REPORT OF THE COMMITTEE ON LIVESTOCK IDENTIFICATION

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Vice Chair: Mr. Kevin D. Maher, Ames, IA

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The Committee met on October 26, 2004 from 8:10 am to 4:30 pm. There were over two hundred committee members and guests in attendance. Chair Bob Hillman presided, assisted by Vice Chair Kevin Maher. The Chair welcomed the Committee members and guests to the meeting, discussed the Committee meeting expectations and addressed United States Animal Health Association (USAHA) Committee policies and procedures.

William Hawks, Under Secretary, Marketing and Regulatory Programs, United States Department of Agriculture (USDA), provided open-

ing remarks to the Committee members and guests. In his remarks he discussed the fourteen listening sessions on animal identification that USDA conducted around the United States. Mr. Hawks discussed three key, common issues which were identified through the listening sessions. These were confidentiality, cost and flexibility.

Mr. Hawks reported that $18.8 million was allocated for initial implementation of the National Animal Identification System (NAIS) during 2004, with over $12 million going to states in the form of cooperative agreements for premises identification and implementation projects. He also stated that $33 million was included in the 2005 President's Budget for continued implementation of the NAIS. The listening sessions revealed the imperativeness that the animal identification system meet producers' needs while allowing USDA to do their job with a very small amount of data they require to safeguard animal health.

Dr. John Weimers, USDA, Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS), NAIS Coordinator, presented a summary of the progress on the implementation of NAIS that was announced by Secretary Ann Veneman in December, 2003. The components of the national system were reviewed with updates provided on the status of each. The National Premises System is well under way with 13 states or tribes having either a compliant state system or the Standardized Premises Registration System (SPRS) in place. Fifteen additional states have requested the use of the SPRS, and 13 states have their state or 3rd party system under evaluation for compliance with NAIS data standards.

The progress on the development of the National Animal Identification and Tracking System was discussed. An interim rule is being reviewed for publication that will recognize numbering systems described in the NAIS as official for interstate movement and animal health control programs but will not mandate their use. USDA will receive recommendations from USAHA and other sources on the development of a Uniform Methods and Rules (UM&R) for NAIS.

An update on the progress of current NAIS cooperative agreements indicated that 11 of the 29 agreements are completed with signatures, 17 have been sent out with notices of award for signature, and 1 is still being processed. An additional $1.5 million is being made available to the states that submitted proposals but were not initially funded. These funds will focus on premises registration.

Continued funding for FY 2005 is expected with approximately $16 million earmarked for cooperative agreements. These funds will support continued field trials and premises registration and will be equitably divided among all states. Administration of the agreements will be through the VS Regions.

Recommendations to USDA on the implementation of NAIS will be coordinated through the NAIS Subcommittee of the Secretary of

Agriculture's Advisory Committee on Foreign Animal and Poultry Diseases (SACFAPD). Confidentiality remains a high priority for USDA. To this end, the agency has drafted language for a bill protecting NAIS data and sent it forward to the House and Senate for sponsorship.

Two new USDA brochures dealing with NAIS were shared with the committee, and other outreach efforts were reported.

Mr. Jim Niewold, Tri-Chair of the NAIS Subcommittee of the SACFAPD, presented a report on formation and activities of the NAIS Subcommittee. In July 2003, USDA established the NAIS Subcommittee. The objective of the NAIS Subcommittee is to provide recommendations to the SACFAPD regarding high-level strategies and objectives for the NAIS. This would include suggestions for the scope of the program, its development, and its implementation—including how the program should be implemented within various segments of the industry. Additionally, the Subcommittee will provide recommendations for the development of a UM&R.

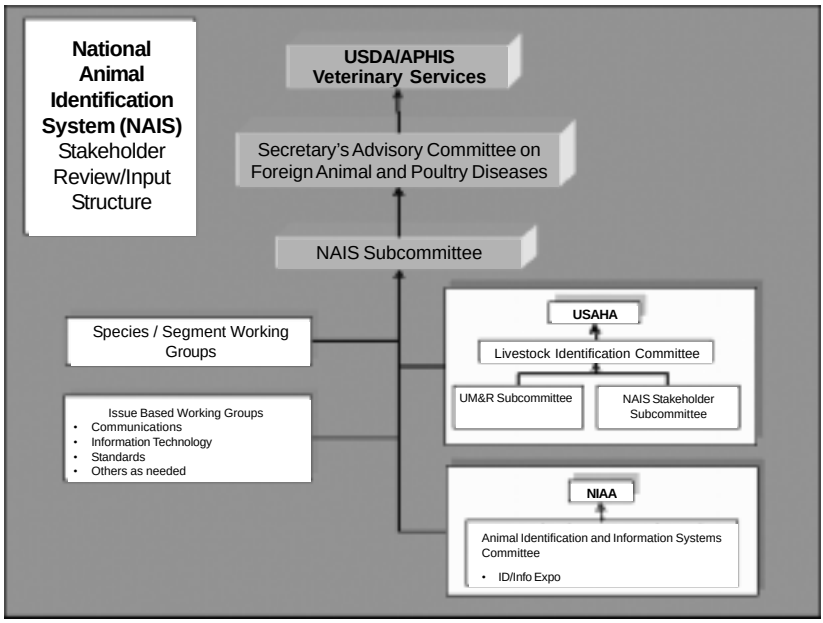
Members

- Mr. John Adams (member SACFAPD) - National Milk Producers Federation
  Ms. Linda Campbell - American Dairy Goat Association
  Dr. Mark Engle - National Pork Board
- Dr. Robert Fourdraine - Wisconsin Livestock Identification Consortium
  Dr. Bob Hillman - Texas Animal Health Commission
  Ms. Amy Mann - American Horse Council
  Ms. Marcine Moldenhauer - Excel Corporation
- Mr. Jim Niewold (member SACFAPD) - Swine Producer
  Dr. Clarence Siroky - Idaho Department of Agriculture
  Mr. Scott Stuart - National Livestock Producers Association
  Mr. Gary Wilson - Cattle Producer, Ohio Department of Agriculture
  Dr. Cindy Wolf - University of Minnesota, Center for Veterinary Medicine
  Dr. Taylor Woods - Missouri Department of Agriculture

- Subcommittee Tri-chairs

USDA-APHIS-VS Resources

- Mr. Neil Hammerschmidt – NAIS Program Staff
  Dr. Valerie Ragan – Assistant Deputy Administrator
  Dr. John Wiemers – NAIS Program Staff



- USDA-APHIS-VS Liaison

The Subcommittee plans to meet two to four times annually with frequent conference calls between meetings. The Subcommittee values the continued input and feedback from stakeholders and recommends that the Species/Segment Working Groups and Issue Based Working Groups, previously established through the National Identification Development Team, be maintained. Additionally, the Committee on Livestock Identification of the USAHA and the National Institute for Animal Agriculture (NIAA) Identification Committee will provide recommendations through the Board of Directors (BOD) of each organization.

The Subcommittee held their first meeting from September 7-8, 2004, at the USDA-APHIS-VS office in Riverdale, Maryland. The following summarizes the actions and discussion of the Subcommittee meeting.

— Confirmed the overall goal of complete animal trace back and trace forward within 48 hours, recognizing that implementation actions to achieve this goal will be determined as the strategic plan is developed.

— The implementation of NAIS is contingent on funding, regulations, etc., and will need to be established through a phased-in approach:

  - Premises Identification

  - Animal Identification/Tracking
  - Validation of the system
  - Full implementation
- Regarding confidentiality, reaffirmed that protection of data must be achieved before requiring premises or animal identification.
- The establishment of an NAIS UM&R is a priority. Acknowledged the formation of the UM&R Subcommittee of the USAHA Committee on Livestock Identification, which will provide recommendations to the NAIS Subcommittee through the USAHA BOD.
- Technology Neutral: While acknowledging the "technology-neutral" position of USDA, the Subcommittee will recommend that technology standards determined by industry through species working groups be established in the NAIS. The technology standards must:
  - Support the 48-hour traceback goal
  - Be cost effective for each species
  - Automate the collection of animal identification and movement data in a way that does not impede the flow of livestock through marketing channels.
- Data management issues:
  - APHIS should continue to develop the NAIS information system as outlined in the U.S. Animal Identification Plan 4.1
  - Focus specifically on needs of animal health
  - Any additional information in the system will be the responsibility of those who need it
  - The Information Technology Working Group will provide a final report at the Subcommittee's next meeting.
- Future priorities:
  - Completion of UM&R (Early 2005 distribution of draft)
  - Develop a NAIS Strategic Plan that contains time line for full implementation
  - Identify financial needs and prepare a long-term budget.

The NAIS Subcommittee is committed to an industry-stakeholder feedback structure that ensures "grass-roots" input that provides direction to the successful implementation of the NAIS!

Species Working Group Reports

Cattle Working Group Report – Presented by Gary Wilson, Co-chair.

The Cattle Work Group (CWG) strongly encourages the continuing development, implementation and funding of the National Animal Identification System (NAIS) to proceed as a partnership between the livestock industry and state and federal animal health officials. Confidentiality of producer information and animal movement data remains a key issue for resolve. Relative to confidentiality, the CWG expects private data management to play a role in the recording of animal data and subsequent reporting of pertinent cattle movements through commerce. The CWG recommends that all dairy and beef animals be individually identified in the left ear with official RFID ear-tag technology and movements reported at change of ownership or interstate movements or when multiple owners commingle cattle. All imported and exported cattle are to be officially identified with the same RFID ear-tag technology and pertinent tracking data reported to the NAIS database. Access to the data will be granted to state and federal animal health officials only under the following criteria: positive determination of a List A Disease; declaration of an animal health emergency by the Secretary of Agriculture; or tracking the origin of program diseases brucellosis, tuberculosis, Johne's, etc.

Livestock Market-Processor Working Group Report – Presented by Scott Stuart, Chair.

Scott Stuart, leader of the NAIS Market / Processor Working Group, reported that group had identified the following primary areas of concern in the implementation of a national animal identification system:

- Costs associated with ID should not impose an undue burden on any segment of the industry.
- Competitive disadvantages cannot be created in marketing channels due to ID.
- Events which require that an animal's identification to be "read" must be clearly defined and required equitably among the industry segments and participants.
- Animal welfare should be of utmost importance in the application and reading of identification devices.
- Safety of personnel at marketing facilities and packing facilities should be ensured as related to applying, reading, and harvesting identification devices.
- Compliance respective to the recording of animal movements by those outside fixed facility marketing and processing chan-

nels should be expected.

- Determination of the responsible party for application of identification devices should be clearly defined.
- Radio Frequency Identification (RFID) should be fully evaluated and its practical application to cattle movements through auction markets is determined.
- Technologies should continue to be evaluated in order to ensure the most cost-effective and appropriate systems are used.

In addition, Stuart reported the Market / Processor working Group had made the following observations:

- A national animal identification system, to be optimally effective and manageable for animal owners, managers, marketers, and processors, must operate as simply as possible.
- Therefore, reported movements should be kept to a minimum necessary to ensure adequate records to facilitate traceback and traceout functions.
- Very clear, unambiguous definitions of reportable events and responsible parties are critical for industry stakeholders to understand their responsibilities and what changes it may mean in their operations.
- Attention at this time should be focused on reporting events most necessary to achieve the goals of the USAIP.

