?

1 ❒ Yes 2 ❒ No - *please skip to Question 9*

5) How often do you use your computer? *(Select one)*

1 ❒ Several times a day
2 ❒ Once a day
3 ❒ Several times a week
4 ❒ Several times a month
5 ❒ Once a month or less

6) For which of the following activities do you use your computer? *(Check all that apply)*

1 ❒ Inventory
2 ❒ E-mail
3 ❒ Machinery records
4 ❒ Labor records
5 ❒ Livestock records
6 ❒ Financial management
7 ❒ Other *(specify):*_____

7) How old is your newest computer? *(Select one)*

1 ❒ Less than 1 year
2 ❒ 1 to 3 years
3 ❒ 4 to 6 years
4 ❒ More than 7 years

8) Do you have access to the Internet for use within your cattle operation?

1 ❒ Yes 2 ❒ No

National Animal Identification System (NAIS)

9) Which of the following animal identification systems do you currently use? *(Check all that apply)*

1 ❒ Tattoo
2 ❒ Brand
3 ❒ Visual ear tag
4 ❒ Electronic ear tag
5 ❒ None
6 ❒ Other *(specify):*_____

10) For what do you use your ear tags?

1 ❒ Identification
2 ❒ Insecticide treatment
3 ❒ I do not use ear tags

11) In 2005, did you purchase any electronic ear tags for identification purposes?

1 ❒ Yes 2 ❒ No

12) Have you purchased, or do you plan to purchase any electronic tags for identification purposes in 2006?

1 ❒ Yes 2 ❒ No

13) Do you use any electronic identification/monitoring on your cattle?

1 ❒ Yes 2 ❒ No

14) Have you received or registered your operation for a premise identification number?

1 ❒ Yes 2 ❒ No

Survey continued on back: ↳

15) Please rate your concerns regarding the following issues surrounding the implementation of a national animal identification plan:
(1-Not concerned, 2- Somewhat concerned, 3-concerned, 4-Very concerned)

	Not concerned	Somewhat concerned	Concerned	Very concerned
Cost to producer	1	2	3	4
Confidentiality of information	1	2	3	4
Reliability of technology	1	2	3	4
Liability to producer	1	2	3	4

16) How important do you feel a national animal identification system is to the following:

	Not important					Critical
Monitoring disease	1	2	3	4	5	6
Increasing consumer confidence	1	2	3	4	5	6
Increased profitability	1	2	3	4	5	6
Regaining foreign markets	1	2	3	4	5	6
Managing the supply chain	1	2	3	4	5	6
Enhancing food safety	1	2	3	4	5	6

17) Please rate the following statements about the national animal identification system (NAIS) in order of agreement:

	Strongly disagree					Strongly agree
NAIS is necessary	1	2	3	4	5	6
NAIS implementation timeline is practical	1	2	3	4	5	6
The implementation of NAIS is overdue	1	2	3	4	5	6

18) How familiar are you with the proposed National Animal Identification System?

No understanding					Complete understanding
1	2	3	4	5	6

19) How familiar are you with the electronic identification systems available to producers?

No understanding					Complete understanding
1	2	3	4	5	6

20) How capable do you feel your operation is to adopting the NAIS?

Incapable					Completely capable
1	2	3	4	5	6

21) Generally speaking, are you in favor of a national identification system for cattle?

Strongly supportive					Strongly opposed
1	2	3	4	5	6

22) Referring to the previous question, why do you feel this way?

_____

_____

You and Your Operation:

23) I have actively owned or managed cattle for: *(check one)*

1 ❒ 5 years or less
2 ❒ 6-10 years
3 ❒ 11-20 years
4 ❒ 21-30 years
5 ❒ 31-40 years
6 ❒ over 40 years

24) What is your age? _____

25) In which of the following production phases does your operation participate in? *(check all that apply)*

1 ❒ Cow-calf
2 ❒ Stocker
3 ❒ Feeder

26) How many head of cattle do you own or manage?

Cows _____

Calves/stockers/feeders marketed per year _____

27) The cattle in my cow-calf operation are primarily:

1 ❒ Purebred
2 ❒ Crossbred

28) In what state or states is your operation located? _____

APPENDIX D

Side 1:

April 1, 2006

Last week a questionnaire concerning the proposed National Animal Identification System was mailed to you.

If you have already completed and returned the questionnaire to us, please accept our sincere thanks. If not, please do so as soon as possible. We are especially grateful for your help – it is only by asking producers like you to share your thoughts and experiences that we can understand the future of our industry.

If you did not receive a questionnaire, or if it was misplaced, please call us at (785) 532-1171 and we will mail another one to you immediately.

Thank you again for your help.

Sharon Glaenzer, Graduate Assistant
Animal Sciences & Industry
Kansas State University

Side 2:

Department of Animal Sciences & Industry
212 Weber Hall
Manhattan, KS 66505-0201

Thank You!

APPENDIX E

(K-State Letterhead)

February 20, 2006

Address of Recipient
1234 Some Street
Somewhere, US, 12345

Dear Recipient,

During the past two months we have sent you several mailings about an important research study we are conducting.

The study, a joint project between *BEEF* magazine and Kansas State University, is determining the preparedness and willingness of producers to implement the National Animal Identification System (NAIS).