Lastly, Stuart reported the Working Group had made the following specific recommendations:

1. Animals moving through markets should be read only one time to indicate an animal has been at a given premises on a given date.

This should only be required if there is adequate technology available that will not slow the marketing process and reading at the market does not cause excessive negative economic impact on individual markets.

2. Radio Frequency Identification (RFID), adequately tested and proven workable, should be the recommended identification technology used in the beef and dairy cattle industries.
3. A long-term economic impact study should be required as a part of any ID pilot project being funded. The study should seek to determine the impacts on all levels of producers and stakeholders associated with the ID system being tested.
4. Application of identification devices to animals should be the responsibility of the owner/operator of the animal's premises of origin.

Such tagging could occur at authorized tagging stations or auctions if available, but responsibility would still reside with the original premises owner/operator.

5. The term “receiving premises” be used in establishing the responsible party for reporting movement to the National Animal Identification Database.

Definition: Receiving Premises – The premises to which animals are moved and at which a responsible party (not necessarily the buyer) is responsible for reporting to the National Animal Identification Database that identified animals have arrived at that premises.

6. Any movement of an animal to a distinctly different premises and to a premises where commingling may occur must be reported to the National Animal Identification Database, regardless if a change of ownership has occurred.
7. It is recommended that all cattle be individually identified.

The potential for cattle to be commingled is significantly higher than in other species and it is strongly felt that by having all cattle individually identified, this potential inequity could be averted.

Swine Working Group Report(SWG) – Presented by Mark Engle, Chair

The NAIS has evolved from the USAIP. In regards to swine, the NAIS identifies the need for a National Premises Identification System. Due to the nature of the pork production a premises ID will provide the majority of our industry with 48 hour traceback. The NAIS describes a “Phase-in Plan” to advance swine identification. The National Premises Identification System would provide for standardized and unique premises identification for all locations housing swine across the nation. This will allow for more efficient disease surveillance and timely health management for the benefit of all producers and animal health officials.

The “Phase-in Plan” is divided into three phases:

- Phase I refers to enhancement of swine ID through premises identification of breeding swine and identification of market swine to the last premises rather than the owner.
- Phase II provides for a standard for Group/Lot ID and production records to allow pigs to move in groups without individual identification. Standardized Group/Lot ID will be necessary if electronic group ID becomes a production advantage to producers and/or USDA-APHIS develops an electronic animal movement permit system.
- Phase III provides for tracking of all swine movements in the event USDA has the appropriate system developed to manage the data and can address confidentiality concerns. The

timelines for each Phase will be dependant upon funding, the establishment of premises IDs and resolution of data concerns.

The highest risk population for health management are show pigs, "out of market" pigs and "off swine" due to the increased probability of commingling outside of the production system. Most likely individual ID will be necessary in these populations however the ideal system for each category will need to be researched for a better understanding.

Finally, the swine industry has had mandatory identification for interstate commerce since 1988. The mission of the Pork Industry Working Group is to expand and enhance swine ID as described in 9CFR71.19 to develop an effective yet affordable ID system for our industry.

Sheep Industry Working Group Report – Presented by Cindy Wolf, Chair.

The Sheep Industry Working group recommends continuation of the existing ID requirements of the USDA national scrapie eradication program until field trials determine the best application of electronic identification and associated tracking. A majority of sheep premises have been identified on a national level. With the gearing up of the NAIS, the scrapie program's flock ID number will need to be converted in a computer to a nationally standardized premises number. The group anticipates that within the next few years electronic ID will be applicable for use for disease surveillance purposes in the breeding flock. ID and movement reporting would be required when breeding flock ewes and rams change ownership or move to any exhibitions. Group or lot ID is applicable to the lamb feeding industry where they originate from a single source and are maintained intact as a unit. If a lamb leaves this group prior to the endpoint, then it needs to be individually identified. The working group recognizes that exhibitions pose a significant potential disease threat and focused attention should be given to these activities. Findings from a current field trial being conducted by Jay Parsons and Cleon Kimberling from Colorado State University have begun to demonstrate the functionality and potential uses of electronic ID for both ewes and lambs. The industry has observed that ID compliance appears to be dependent on the effectiveness of an ongoing educational campaign, the perceived benefits of the program which are not limited to program purpose, i.e., scrapie control but are also related to the management benefits, and active inspection that animals are identified.

Goat Industry Working Group Report – Presented by Cindy Wolf for Linda Campbell, Chair.

While sheep and goats have many similarities, there are differences between breeds and management types. Working with the goat industry to establish a workable plan helps to build industry support which can later result in better participation and cooperation. Forms of identification currently in use by those people who raise goats include: unique registration tattoos, neck tags, plastic and metal ear tags and electronic implants. The industry's ultimate goal is to have a combination of visible and electronic identification. While ear tags could most efficiently provide both visual and electronic identification, the problems with retention, infections and the issue with the LaMancha breed, currently make it not acceptable as the only method of identification. Identification methods in use today include: registration numbers, DHI Identification, herd management identification, Scrapie Eradication Program (mandatory), and the Scrapie Flock Certification Program (voluntary). It is the goal of this group to merge these existing systems and ID methods into the National Animal Identification System. There is concern of the cost of the producer-born ID program components versus the value per head. Recommendations include: continuing with currently approved types of ID being used for Scrapie program, and incorporate them into the National System Standards, but also include ages and groups of goats not currently included with Scrapie Program. Conduct field trials to fully test devices with different breeds and management systems. To establish approved site for electronic implants (recommend tail, with removal of tail post-slaughter). To provide approved devices to producers. Where applicable, allow Group/Lot ID. To allow continued use of current tattoo and electronic ID for shows while requiring tags for sale purposes. To move toward using existing scrapie tags for kids under 60 days of age and use RFID tags for older animals, when suitable RFID tags are available. Successful implementation will require: allowing flexibility with ID methods beyond phase-in period, continuing involvement with industry representatives as the NAIS develops, working with organizations to integrate with existing ID systems, incorporating existing production/management information and current industry practices to ensure greater participation, implementing reasonable record keeping requirements, protecting producer confidentiality of records, initiating comprehensive educational effort that targets specific groups such as producers, markets and consumers.

Equine Working Group Report – Presented by Amy Mann, Chair

The Equine Species Working Group (ESWG) was established in March of 2004. It evolved from the American Horse Council's Task

Force on National Equine Identification. There are 41 members, including representatives from 30 breed registries or organizations. The goal or focus of the ESWG has been to determine what the horse industry's participation should be and what will it look like. Like other species working groups we have been working on what the framework of the horse industry's participation will be.

The concept of a national ID system for horses has been discussed at equine industry meetings for the last several years. In the Fall of 2003, the American Horse Council organized a task force that included nearly thirty national equine organizations. Its purpose is to evaluate the concept of a national ID system and to determine if the horse industry could develop standards for equine identification that would benefit the industry and be compatible with the plans being considered.

Through the ESWG, the horse industry is evaluating the overall concept, its benefits and costs, as well as determining how the industry can participate and what standards for equine identification would fit into the system and help the industry.

The ESWG has held four face-to-face meetings and numerous conference calls. It has formed subcommittees to review in detail the many issues that still need to be thought through fully. The subcommittees formed and their purpose include:

- Identification and Technology Subcommittee to review what identification methods are appropriate and the technology available.
- Premises Identification and Responsibilities Subcommittee to review what premises should be included in any equine tracking system and what responsibilities the premise managers should have.
- Movement Recording Subcommittee to recommend what movements of horses should be tracked and how.
- Communications Subcommittee to keep the industry informed of developments regarding the national animal identification system (NAIS) through media and educational materials on a national plan for the equine industry.
- Implementation Projects Subcommittee to monitor progress of state implementation projects that include equine and to plan and draft an application when appropriate to USDA for federal funds to test the initial effectiveness of an identification system for the horse industry.
- Breed Registries to facilitate the coordination between registries in implementing a national equine identification system

In May, when asked to give an update on the ESWG, we had many unanswered questions remaining. Today, as you can see by this slide, we have addressed twelve of them. There are others that must yet be addressed and we are working steadily toward that goal.

Much of the focus of the ESWG has been on communication and education to the equine industry on the NAIS and why the horse industry might participation in it. We've also worked to gain an understanding of the current ID methods in use in the horse industry. Many of the breed registries have recognized that they will be key entities in the implementation of the NAIS and a subcommittee specifically to address issues surrounding the coordination between these organizations has been established. Most recently, the ESWG has proposed some recommendations with regard to participation in a national animal identification system. These recommendations have been sent to all ESWG members, asking them to take them to their organizations for review and approval.

As part of our Communication and education efforts, the ESWG has produced several documents aimed at providing information on why the horse industry would participate in the NAIS. One of these documents lists the benefits to the horse industry. We've also produces an industry specific Frequently Asked Questions (FAQ). One of the questions we so often get asked is "why should horses participate as there are no diseases common to horses and other livestock or humans". This is a common misconception and the ESWG is now working on developing publications that will help educate our industry with regard to this issue.

The American Horse Council (AHC) has agreed to host a website where this information can be housed. This has proved to be beneficial to those in the industry looking for background on equine ID.

One area that the ESWG needed was a clearer understanding of Equine ID technologies and the current use of identification in the horse industry. We established the ID and Technologies Subcommittee. This subcommittee surveyed nearly 100 breed registries and industry organizations on their requirements for equine identification. The survey contained 60 questions. Twenty-three responses were received giving us a reasonable picture of identification requirements in the horse industry.

The Subcommittee also recently sent a survey to RFID vendors to learn more about the availability of RFID for use in horses. Information has also been provided to the ESWG on current brand inspection practices throughout the country.

At the same time, Breed registries have been evaluating their current ID requirements and database capabilities. This was supported by the survey conducted by the ID subcommittee. The breed registries have also been evaluating the use of the Universal Equine Lifetime

Number, which has been implemented among breed registries worldwide. The use of the UELN would ensure compatibility between databases throughout the world.

At its most recent meeting the ESWG overwhelmingly agreed to twenty-one recommendations that have been sent out to each member with a request that their organization review and evaluate the recommendations for approval. A response deadline of 10 December 2004 was established with responses to be sent to the AHC for compilation. Approved recommendations will be forwarded to NAIS, USDA by mid-December. Recommendations not receiving approval will be returned to the ESWG for reconsideration.

The ESWG asked that three of the proposed recommendations be brought to the attention of the USAHA. Those recommendations are as follows:

- Recommendation 1: To enhance disease surveillance through a successful identification and tracking program, standardized requirements for Certificate of Veterinary Inspection (CVI) must be established among the states. The standards for compliance shall be established and enforced both for intrastate and interstate movement. The USDA and the state animal health officials should work with the American Horse Council (AHC) to expeditiously establish these standards, and report their recommendations to the Equine Species Working Group (ESWG).
- Recommendation 2: Currently, for interstate and some intrastate movement of horses, a CVI is required. Proper identification should be associated with the CVI. At the time of veterinary inspection, any horse that has not been previously identified or assigned an Animal Identification Number (AIN) shall be identified with an official form of identification.
- Recommendation 3: Accredited veterinarians completing the Equine Infectious Anemia (EIA) form VS 10-11 shall be required to include the animal identification number, any electronic identification and a more complete description of the horse's coat color, white markings and any unique identifying marks including cowlicks, brands and tattoos. Whenever possible, a digital photograph should be included.

Other recommendations being considered address questions of equine premises, number recording/reporting responsibilities, use of the Unique Equine Life Number (UELN), identification modalities and implementation schedules.

The ESWG and its work groups continue to work to answer questions. We continue to communicate and cooperate with USDA to en-

sure the horse industry involvement in this process of developing the NAIS. Areas yet to be address include, but are obviously not limited to, database issues and costs (including who will pay for those costs) and finally an implementation schedule.

We've made significant progress but there remains a lot to do. It's a complicated issue, more so than most people on the outside recognize. Those of you in this room certainly recognize this.

Camelid Working Group (CWG) Report – Presented by Karen Conyngham, Co-chair.

Camelids-llamas and alpacas-are domestic farm animals, members of the order Artiodactyla, suborder Tylopoda, family Camelidae that also includes guanacos and vicunas. Their average lifespan is 15-25 years; estimated US population is about 300,000 animals with approximately 33,500 owners. The average herd size is 9-10 animals. There are 3 registries: International Lama Registry (ILR) (llamas, guanacos, vicunas and crossbreeds), Alpaca Registry Inc. (ARI) (alpacas only) and the Canadian Llama & Alpaca Association Registry (CLAAR) which includes all species and U.S. animals may be registered.

Camelid are used for fiber production, breeding and show stock, companions, pack animals (llamas) and livestock guardians (llamas).

Camelid premises are farms/ranches where 1 or more camelids are kept; shows/fairs/exhibitions; sales/auctions; transport vehicles; on-farm events; veterinary clinics; public lands and social events such as parades or nursing home visits. The CWG considers the latter two premises to have minimal epidemiological significance.

Methods of ID currently used for camelids include 124-128 kHz implanted microchips, tattoos, neck tags/collars, ear tags (bangle or clip), DNA or blood typing, photos and owner recognition. The registries recommend microchip implantation at the back of the base of the left ear. About 44% of all registered alpacas are already microchipped; about 10% of llamas are reported microchipped but reporting chip numbers to the ILR is optional. The alpaca registry will require microchipping as a prerequisite for registration in 2005. The CWG is hopeful that existing microchips will be accepted by the NAIS.

Camelid industry concerns with permanent identification voiced to the CWG include confidentiality; cost; the potential impact on 4-H, youth activities, rescue operations and independent shows – youth may not be able to afford to ID their animals so will not participate in activities and small events could fail from lack of participants. There is a concern about possibly losing access to trails and parks if those locations cannot afford to handle tracking requirements. The NAIS is seen by some owners as being a food animal program – camelids are not food animals. Others feel that current tracking using certificates of

veterinary inspection and registry data are sufficient for movement tracking.

Working group challenges include educating owners about the NAIS as it develops; obtaining more input from owners; reaching owners of unregistered animals and reaching consensus on the best methods of camelid ID. Microchips are the current method of choice. The Alpaca Research Foundation has issued a call for research proposals to evaluate ID methods through peer-reviewed research. Emerging ID technologies will also be evaluated, as they become available. For these reasons, the CWG is not yet in a position to make recommendations to the USDA on a camelid identification plan

Poultry, Bison, Cervidae, and Aquaculture Working Groups

Chairman Hillman reported that the Bison Working Group (BWG) had developed a Working Group Report and submitted it to the Advisory Subcommittee for consideration, however, neither the chair nor the vice-chair were able to attend the meeting of the Committee on Livestock Identification. Chairman Hillman reported that the Working Group Chair had indicated the Bison report was consistent with the Cattle Working Group Report, except for a few special issues specific to bison.

Chairman Hillman reported that Working Groups had been established for Poultry, Cervidae and Aquaculture, but that these working groups had not yet developed a report or recommendations relative to the NAIS.

REPORT OF THE EQUINE SUBCOMMITTEE OF THE COMMITTEE ON LIVESTOCK IDENTIFICATION

Chair: Maxwell Lea, Jr.
Baton Rouge, LA

At the 2003 Annual meeting in San Diego, Committee on Livestock Identification Chairman John Wortman appointed a Sub-Committee to address equine ID as it relates to the United States Animal Identification Plan (USAIP). The Sub-Committee members are : Amy Mann, Amelita Facchiano, Angela Pelzel, Neil Hammershmidt, Tim Cordes, Peter Timoney, Steve Halstead, John Wortman, and Mack Lea,Chairman.

The Sub-Committee met by telephone conference call on Monday, March 15, 2004. Present on the call were Steve Halstead, Amelita Facchiano, Peter Timoney, John Wortman, Angela Pelzel, Neil Hammerschmidt and Mack Lea.

The overwhelming sentiment of the Sub-Committee was that it

should work together with other equine ID groups to formulate a broad overall plan for equine ID. Efforts should be made to communicate with the American Horse Council (AHC), National Institute of Animal Agriculture (NIAA) and any/all other groups, organizations or committees interested in and working on equine ID at the national level. Integration of efforts to avoid duplication of work and accomplishments need to be priority.

It was agreed that the horse industry has time to develop a program, that the available time will allow the program to be developed correctly in an effort to satisfy as many factions as possible and to take advantage of the experience other species groups gain who are on a faster track.

Priorities need to be: education of the equine owning public, the development of a list of sound reasons why ID is important and what advantages ID will provide.

The question of confidentiality seems to be a concern of all involved. The prevailing thoughts are that this issue will probably have to be handled with legislation if owners and producers, regardless of species, are going to accept animal ID.

The AHC facilitated the formation of the National Equine ID Task Force (NEIDTF) at its January 2004 meeting in Los Angeles, California. The NEIDTF met in Dallas, Texas on March 18 and 19th, 2004. Eighteen people, each representing different equine groups, continued discussions concerning ID. Neil Hammerschmidt and Mack Lea were present representing USDA and state animal health officials. A number of decisions were made, the most important being that the industry has overwhelmingly bought into the ID program with conviction and enthusiasm. Minutes of the meeting are attached.

The NEIDTF met April 5, 2004 in Salt Lake City, Utah and made recommendations for the formation of the Equine Species Working Group (ESWG) As a result of the recommendations, the ESWG was established with representation from industry, state and federal entities. The Committee on Livestock Identification Committee Sub-Committee on Equine Identification is represented on the ESWG by Amy Mann, Amelita Facchiano, Neil Hammerschmidt, Tim Cordes, Peter Timoney, Steve Halstead, and Mack Lea.

With the inclusion of seven members of the Sub-Committee on the ESWG, the Sub-Committee feels it can best serve USAHA and the equine industry by continuing the work within the ESWG to develop a functional, realistic and acceptable program for the identification of the nation's horses.

ELECTRONIC CERTIFICATES OF VETERINARY INSPECTION–PROGRESS REPORT

Amelita Facchiano
Dallas, TX

The concept of electronic health certificates developed as a result of state veterinarians growing concerns for foreign animal diseases in the mid 90's. The USAHA supported this initiative more than five years ago. Concurrently, the Government Paper Elimination Act (GPEA) in 1998 initiative requiring electronic paperless interaction with various publics by 2003, aids the achievement of real-time ability to trace disease issues related to ongoing food safety concerns. Today electronic Interstate Certificates of Veterinary Inspection (ICVI) are being implemented by the United States Department of Agriculture (USDA)-Animal and Plant Health Inspection Service (APHIS)-Veterinary Services (VS)-Center for Epidemiology and Animal Health (CEAH) are fully coincide with the United States Identification Plan (USAIP).

Electronic health certificates offer the ability to create complete and legible documents, in corporate digital images and signatures of practitioners and laboratory technicians, compile real time data, allow for ease of data analysis and disseminate documents to the appropriate animal health officials with the same ease as sending e-mail. Reduction of paper work an time/cost benefits to administrative staff accomplishes the goals supported by USAHA, which are now in national implementation states by USDA-APHIS-VS. This project compliments the goals of the National Animal Health Laboratory Network (NAHLN) and their partnership with state and federal agencies to safeguard animal health as well as fully coincides with the USAIP and NIAS.

Program for Electronic ICVI's have been implemented in 6 states (California, Colorado, Florida, North Carolina, Texas and Wisconsin).Sixty five accredited veterinarians in these 6 states have issued 2628 electronic ICVI's for movement of 110,060 animals thru October 19, 2004.

Dr. Hillman asked what the acceptance level was at the veterinary practice level and Ms. Facchiano indicated that it varied based on practice level of knowledge and other issues.

Dr. Larry Williams asked when data can become available real-time – and Ms. Facchiano indicated it was available real-time now – States were just being sent a weekly/monthly summary of activities. Dr. Williams indicated that notifying once per day would be sufficient. Dr. Lee Roy Coffman- industry asked for it to be used, and advancement of the process is due to hair off of people's head. Voids occur at Ft. Collins. Until an investment is made in this process – it will stagnate.

Dr. Hillman asked if the system was capable of moving electronic

ID information from collection devices? Ms. Facchiano indicated it will happen in phase II.

REPORT FROM THE STATE PROGRAM STANDARDS FOR IMPLEMENTATION OF A NATIONAL ANIMAL IDENTIFICATION SYSTEM (NAIS) SUBCOMMITTEE

Taylor Woods, Subcommittee Chair
Jefferson City, MO

The report provided information gathered from all of the available species reports. The task of the subcommittee was to utilize the species reports in development of the state standards without changing the intent of the species reports. The goal of the subcommittee was to develop one document for all species, with specific species information placed in addendums to the document.

The subcommittee wanted to insure inclusion of the following areas in the state standards:

1. Introduction
2. Definition-Nomenclature
3. NAIS key data element standards.
4. Part III, Information system overview.
5. Part IV, Administrator roles and responsibilities.
6. Part V, Regulations and Policies
7. Part VI, Species Specific programs, producers and other stakeholders responsibilities.
8. Identification of commonalties among the species working group recommendations.
9. Addendum for the cattle species group.
10. Addendum for the swine species group.

Dr. Woods reviewed the NIAS State Standards draft. A copy is included as part of this Committee Report.

THE STATE'S STANDARDS FOR IMPLEMENTATION OF THE NATIONAL ANIMAL IDENTIFICATION SYSTEM (NAIS) PROGRAM

Subcommittee of NAIS Subcommittee of the Secretary of Foreign Animal Disease Committee

Report of NAIS Standards Subcommittee of the National Animal ID Steering Subcommittee of the USDA Secretary's Foreign Animal Disease Advisory Committee.

This document represents the system standards which can be used by States and Tribes for NAIS implementation. The composition of this document reflects the efforts of the species working groups (as addendums) as well as commonalities between these reports.

This document will be presented to the United States Animal Health Association's (USAHA) Animal Identification Committee in Greensboro, North Carolina, on October 22, 2004.