The results of the enclosed survey will be used by Kansas State University and *BEEF* magazine to provide the nation with information regarding our NAIS preparedness.

The study is drawing to a close, and this is the last contact you will receive regarding this survey. Hearing from everyone helps to ensure that the research results are as accurate as possible. Your name and individual answers are not given to anyone.

We also want to assure you that your response to this study is voluntary, and you may choose not to respond. Also, if you are no longer a cow-calf producer, please return the blank survey with a note indicating so.

We have enclosed a small token of appreciation as a way of saying thanks for your help.

Finally, we appreciate your willingness to consider our request as we conclude this effort to better understand issues facing cow-calf producers. Thank you for your time.

Sincerely,

Sharon Glaenzer
Graduate Assistant, Kansas State University

Joe Roybal
Editor, BEEF Magazine

BEEF®

APPENDIX F

Hello, may I speak to _____?

Mr./Ms. _____, my name is _____ and I am a student at Kansas State University. We are conducting a confidential national survey of cow-calf producers to determine the preparedness and willingness of producers to implement the National Animal Identification System.

Your participation is completely voluntary, but your answers are invaluable to our research.

Is this a convenient time to continue?

If yes, move to next question.

If no, *"Is there a more preferred time I could reach you?"*

If no, *thank them for their time and end call*

If yes, *log time to return call _____"Thank you for your time and I look forward to speaking with you soon."*

Are you currently a cow-calf producer?

If yes, move to next question.

If no, *"Sorry to have bothered you. This research is only intended for cow-calf producers. Thank you for your time and have a good evening."*

We have sent you several mailings regarding this research. Our latest records show that you have not returned this survey, is this accurate?

If yes*, thank them for returning the survey and end call.*

If no*, continue to next question.*

Would you be willing to answer a few questions from the survey?

If no *– Would you be willing to mail us your survey?*

If survey is missing *- Could we send you a replacement?*

If yes*, log address, thank them for their time and end call.*

If no*, thank them for their time and end call.*

Thank you for agreeing to participate. I will begin the survey now.

1) Have you purchased, or do you plan to purchase any electronic tags for identification purposes in 2006?

__ Yes

__ No

2) Have you received or registered your operation for a premise identification number?

__ Yes
__ No

3) How capable do you feel your operation is completely incapable, incapable, somewhat incapable, somewhat capable, capable, or completely capable of adopting the NAIS?

__ completely incapable
__ incapable
__ somewhat incapable
__ somewhat capable
__ capable
__ completely capable

4) Generally speaking, rate your support of a national identification system for cattle?

__ strongly supportive
__ supportive
__ somewhat supportive
__ somewhat opposed
__ opposed
__ strongly opposed

5) Please rate the following statement about the national animal identification system. State whether you strongly disagree, disagree, somewhat disagree, somewhat agree, agree or strongly agree:

The implementation of the NAIS is overdue

__Strongly Disagree
__Disagree
__Somewhat Disagree
__Somewhat Agree
__Agree
__Strongly Disagree

6) Please rate your concerns regarding the following issues surrounding the implementation of a national animal identification plan. In response to the following please state whether you are Not concerned, Somewhat concerned, concerned, or Very concerned.

	Not Concerned	*Somewhat Concerned*	*Very Concerned*	*Concerned*
Cost to Producer	1	2	3	4
Confidentiality of Information	1	2	3	4
Reliability of Technology	1	2	3	4
Liability to Producer	1	2	3	4

This concludes our survey. Thank you for your time and responses. If you have questions or concerns please feel contact research coordinator Sharon Glaenzer at (785) 532-1171.

APPENDIX G

T-test Comparison of Phone Respondents to Mail Respondents

Purchased Tags in 2005	**Phone Respondents**	**Mail Respondents**
Mean	1.71	1.92
Standard Deviation	.4596	.2612
	df= 553	
	t= -2.682*	

Registered Premise	**Phone Respondents**	**Mail Respondents**
Mean	1.65	1.66
Standard Deviation	.4808	.4721
	df= 548	
	t= -0.389	

Capability to Adopt	**Phone Respondents**	**Mail Respondents**
Mean	4.92	3.87
Standard Deviation	1.194	1.649
	df= 540	
	t= 5.073*	

Support for NAIS	**Phone Respondents**	**Mail Respondents**
Mean	2.84	3.53
Standard Deviation	1.586	1.672
	df= 542	
	t= -2.569*	

Concern -Cost	**Phone Respondents**	**Mail Respondents**
Mean	2.76	3.02
Standard Deviation	1.076	0.976
	df= 549	
	t= -1.428	

Concern - Confidentiality	**Phone Respondents**	**Mail Respondents**
Mean	2.21	2.94
Standard Deviation	1.143	1.05
	df= 523	
	t= -3.8128*	

* Correlation is statistically significant at the .05 level (two-tailed)

Concern - Technology	**Phone Respondents**	**Mail Respondents**
Mean	2.13	2.95
Standard Deviation	0.991	0.943
	df= 525	
	t= -4.920*	

Concern - Liability	**Phone Respondents**	**Mail Respondents**
Mean	2.55	3.12
Standard Deviation	1.155	0.965
	df= 532	
	t= -2.949*	

* Correlation is statistically significant at the .05 level (two-tailed)

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