NAIS Standards Subcommittee Members:

Dr. Taylor Woods
Dr. Kent Haden
Dr. John Ragan
Ms. Nancy Robinson
Mr. Neil Hammerschmidt
Mr. Mark Engle
Mr. Bill Sauble
Mr. Jim Akers
Dr. Joan Arnoldi
Mr. Kevin Maher
Mr. Scott Stuart
Dr. Maxwell Lea, Jr.
Mr. L. Wayne Godwin
Mr. Jay Lemmermen
Mr. Kent Waters

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Introduction

Protecting American animal agriculture by safeguarding animal health is vital to the well being of all US citizens. It promotes human health; provides wholesome, reliable, and secure food resources; mitigates national economic threats; and enhances a sustainable environment. Essential to achieving this goal is an efficient and effective animal identification program.

The United States Department of Agriculture initiated the implementation of a National Animal Identification System (NAIS) in 2004. ***The goal of the National Animal Identification System is to have the capability to identify all animals and premises that had direct contact with a foreign animal disease (FAD) or disease of concern within 48 hours after discovery.***

The identification of individual animals or a group of animals with unique numbers and associating or linking those numbers to a premises (location) throughout each animal's life in an information system is the basis of the NAIS. This basic and limited data will support the objective of achieving timely animal tracebacks and trace forwards when responding to an animal disease concern. The system will focus on all livestock within the represented industries regardless of their intended use as seedstock, commercial, pets or other personal uses. Initially, the program will be implemented on a voluntary basis, and eventually with requirements for premises and animal identification.

Traceback refers to the ability to track an animal's location over its lifespan and the ability to determine which animals may have been in contact with the diseased animal or shared a contaminated feed supply. Trace forward data provides locations of animals moved out of the premises of concern that may have been exposed to the disease. The ability to achieve the 48 hour goal is directly related to the completeness of animal movement data that is reported to the national system (Neil, this is not a true statement. I let it go last conf. call because of the beef database confusion but one call to Smithfield and you have the movements of 700,000 sows and 14,000,000 pigs. 39 producers represent 80% of our swine inventory. Not sure this statement needs changed but this is not a true statement for us or poultry. Just so you know my position.**)**. The identification of premises and animals, while requiring significant resources, is fundamental and straight forward. However, the collection and reporting of animal movement information to establish a record of the locations for each animal's life is an enormous undertaking. This activity will require significant development, testing and substantial infrastructure. Due to this complexity, a phased-in implementation plan is scheduled to provide a timely and cost-effective program while ensuring it is functional, practical, and reliable. The implementation strategy must evolve through producer and stakeholder input and participation.

The establishment of national identification standards is key to the success of the NAIS. When applicable, such standards will follow those already in place internationally. The program must remain practical and flexible for the producers and animal health officials, and will incorporate new and proven technologies as they become available.

NAIS Uniform Methods and Rules

The NAIS Uniform Methods and Rules (UM&R) are cooperative procedures and standards adopted by the Animal and Plant Health Inspection Service (APHIS) and States to coordinate a national animal identification program. These UM&R are intended to assist State and Federal animal health personnel in implementing the NAIS consistently and equitably throughout the United States.

Additional information may be obtained from state or federal animal

health officials or at *http://www.aphis.usda.gov/nais/* (site pending).

Part I. Definitions

American Identification Number

The American Identification Number was adopted in 1998 by the Council on Dairy Cattle Breeding to facilitate developing national programs that not only enhance genetic progress but also animal disease control and eradication. The number is defined as a 12 character field prefixed with "USA". The American ID number, as an alphanumeric field, cannot be encoded in the ISO transponder. The American Identification Numbering system will be phased out (or merged with) the Animal Identification Number as it is implemented.

Animals

Consist of those species listed in the Species Codes definitions in Part.II.B.

Animal Identification Number (AIN)

The Animal Identification Number (AIN) will evolve into the sole national numbering system for the official identification of individual animals in the United States. The format contains 15 digits with the first three being the country code (840 for the United States).

AIN Allocator

The program administered by APHIS that allocates Animal Identification Numbers to AIN Managers.

AIN Managers

AIN Managers are companies that receive allocations of Animal Identification Numbers, are authorized by the USDA to manufacture approved identification devices or provide approved identification technologies that contain the Animal Identification Number and has responsibilities for the distribution of AIN Tags through AIN Distributors.

Note: AIN Managers that distribute AIN numbers to a premises will also be an AIN Distributor.

AIN Tag

Official identification devices that have the Animal Identification Number (AIN) printed on the identification device. Only official identification devices may carry the US Shield.

AIN/RF Tags

AIN Tags that have an RFID transponder encased and is configured so it can be attached to an animal's ear.

AIN Tag Manufacturer

Manufacturer approved by APHIS to produce identification tags with the AIN.

AIN Tag Distributors

AIN Distributors are individuals, organizations or companies that

provide AIN Tags to a premises that manages or holds livestock. The AIN Distributor must have an AIN Tag distribution agreement with an AIN Manager(s) to be eligible to be an AIN Distributor. AIN Distributors may include state departments of agriculture, breed associations, producer organizations, service providers, veterinarian clinics, etc.

Brand Inspection Entity

Breeding Stock

Sexually intact animals of either sex. Veal calves and females of any species moving direct to a terminal feedlot are exceptions.

Check Digit

A decimal (or alphanumeric) digit added to a number for the purpose of detecting the sorts of errors humans typically make on data entry.

Compliant Premises Registration System

A premises registration system developed by a State, Tribe or third party that, through evaluation conducted by USDA/APHIS, is compliant with the NAIS data standards and that meets established security communication requirements.

Country code

A 3-digit numeric code representing the name of a country in accordance with ISO 3166.

Electronic Identification (EID)

An identification method that utilizes electronic technology including, but not limited to, bar codes, 2-D symbology, and radio frequency.

Group/Lot Identification Number (GIN)

The identification number used to uniquely identify a unit of animals of the same species that is managed together as a group throughout the preharvest production chain. The GIN consists of a seven-character Premises Identification Number and a six-digit representation of the date on which the group or lot of animals was assembled (MM/DD/YY).

Individual Animal Identification

A means of identification that provides unique identification of an animal so to differentiate one animal from another. Official individual animal identification uses methods that meet the definition of official identification.

Identification Methods

A means of identifying an animal, including ear tags, biometrics, brands and brand inspection records, breed registry certificates, etc.

Interstate Movement

Movement that crosses state lines, regardless of ownership at either shipping or receiving premises.

Intrastate Movement

Movement that does not cross a state line and does not meet criteria for entering interstate commerce.

Intrastate Commerce

Movement that involves commingling or change of ownership, but does not cross a state line nor meet criteria for entering interstate commerce.

ISO

International Organization of Standards.

ISO Transponder

RFID device that transmits its transponder code according to ISO 11784/11785 when activated by an ISO transceiver and that has been evaluated and approved for conforming to these standards by the International Committee on Animal Recording

ISO Transceiver (Reader)

Transceiver that reads at least both ISO FDX-B and ISO HDX transponders as defined in ISO 11784/11785.

Mandatory Identification

A state and/or federal identification requirement that defines which livestock must be identified according to established protocols.

National Animal System

The National Animal System of the NAIS contains the AIN Allocator, Animal Identification and Tracking Systems and the National Animal Records Repository.

National Premises System

The National Premises System is the overall premises system, consisting of Premises Number Allocator, the Premises Registration Systems and the National Premises Information Repository.

Non-producer Participant

A person or entity who will engage in the NAIS in one or more designated roles, that in many instances will require that they provide data to the national identification database. Such entities include USAIN Manager, AIN Distributor, Animal Health Official, Brand Inspection Entity, Diagnostic Laboratory, etc.

Official identification Devices and Methods

Means of officially identifying an animal or group of animals using devices or methods approved by the Administrator, including, but not limited to, official tags, tattoos, and registered brands when accompa-

nied by a certificate of inspection from a recognized brand inspection authority.

Officially Identified

The point in time when an official animal identification number is applied to an animal by means of an identification method or device approved by the Administrator for purposes related to official disease control programs or animal movements in interstate or international commerce.

Official Identification Numbers

Numbering systems recognized in the CFR; alpha-numeric National Uniform Ear tagging System or valid premises identification number that is used in conjunction with the producer's livestock production numbering system. The NAIS directs the establishment of the Animal Identification Number as the sole official identification number over an agreed-to period of time.

Premises

A premises is an identifiable physical location that, in the judgment of the State Animal Health Official or Area Veterinarian in Charge, and when appropriate in consultation with the affected producer, represents a unique and describable geographic entity where activity affecting the health and/or traceability of animals may occur.

Premises Identification Number

The official premises identification number for the United States. The number is nationally unique and has no meaning itself. The premises number is associated with an address or legal land description. The field specification for the Premises Identification Number is:

- 7 characters (right most character is a check digit)

Premises Identification of Individual Animals

Based on the species, the class of animals and the diseases of concern, premises identification of individual animals can be adequate to achieve the traceback objective, for example sows and boars going to a cull market. In these cases an official identification device bearing the last premises ID number is attached to the animal prior to its movement and identify that animal to its source farm.

Premises Number Allocator

The program administered by APHIS to allocate the Premises Identification Numbers through interfaces with the Standardized or a Compliant Premises Registration System.

Radio Frequency Identification (RFID)

An ID device that utilizes radio frequency technology. The RFID device or method of identification includes ear tags, bolus, implants (inject), and tag attachments (transponders applied during the tagging process).

Standardized Premises Registration System

The Premises Registration System made available to the State and Tribes by APHIS.

Terminal Feedlot (Designated Feedlot)

A livestock feeding operation in which all animals, upon exit of the operation, move directly to a slaughter plant.

Transponder code

Code as programmed in the transponder and defined in ISO 11784 (Table 1) and ISO 11785.

Write Once Read Many (WORM)

Distinguishing a transponder that can be partly or totally programmed once by the user, and thereafter only read.

Part II. NAIS Data Standards for Key Components

II. A. Data Elements and Numbering Systems

To achieve the "48-hour" traceback objective, the movement of individual animals, or "units of animals", must be recorded. Reporting this information to the national information system is necessary to achieve timely response to animal disease concerns. Standards for certain data elements are essential for a successful information system in which data is shared among States and the Federal government, as well as being provided or linked through certified commercial service providers.

Specifications for the key data elements are summarized in the chart below followed by more explanation.

Key Data Element Standards

Data Element	Field Structure	Type	Example	Comments
Premises Identification Number	7	Alphanumeric	A123R69	Right most character is a check digit[1] based on ISO 7064, Mod 37, 36
Non-Producer Participant Number	7	Alphanumeric	H892345	Same numbering system as Premises Identification Number
Animal Identification Number	15 Total			
	3	Numeric	First	Three digits are the country code (840 = USA) based on ISO 3166
	12	Numeric	123456789012	Animal number. Start number > 2,000,000,000
Group/Lot Identification Number	13 Total			
	7	Alphanumeric	A234567	First seven characters are the entity's Premises ID Number
	6	Date	100302	MMDDYY

[1] See check digit formula in NAIS Technical Supplement.

II. A.1. Premises

Tracing a subject animal or a group/lot of animals to its origin and determining other potentially exposed premises and animals can only be achieved with a complete record of all locations that manage or hold livestock. Such locations are referred to as "premises". Identifying these premises with a single and unique number is essential to trace animals potentially exposed to disease. If more than one premises number is used for the same location, animals subject to contagious disease can go undetected. Therefore, the assignment of a unique number for each premises is essential.

The diversity of the environments in which we manage livestock makes the definition of such locations quite complex. From a general perspective, the following defines a premises:

"A premises is an identifiable physical location that, in the judgment of the State Animal Health Official or Area Veterinarian in Charge, and when appropriate in consultation with the affected producer, represents a unique and describable geographic entity where activity affecting the health and/or traceability of animals may occur."

More specific premises definitions will be established to define livestock operations and environments as the NAIS is developed. In addition to farms, ranches and other production units, markets, packing plants, quarantine facilities, ports of entry, veterinarian clinics, etc. will be registered in the national premises system.

Premise Identification Number

The official premises identification number for the NAIS. The number is nationally unique and has no meaning itself. The premises number is associated with an address or legal land description. The field specification for the Premises Identification Number is:

- 7 characters (right most character is a check digit)
- Example: A123R69

II. A. 2. Non-producer Participants

The NAIS provides for the establishment of Non-producer Participants who have authorized responsibilities. These participants may submit information to the designated databases. Data they supply will be associated with their Non-producer Participant Number so proper controls and integrity measures of the data can be maintained. The USDA will establish enrollment/application procedures for Non-producer Participants and will be responsible for the allocation of unique Non-producer Participant Numbers to such entities/individuals.

A Non-producer Participant number must be obtained from USDA/APHIS or cooperating State/Tribe before data can be uploaded to the national system. This allows the submitting Non-producer Participant

to be contacted in the event of error in the file they submit**.**

Non-producer Participant Number

The field specification for the Non-producer Participant is:

- 7 characters (right most character is a check digit)
- Example: H892345

The Non-producer participant number is generated through the same computer program that generates the premises number.

II. A. 3. Animal Identification

Two types or levels of animal ID are necessary to support animal disease management programs: individual animal and "group/lot" identification. Individual animal identification is needed for tracking animals that are destined to be commingled with animals outside of the production system in which they were born as they move through the production chain. While certain traceback functions can be achieved with Premises ID alone it cannot be used to record an individual animal's movement through multiple marketing and commingling points. In this instance, individual animal identification is necessary.

Group/Lot ID can be used in species where groups of animals are assembled from within the same production system and tracking is achieved through recording of group movements and the maintenance of required production record elements. In the event animals identified through Group/Lot ID become commingled with animals outside the production system, unique individual animal identification becomes necessary.

- Individual Animal Numbers

The collective livestock industries agree that a national numbering system is most effective when individual ID is required. However, with several "official" numbering systems in use today, achieving a single national numbering system can only be accomplished through a planned transition.

Current numbering systems considered official for the interstate movement of livestock include:

- USDA uniform state series code
- Breed registration numbers
- Premises ID used in combination with a unique herd management ID

The standard for the single national numbering system must:

- Be compatible with national numbering systems already established in other countries;
- Avoid duplication of any existing numbers.

Animal Identification Number

The field specification for the Animal Identification Number is:

- 15 digits (first three digits is the country code, plus 12 digit national number)
- Example: 840123456789012

The AIN will become recognized in the Code of Federal Regulations as an official number for identifying individual animals. A transition plan to establish the AIN as the sole numbering system for individual identification will be established in the future. Additionally, over time all official animal health programs will incorporate the AIN.

The American Identification Number (USA plus 12 digits) and the RFID code number (3 digit manufacture code plus 12 digits) in ISO compliant transponders will be recognized as an official number by an interim rule during a transition period.

Group/Lot Identification Numbers

Group/Lot ID (GIN) is used in industries where production practices involve management by groups. In such cases, there is no traceback advantage to individual identification. Thus, individual animals will not be identified; instead, groups of animals can be tracked using appropriate group identifiers and production records. A unique and standardized number is necessary to track groups of animals in the national system. Group/Lot ID is an option for certain species in which animals move as a group through the production chain and when such identification will meet the requirements of 48-hour traceback. Requirements for Group/Lot ID may vary by species.

An animal production system can use Group/Lot Identification if the producer is able to demonstrate to the satisfaction of state animal health officials that, through group identification and production records, 48-hour traceback can be accomplished to all premises with animals potentially exposed to disease.

Group/Lot Identification Number

The field specification for the Group/Lot Identification Number is:

- 13 Characters combining the Premises Identification Number (7) of the premises where the groups was assembled and the date (6) the group was assembled (mmddyy)
- Example: A234567100302 (Group assembled on October 3, 2002)

If more than one group of animals is assembled on a particular day at a given premises, the animals will still be considered a single group for the purpose of assigning a GIN.

II. B. Information System – Components/Data Elements

The National Animal Identification System (NAIS) requires the collection of data, interfaces to exchange data and the data repositories to support the 48-hour traceback objective. The overall system must allow for the identification of each premises, and the recording and re-

porting of the animal identification and animal movement data. Additionally, the system must associate or link the animal ID data to each premises where the animal or group was located and the specific dates the animal(s) was at the premises (locations).

The primary information system components of the NAIS include the National Premises and National Animal Systems.

II.B. 1 National Premises System

The National Premises System includes the Premises Number Allocator, the Premises Registration Systems and the National Premises Information Repository.

- Premises Number Allocator

The national uniqueness of each premises identification number is achieved through this program that the Premises Registration Systems interfaces with when administering the registration of premises. Assigning premises numbers to a valid address or legal land description will help avoid having multiple numbers assigned to the same operation, regardless of species.

- Premises Registration Systems

The Premises Registration Systems (databases) provides for the administration of premises enrollments according to the national requirements. The States and Tribes who are responsible for administering the registration of premises within their geographic areas (or boundary of the multiple states working together) may use either of the following system options:

Standardized Premises Registrations System: The USDA will provide a Standardized Premises Registration System that a State and Tribe may elect to use. This web based system, housed at the Centers of Epidemiology (CEAH), provides each State/Tribe using the system with it own administrative functions to establish access authorization, user privileges, etc.

Compliant Registration Systems: States and Tribes may use premises registration systems other than the one provided by the USDA. Such systems, developed with the state departments, or provided through contractual arrangements of third parties, must be evaluated for compliance with the NAIS data standards. USDA will support the establishment of the interfaces of systems that meet the data and security criteria. When the interfaces are functioning properly, these Compliant Premises Registration System may be used by States or Tribes to register premises in the NAIS.

All systems will ensure compatibility is achieved through adherence to the NAIS data standards. The States and Tribes are responsible for the administration of premises registration, and as a minimum collect and maintain the information defined in the following chart.

Premises Registration Systems - Data Elements

Field Name	Type	Length
Premises ID Number	Alphanumeric	7
Name of Entity	Alphanumeric	30
Owner or Appropriate Contact Person*	Alphanumeric	30
Street Address	Alphanumeric	30
City	Alphanumeric	20
State	Alpha	2
Zip/Postal Code	Numeric	9
Contact Phone Number	Numeric	15
Operation Type	Character	1
Date Activated	Date (YYYYMMDD)	8
Date Retired	Date (YYYYMMDD)	8
Reason Retired	Character	1
Historic Data**		
Previous Contact Person	Alphanumeric	30
Previous Contact Person Phone	Numeric	15
Previous Contact Person - Start Date	Date (YYYYMMDD)	8
Previous Contact Person - End Date	Date (YYYYMMDD)	8
GPS		
Longitude	Numeric (6 decimals)	11
Latitude	Numeric (6 decimals)	11
Alternate Phone Numbers **	Numeric	153

** The contact person should be the person with whom the animal health official is to communicate with when performing a traceback (as determined by the entity).*

*** Requires facility to store multiple records.*

Do we need date “sold” or “transferred”? I guess the contact person will change in a sale so not sure we need more than that.

In addition, the historic data is to be maintained for 20 years. This will provide Animal Health Officials with the proper contact reference when the current contact person was not associated with the premises during the period being researched in a traceback situation.

States and Tribes may also establish various means for collecting and entering the data into the system they elect to operate. These cooperative efforts may be with industry organizations, brand inspection entities, third party service providers, etc.

- National Premises Information Repository

The National Premises Information Repository centralizes agreed-to data from the Standardized and Compliant Premises Registration Systems. A real-time subset of all Premises Registration Systems is necessary to support the national infrastructure. For example, the National Premises Repository will enable the functionality necessary to administer the allocation of Animal Identification Numbers (AIN) to a premises. AIN Distributors will have look up capabilities in the National Premises Repository to confirm that a producer has a valid Premises Identification Number before distributing Animal Identification Numbers to a producer.

The following chart defines the fields (data elements) that are required by the National Premises Information Repository.

National Premises Information Repository - Data Elements

Field Name	Type	Length
Premises ID Number	Alphanumeric	7
Name of Entity	Alphanumeric	30
Owner or Appropriate Contact Person*	Alphanumeric	30
Street Address	Alphanumeric	30
City	Alphanumeric	20
State	Alpha	2
Zip/Postal Code	Numeric	9
Contact Phone Number	Numeric	15
Operation Type	Character	1
Date Activated	Date (YYYYMMDD)	8
Date Retired	Date (YYYYMMDD)	8
Reason Retired	Character	1

** The contact person should be the person the animal health official is to communicate with when performing a traceback (as determined by the entity).*

IV.B.2. National Animal System

The National Animal System includes the AIN Allocator, Animal Identification and Tracking Systems (Animal ID/Tracking) and the National Animal Records Repository (Animal Repository).

- AIN Allocator: The AIN Allocator supports the allocation of Animal Identification Numbers to AIN Managers. Only authorized AIN Managers have access the system. The AIN Allocator maintains a record of all animal numbers allocated to each AIN Manager. AIN Managers, may be AIN Distributors or have marketing agreements with independent AIN Distributors who provide the AIN devices to the producers.

Note: Animal Identification Numbers are only allocated to AIN Managers by APHIS.

- Animal Identification and Tracking Systems: The Animal Identification and Tracking Systems are administered at the state/regional level and provides required animal records to the National Animal Records Repository. APHIS will provide a Standardized Animal Identification and Tracking System that States/Tribes may elect to use. States and Tribes, through cooperative efforts with industry, may elect to have their information administered at the local or regional level through their own system or ones provided by third parties. Systems that meet the data standards and communication security requirements will be designated as a Compliant Animal Identification and Tracking System. Such systems most likely will maintain additional information as determined by the industry. However, the

data submitted to the National Animal Repository will be consistent from both systems. (See File Format xx in the NAIS Technical Supplement).

- National Animal Records Repository: This repository is a centralized database that receives records direct from producers and Non-producer Participants, from Standardized and Compliant Animal ID/Tracking Systems. Such data includes, but not limited to, the allocation of AIN to a premises, records of animal sightings, movements, and terminations. Access to the repository is restricted to state and federal animal health officials when information is required to perform their responsibility for maintaining the health of the US herd.

The following table lists the fields that are maintained for individual animals on the National Animal Records Repository.

National Animal Records Repository – Individual Animal Data Elements				
Field Description	**Data Type**	**Size**	**Required**	**Example**
Event Type Code	Numeric	2	Y	1 (see following event code table)
Sighting/Reporting Premise ID	Character	7	Y	
Source/Destination Premise ID	Character	7	N	
Event Date & Time	Numeric	12	Y	YYYYMMDDHHMM 200308011223
Animal ID number	Numeric	15	Y	Until AIN number is the only approved animal ID identifier, Other official ID numbers need to be reported as alter native ID fields
Species	Character	3	N	
ID Electronically Read	Boolean	1	Y	0 (False default) / 1 (True)
Animal Date of Birth	Character	8	N	YYYYMMDD 20020101
Age of Animal	Character	3	N	(M)onth, (D)ay, (Y)ear i.e. M11
Sex	Character	1	N	(M)ale, (F)emale, (C)astrated/neutered male, (S)payed/neutered female
Breed of Animal	Character	2	N	See document Breed codes US and Can1.pdf
Remarks	Character	50	N	Description/other comments
Status	Character	1	N	(C)orrection
Alternate Animal ID 1	Character	17	N	Alternate pre-existing official Identification number if USAIN not available, Lot ID number if animal has USAIN number and was moved out of a lot, old USAIN number if tag replaced
Alternate Animal ID Type 1	Character	1	N	(A)merican ID, (U)SDA eartag, (R)FID, (B)reed registry number, (L)ot number, (T)attoo, required if Alternate ID (field 15) is provided, R(E)eplacement USAIN number if event code 6 used
Alternate Animal ID 2	Character	17	N	Second alternate pre-existing official Identification number if USAIN not available, or Lot ID number if animal has USAIN number and was moved out of a lot
Alternate Animal ID Type 2	Character	1	N	(A)merican ID, (U)SDA eartag, (R)FID, (B)reed registry number, (L)ot number, (T)attoo,required if Alternate ID (field 17) is provided

- Animal Event Codes

Animal Event Codes	
Event Code #	**Description**
1	Tag allocated – National USAIN number is allocated to a premises
2	Tag applied - National Animal ID tag is applied to an animal
3	Moved in – Animal is moved into a premise
4	Moved out – Animal is moved out of a premise
5	Lost Tag – New tag is applied to an animal that lost a tag and previous USAIN is unknown
6	Replaced Tag or Re-Tagged – New tag is applied to an animal that lost a tag and previous USAIN is known
7	Imported – Animal is imported into the U.S.
8	Exported – Animal is exported out of the U.S.
9	Sighting – Animal has a confirmed sighting at a location, no movement has occurred. (Ex: vet sighting)
10	Slaughtered – Animal was sent to slaughter.
11	Died – Animal died of natural causes or euthanised at the farm/ranch
12	Tag retired – Tag retired by producer, packing house, etc.
13	Animal Missing (lost stolen, etc)
14	ICVI – Certificate of veterinary inspection

National Animal Records Repository - Group/Lot Data Elements				
Field Description	**Data Type**	**Size**	**Required**	**Example**
Event Type Code	Numeric	2	Y	1 (see following event code table)
Premise ID	Character	7	Y (Required when event code is 2, 3, or 4)	
Event Date & Time	Numeric	12	Y	YYYYMMDDHHMM 200308011223
Lot ID number	Character	13	Y	G/L ID number is comprised of Premises ID and date the lot was established
G/L Subset Identifier	Character	30	N	Used to identify subset such as a barn
Group Type	Character	1	Y	(S)tatic, (D)ynamic
Species	Character	3	Y	
Event Remark	Character	50	N	
Status	Character	1	N	(C)orrection

- Group/Lot Event Codes

Group/Lot Event Codes	
Event Code #	**Description**
1	Begin Group/Lot, Group/Lot of animals was established at a premise
2	Moved Group/Lot in, Group/Lot of animals was moved into a premise
3	Moved Group/Lot out, Group/Lot of animals moved out of a premise
4	Sighting Lot has a confirmed sighting at a location, no movement has occurred (i.e. vet sighting)
5	End Group/Lot, Group/Lot inventory is zero

- List Codes

List Codes

Field Name	Type List Options	Length Stored As
Species	Character	3
	Bovine (Bison and Cattle)	BOV
	Camelid (Alpaca & Llama)	CAM
	Equine (Horses)*	EQU
	Porcine (Swine)	POR
	Ovine (Sheep)	OVI
	Caprine (Goats)	CAP
	Cervids	CER
	Deer	DEE
	Elk	ELK
	** Equine industry will expand as necessary*	
	Poultry	POU
	Chickens	CHI
	Turkeys	TUR
	Geese	GEE
	Ducks	DUC
	Pheasants	PHE
	Guineas	GUI
	Quail	QUA
	Pigeon	PGN
	Aquaculture	AQU
	Trout	TRO
	Salmon	SAL
	Catfish	CTF
	Tilapia	TIL
	Striped Bass	SBA
	Shrimp	SHR
	Crawfish	CRA
	Oysters	OYS
	Clams	CLM
	Scallops	SLP
	Mussels	MSL

Field Name	Type List Options	Length Stored As
Sex	Character	1
	Male	M
	Female	F
	Neutered/ castrated male	C
	Neutered/ spayed female	S
	Mixed (used) only in groups	X
Operation Type	Character	1
	Clinic	C
	Exhibition	E
	Laboratory	L
	Market/ Collection Point	M
	Production Unit*	P
	Port of Entry	B
	Quarantine Facility	Q
	Slaughter Plant	S
	Tagging Site	T
	Rendering	R
	Non-producer participants	N
	** Hunt Ranches, etc. included*	
Premises - Reason Retired	Character	1
	Error (Reported in error)	E
	Developed (Operation terminated resulting from commercial development)	D
	Merged	M
	Sold	S
	Split	X

Certain fields are predefined for list standards that will allow the data to be selected and stored consistently. Such list standards are presented below.

II.C. Official Identification

Official identification requirements, as well as methods and devices, vary among species. The means of officially identifying an animal or group of animals using devices or methods are those approved by the APHIS Administrator, including, but not limited to, official tags, tattoos, radio frequency identification, and registered brands when accompanied by a certificate of inspection from a recognized brand inspection authority.

Animals identified as individuals versus a group or lot of animals will have different requirements. These specifications are defined through species specific standards. Such standards and definitions are provided in the species section of this UM&R.

AIN Tags will become the “defacto” standard for species when visual unique individual animal identification is necessary. The following chart lists the minimum standards for the AIN Tag. Certain species may incorporate other technologies as part of the AIN Tag. For example, the cattle industry has established RFID eartags as their identification standard which meets these minimum standards.

AIN Tags
• the tag must bear the entire 15 digit number • the tag must be designed for one-time use (tamper evident) • the tag may not be readily altered or otherwise tampered with • the national identification number must be easily and reliably readable • the tag will have the US Shield imprinted

Is it the US shield or the USDA shield? I think the shield needs to be in the definitions.

Part III. Information System Overview

III.A. National Premises System

States and Tribes, responsible for the administration of premises registration in their area, may elect to integrate data from existing data bases (brand registration and records, milk permits, etc), implement processes to initiate premises enrollments from “scratch” or they may utilize a combinations of the two. Premises registration procedures may include options for producer, or agents on their behalf, to register their premises through the internet, paper application forms, etc. While States/Tribes have flexibility in how they collect, update and administer

premises registration within their geographic area, compliancy with the NAIS standards will ensure nation-wide compatibility.

Each State and Tribe will use either the Standardized Premises Registration system or a Compliant Registration System. The following flow charts provide an overview of how the premises registrations are administered

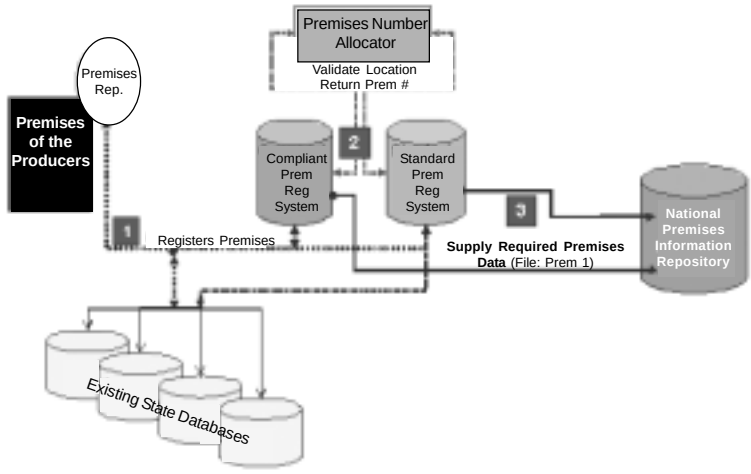
National Premises Registration System: Flow Chart Description

1: The premises identification data is administered in a Premises Registration System used by the State/Tribe. In some states/ reservations the producer, or agent for the producer, may provide the information. Other states may "merge" or integrate data from existing data bases or use a combination of both methods to obtain the premises information.

2: The Premises Registration System being used by the State/ Tribe, through a machine-to-machine interface, passes the address (or land description if no address is exist for the premises) to the Premises Number Allocator. The Premises Allocator determines if the address is valid and if the address has previously been allocated a Premises Number.

Illustration III.A.

Components of the NAIS Premises Registration Systems



When the address is valid and has no premises ID on record, the Premises Allocator returns the next available sequential premises number to the Premises Registration System. If a Premises ID Number is on record for the premises being processed, the Allocator will return the premises number already on file for that premises. In cases where

the premises does not have an address, an exception process will be established to assign a premises number to the appropriate locations of the livestock enterprise.

The Premises Registration System completes the identification/ enrollment process of the premises, collecting as a minimum the data elements required by the National Premises Information Repository.

3: The Premises Registration Systems updates the National Premises Information Repository according to prescribed update procedures and file format specifications. This includes updates of new and revised premises records daily and monthly "master" updates. The "master" updates contain all records from each Premises Registration System.

The file format of the upload file from the Premises Registration System to the National Premises Information Repository is defined in the file format, "Premises Upload Record Format" (File: Prem #1) in the NAIS Technical Supplement.

III. B. National Animal System

III.B.1. Allocation of Animal Identification Numbers and Distribution of AIN Tags

APHIS will administer the authorization of AIN Manager and will assign them a Non-producer Participant Number.

AIN Tag Distribution Flow Chart (Need to restart the numbering under this section)

4: The AIN Manager accesses the AIN Allocator for a pre-approved volume of Animal Identification Numbers. The AIN Allocator maintains a record of the numbers and the date the numbers are released to each AIN Manager. The AIN Manager may manufacturer AIN Tags for their supply distribution chain or may provide the AIN Tags as they are ordered by their distributors.

5. The Premises representative request AIN Tags from an AIN Distributor and provides their Premises Identification Number.

Note: AIN Mangers who sell AIN Tags direct to premises will also be AIN Distributors.

6: The AIN Distributor, through an authorized lookup access to the National Premises Information Repository, validates the reported premises number of the producer. If the Premises ID Number is correct, the AIN Distributor provides official identification devices to the producer/premises.

Note: Official Identification devices can only be provided to entities that have a valid premises identification number.

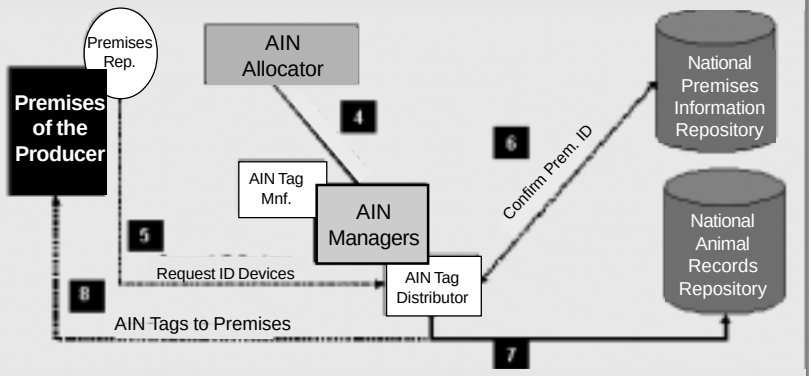
7: The AIN Distributor reports the Animal Identification Numbers printed on the AIN Tags to the National Animal Repository. The "AIN/Animal Transaction" file (File: ID #1) is used to upload

the data from the AIN Distributor to the National Animal Records Repository.

8: The AIN Tags are shipped or delivered to the premises (or sold at the retail outlet to the representative of the premises).

Illustration III.B.1.

Allocation & Distribution of Animal Identification Numbers



III.B.2. Reporting Animal Events

Animal movements and sightings are reported to the National Animal Records Repository using ID File #1.

TO BE COMPLETED FROM USAIP 4.1 chart/text page 20.

Part IV. Administration Roles and Responsibilities

APHIS may execute cooperative agreements and/or Memorandum of Understanding (MOU) with the animal health authority of any State or Tribe to administer the NAIS. The NAIS will be achieved through shared responsibilities of State, Tribal governments and Federal agencies, producers and non-producer participants. These government responsibilities are summarized in the following chart.

IV.A. Premises Registration

The following general principles apply to the administration of a premises:

- Premises information shall be kept confidential and only partial data will be available to authorized officials.

Responsibilities of States/Tribes and USDA	
States/Tribes	**USDA APHIS**
• Register/identify premises within their geographic area • Maintain data required by the Premises Registration System • Submit premises data to National Premises Repository • Recognize the use of the AIN as an official identification number within their state/regions. • Administer intrastate movements • Report interstate movement to National ID DB • Administer the enrollment of certain Non-producer Participants	• Administers Premises Allocator Program • Provide a Standardized Premises Registration system • Evaluate other Premises Registration Systems developed by states and/or third parties for compliancy • Administers National Premises Information Repository • Administer allocation of Animal Identification Numbers • Administers National Animal ID Database • Administer the enrollment of certain Non-producer Participants

- A location will maintain the same Premises Number when sold intact. A historic record providing the previous contact information and the dates that information was associated with the premises must be maintained by the State administer the premises record.
- Production locations that have multiple species must have one unique Premises Identification Number.
- Owners with multiple production units and/or holding units will consult with their State Animal Health Official or Area Veterinarian in Charge to determine if multiple premises identification numbers are required. Establishing multiple premises identification numbers should be based on epidemiologic links and/or the likelihood of disease transmission among the premises.
- The owner of the premises, or person designated by the owner of the premises, must register the location(s) and must keep the required information current.

IV.A.1. APHIS Responsibilities for Premises Registration

- Administration of Premises Identification Numbering Systems

APHIS is responsible for the allocation of nationally unique premises identification numbers in accordance with the national standard. The Premises Allocator Program, through a secure web-based interface with the Standardized and Compliant Premises Registration Systems, will be administered by USDA/APHIS. The functionality, interface specification, etc. for the Premises Allocator is explained in the NAIS Technical Supplement.

The Premises Allocator, in addition to allocating unique premises

numbers to an address or legal land description, will maintain a record of the premises identification numbers allocated and the address or legal land description associated with each Premises number.

- Standardized Premises Identification System

APHIS will provide a Standardized Premises Registration System that States and Tribes may utilize to administer the identification of premises within the area they are responsible. The system will be available through the internet. APHIS will maintain and operate the application and make enhancements to the system. A "configuration control board", made up of users from the States and Tribes utilizing the system, will be responsible to establish and prioritize enhancements to the Standardized Premises Registration System.

- Compliant Premises Registration Systems

APHIS will evaluate other premises registration systems to determine their compliancy with the establish data standards and communication security requirements that Compliant Premises Registration systems must adhere to. When the system is determined as being compliant, APHIS will support the administrator of the system to establish the interface with the Premises Allocator and National Premises Information Repository.

- National Premises Information Repository

USDA/APHIS is responsible for the administration of the National Premises Information Repository. All data maintained in the National Premises Repository is obtained from States and Tribes that use the Standardized or Compliant Premises Registration systems.

The USDA will establish access authorizations for certain Non-producer Participants that need access when performing their roles. For example, AIN Distributors must have lookup access to the Premises Repository to confirm that a producer has a valid Premises Identification Number before processing the distribution AIN Tags to that producer.

IV.A.2. State/Tribal Governments Responsibilities for Premises Registration

Each State/Tribe is responsible for the administration of the premises within the geographic area for which it has authority for animal health programs and related activities.

- Premises Number

The States and Tribes will identify each premises within their geographic area with the Premises Identification Number. Each premises number will be obtained through an interface with the Premises Number Allocator following established protocols. The State/Tribe that utilize the Standardized or a Compliant Premises Registration System will have authorized access to the Premises Number Allocator.

- Premises Registration

The State/Tribe will identify each premises in accordance with data standards defined in the Part II of this UM&R. They may maintain their premises data on the Standardized Premises Registration System provided by USDA or a Compliant Premises Registration system. Regardless of which system is used, the States/Tribes have the responsibility to identify premises and managing the premises data within the geographic area for which they are responsible.

The States will maintain the historic data for 20 years. This will provide Animal Health Officials with the proper contact reference when the current contact person was not associated with the premises during the period being researched in a traceback situation.

States and Tribes shall submit data on all premises as defined in Part II.A. to the National Premises Information Repository using the file transfer protocols provided in the NAIS Technical Supplement. The transmission of data will include new and revised premises records daily and monthly "master" updates. The "master" updates contain all records from the State premises database.

While each state will be required to adhere to the national standards and requirements, other functionality and data collection is at the discretion of the state.

The State Animal Health Authority and Tribal Governments will determine how the registration of premises will be administered on reservations in the states geographic boundries.

IV.B. Animal Identification Components

IV.B.1. APHIS Responsibility for Animal Identification Components

- Animal Identification Numbering System

USDA/APHIS will administer the Animal Identification Numbering (AIN) System and have final authority to make decisions regarding the administration of the AIN System. It is imperative that APHIS implement proper controls that will ensure the uniqueness of the individual AIN numbers and that necessary information relative to the distribution of the numbers is properly maintained. USDA/APHIS, through a formal Agreement, will only allocate Animal Identification Numbers to AIN Managers and will maintain a record of the numbers allocated to each AIN Manager.

USDA/APHIS will also enforce compliance with the AIN Manager Agreement, and deny or withdraw the approval of an AIN Manager for noncompliance with the Agreement, including failure to maintain required records, failure to upload required information to the National Animal ID Database or failure to correlate AINs with premises and/or issuing duplicate numbers. Following a decision to suspend or terminate a noncompliant AIN Manager, any Animal Identification Numbers

not yet assigned to a premises would be retracted and the non-compliant AIN Manager would immediately be denied access to the National Premises Information Repository. The denial or withdrawal of approval of an AIN Manager could be appealed to USDA/APHIS through an appeal process.

- AIN Tags

IV.C.1. State/Tribe Responsibility for Animal Identification

To be Completed

IV.D. Administration of Non-producer Participant

The NAIS provides for the establishment of "Non-producer Participants" to establish individuals and/or entities that will have certain roles and responsibilities in the administration of the program.

IV.D.1. APHIS Responsibility of Non-producer Participants

The USDA will establish enrollment/application procedures for Non-producer Participants and will be responsible for the allocation of unique Non-producer Participant Numbers to such entities/individuals. The enrollment of certain Non-producer Participants will be administered through the State/Tribe Premises Registration Systems in which the individual or entities maintains their primary business office.

The Non-producer Participant Number is a unique 7-character field and is defined in the Part I. The Premises Allocator program that assigns premises identification numbers to a premises will be used to allocate numbers to Non-producer Participants.

- Non-producer Participant Type Codes

The following entities and individuals who may participate in the NAIS have been assigned Non-producer Participants Type Codes. These codes will be used to establish authorization levels to the appropriate databases.

IV.D.2. Non-producer Participants Involved in the Administration of the Animal Identification Numbers

- AIN Managers

AIN Managers are companies that are authorized by the USDA to manufacture approved identification devices or provide approved identification technologies that contain the Animal Identification Number. Additionally, they are AIN Distributors themselves and/or have formal agreements with AIN Distributors. The AIN Managers have access to the AIN Allocator to obtain numbers for use on the devices they manufacturer or provide.

AIN Managers must:

- Demonstrate a functioning computerized system, compatible with NAIS standards, that ensures the uniqueness of the Ani-

Non-producer Participants – Type Codes		
Name	**Non-Producer Participant Type**	**Role and/or Responsibility**
Animal Health Official - Government	1	
Animal Health Official - Accredited Veterinarians	2	
AIN Managers	3	Have certain roles in the management of Animal Identification Number.
AIN Identification Companies	4	Companies that have identification technologies that are used to identify animals utilizing the Animal Identification Number. Note: May also be AIN Managers.
AIN Distributors	5	Distributes identification devices with the AIN imprinted on a device approved by the USDA that is attached or adhered to an animal.
Laboratories	6	Diagnostic laboratories that submit data to the national databases
Order Buyers/Dealers	7	When individuals act as agents for the purchasing of livestock they will have their Non-producer Participant Number recorded at markets in lieu of a premises number
Service Providers	8	Submits animal records to the National Animal Identification Database
Identification Services/Sites	9	Identifies animals with using the AIN on behalf of producer and submits File ID#1 to National ID DB

mal Identification Numbers Allocated to them.

- Submit a record of all Animal Identification Numbers provided to an AIN Distributor using File: ID#1 to the National Animal ID Database in accordance with prescribed protocols.
- Maintain a database of the manufacturer product code for all devices that contained an Animal Identification Number.
- Agree to use only Animal Identification Numbers allocated to them on or with devices approved by the USDA.
- Furnish official identification devices to producers as prescribed by the policy on official identification devices.
- Educate customers on the proper use of official identification devices

- **AIN Distributors**

AIN Distributors are individuals, organizations or companies that provide AIN Tags to a premises that manages or holds livestock. The AIN Distributor must have an AIN Tag distribution agreement with an AIN Manager(s) to be eligible to be an AIN Distributor. As an authorized AIN Distributor, the individual or firm agrees to:

- Validates the Premises Identification Number of the premises that are to receive AIN Tags.
- Submit an Animal Transaction File to the Animal Identification Repository to report the distribution of all Animal Identification Numbers distributed to each premises.

Part V. Regulations and Policies

V.A. Confidentiality

Producer's data/information must be kept confidential / exempt from current Freedom of Information Act (FOIA) requirements including a FOIA exemption to block data from passing among varied governmental agencies.

V.B. Release and Access on data

Only approved animal health authorities at the federal and state level will have access to the NAIS information system. Only information essential to the enhancement of animal disease surveillance and monitoring shall be stored in any state or federally managed database under the NAIS.

Event(s) that will trigger access to the data management system must be characterized as a regulatory need to accommodate disease traceback / traceforward under one of the following:

1. A confirmatory positive test for List A diseases.
2. The declaration of an animal disease emergency by the Secretary of Agriculture.
3. Program diseases (Brucellosis, TB, etc.) traceback to determine the origin of infection.
4. **Domestic or emerging disease surveillance as determined by an industry and government agreement.**

V.C. Transition of Official Animal Numbering Systems

The Animal Identification Number will be recognized in the Code of Federal Regulations as an official numbering system late 2004. Through a transition plan numbers with manufacturer codes and "USA" as the first three characters will be considered as official. The implementation of the Animal Identification Number containing 840 as the first three digits will be initiated in 2005.

V. D. Phase out of existing official numbering systems

The USDA/APHIS and states will terminate the distribution of all identification tags with the Uniform State Series number by July 1, 2005. The recognition of any number other than the USAIN for unique and official identification of an individual animal within certain species groups will be ended July 1, 2006 (see Section V.B. Implementation by Species Group). After this date, such animals requiring unique individual identification will meet the identification requirements according

to the USAIP.

V. E. Official Identification Devices

The AIN and the US (or USDA?) shield will be imprinted on official identification devices. Identification devices will be approved by APHIS as recommended by the NAIS Subcommittee.

APHIS and all cooperating state animal ID agencies shall promulgate regulations, as appropriate and/or necessary, that will permit state and federal animal health authorities to enforce the following current provisions of federal law relative to regulations governing the NAIS, so as to prohibit any person from:

- Removing an official identification device or causing the removal of one unless the animal is terminated (exception: unless the AIN is illegible or the device malfunctions)
- Causing the application of an official AIN Tag to an animal that is currently carrying an official AIN tag
- Altering an official AIN Tag to change its number or to make the number unreadable
- Selling or providing an identification device bearing the US Shield unless so authorized

VI.G. Animal Identification Requirements

USDA/APHIS will work with the states and industry to develop standards for official identification of animals moving in interstate commerce requirements, and the reporting of those movements by July 2005. These standards shall also specify that such movements are reported to the National Animal Identification Database.

Part VI. Species Specific Programs, Producer and Other Stakeholder Responsibilities

V1.A. Introduction

VI.A.1. General Producer Responsibilities

The following explains the general responsibilities of the producers. The specifics requirements are provided in Species Specific Program section.

- Premises Registration

The owner of the premises, or person designated by the owner of the premises must register their location(s) and must keep the required information current. All individuals who own or lease livestock are responsible for having a Premises Number for the holding location(s) of their livestock.

- Animal Identification

Producers should have any animal or lot of animals properly identi-

fied under the NAIS. The regulations shall clearly indicate that the producer holding[1] the animal(s) at the current premises must be held solely responsible for ensuring that each animal or lot of animals is properly identified when required prior to its movement. Producers are urged to utilize identification methods described in the NAIS as soon they become available.

When proper identification requires an AIN Tag, the tag must be properly attached to the individual animal prior to the animal leaving its current premises or at the location of an approved tagging site.

The NAIS permits approved tagging sites for producers to utilize if facilities are not available to permit animals to be properly identified at current premises, provided such movement is approved by the appropriate state animal health authority. An approved tagging site is a location that has applied to and been approved by USDA/APHIS to provide this service. In such situations, animals must be moved to the authorized facility directly from their herd of origin without commingling with other animals.

Auction markets are not required to tag cattle that arrive at their facility untagged; however, they are not prevented from applying to become an approved tagging site if they desire. (Feeder pigs at auction markets do require tags and the auction is responsible for putting them in. The producer pays the market.)

[1] Pertains to the individual who owns the animal. For leased animals the person leasing the animal is responsible. *(move when page breaks are final)*

VI.B. Cattle

VI.B.1 Method of Individual Identification

The NAIS Cattle Working Group (CWG) fully endorses the utilization of ISO compliant radio frequency identification (RFID_ ear tags as the standard for implementing the NAIS in the U.S. cattle industry. The CWG considers RFID ear tags to be the most practical technology today to automate the collection of individual animal identification for cattle. However, the industry remains receptive to other technologies that may prove to be both effective and efficient in either replacing or augmenting RFID.

The official AIN Tag with an RFID transponder incased in the eartag that is compliant with ISO 11784 and 11785 is referred to as the AIN/RF Tag. The 3 digit country code (or manufacture code) and the 12 digit animal number imbedded in the transponder code is also to be printed on the AIN/RF Tag.

- AIN/RF Tag Distribution

AIN/RF Tags may become available through any qualified person, group or organization that becomes authorized by USDA to meet the requirements established for authorized AIN Distributors. Official iden-

tification devices are to be distributed to be readily available for producers to purchase either through telephone order / drop shipment or the retail sector. All utilized distribution systems must accurately report the distribution of AINs to each premises number to the National Animal Records Repository.

Performance Standards for AIN/RF Tags (Cattle)

Description	Performance measurement/requirement
Read Rates and Range (transponder)	
In a laboratory with a neutral electromagnetic environment,	100% read rate in best orientation at 24 inches (60 cm), in a stationary test and a moving test of 1 m/ sec over a passage length of at least 20 inches (50 cm).
In a field test environment	Transponders must be reliably machine read without regard to orientation by a standardized dual HDX/FDX reader, as cattle move by in single file in a passage 48 inches (1.2 m) wide with animals moving at 4 mph (1m/sec) at a read rate of 99.5%.
Transponder security	The official number encoded within each transponder must not be able to be altered and must be contained within tag.
	Tags will be tamper-evident and impossible to unseal without visible evidence of tempering.
	The tag is designed for one-time use. The tag design makes it impossible to remove and re-apply the tag securely without damaging the portion c ontaining the transponder.
Tag toxicity/animal injury	Tags shall do no harm to animal or affect its health or well-being.
	Tags will not cause chemical contamination of meat or edible offal or damage the hide
Tag deterioration	There will be no diffusion of colorant from tag
	There will be no apparent physical deterioration (other than color) due to detrimental effects to UV light, rain, heat (45C) and cold (-30C) or other environmental influences such as chemicals, mud, urine and manure for at least 5 years of wear.
Tag plasticity	Devices will not split or crack under normal use.
Transponder failure rates	Transponder within the tag shall be reliably machine readable for the expected lifetime of animal
Tag retention rates	When applied in a manner approved by the manufacturer, the average tag loss shall not exceed 1% per annum under normal field conditions
Tag coupling/tensile strength	Evaluation standards conform to ICAR testing standards and at minimum ISO standards 37 and 527.
Tag abrasion resistance	Tag shall not exhibit damage or change due to wear and will be subjected to ICAR testing standards and at minimum ISO standard 9352.
Tag applicator devices	A single action applicator that provides minimal risk of pain or distress, that safeguards animal and operator from danger, guards against the spread of disease.
ID device visual characteristics	The tag color shall be white.
	Print color shall be black or in contrast to the background color or pattern.
	Printed information on the tag will require a visible US logo and the animal identification number (AIN)
	Print size for bovine tags shall be a minimum height of 0.2 inches (5 mm) for numbers, letters and the official logo.
	The US Shield shall have a minimum width of 0.2 inches (5 mm).
	The printing and color contrast of the US Shield, lettering and numbers are to remain readable at a distance of 30 inches (0.75 m) for the expected lifetime of the tag.

- Performance Standards for AIN/RF Tags - Cattle

VI.A.2. Individual Animal Identification Requirements:

Three basic events "trigger" the requirement for official individual animal identification of cattle:

1. Change of ownership
2. Interstate movement
3. Multiple owners commingle their cattle.

When individual identification is required, the owner / seller is the person ultimately responsible for applying the official RFID tag to all individual animals offered for sale, moved interstate or commingled with other owners cattle. This responsibility may be accomplished at the location where the cattle reside prior to change of ownership or at some other intermediate tagging station or at first point of concentration, but always prior to commingling with other cattle including when commingled on trucks or trailers, livestock markets, exhibitions, rodeos, joint grazing agreements, etc.

SPECIAL NOTE: The combined logistical issues of location, management and transportation may mean that, as a condition of trade, individual ID when required, gets installed at some later point at the receiving facility and reported by the buyer for the seller utilizing only the sellers AIN tags as the official ID.

The establishment of approved tagging services and tagging sites may provide alternatives for producers to tag their cattle in cases when facilities at one's premises are not available.

Producers are encouraged to identify calves at birth or at the earliest date possible and to report birth dates to the National Animal Identification database to support animal disease issues when the age of an animal is needed. When the precise date of birth is not known, the approximate birth date within 2 to 3 months is recommended. However, the "date of birth" remains an optional field for reporting to the National Animal Records Repository.

Producers are encouraged to utilize and record a second visible tag as a matter of "best management practices". This additional visible tag could enhance day-to-day management needs and could serve as a cross reference in the event of a lost official tag.

Exceptions To The Individual ID Requirements Include:

- Cattle moving under a Brand Inspection Certificate that officially identifies the premises and owner, with individual identification occurring at the receiving location, if required.
- Cattle moving to another premises when they remain under the same person's control (ownership) and when they are not

co-mingled with cattle from another owner's premises

- When adjoining premises under the same ownership and/or control cross state lines, cattle may move among the premises without requiring official individual identification with approval of the respective animal health authorities.

VI.B.3. Reporting Cattle Movements (minimum requirements)

Three basic events trigger the need for reporting cattle movements:

1. Change of ownership
2. Interstate movement
3. When multiple owners commingle their cattle.

All cattle that change ownership, move interstate, or are commingled with other producer's cattle are to have their official identification and subsequent movement reported to the National Animal Identification Database. Forms of reporting may include electronic Interstate Certificate of Veterinary Inspection (ICVI), (where available), electronic or hardcopy invoice, and/or other methods as deemed appropriate by state animal health authorities.

Reportable commingling includes, but is not limited to; cattle commingled with other producers cattle on trucks or trailers, livestock markets, exhibitions, rodeos, joint grazing agreements, etc.

The reporting of cattle movements shall be the sole responsibility of the receiving premises or person responsible for the animals at the receiving premises. The receiving premises are the premises to which animals are moved and at which a responsible party (not necessarily the buyer) is responsible for reporting that identified animals have arrived.

SPECIAL NOTE: In private treaty transactions, where a marketing agent may not exist, the seller is encouraged to also report such movement events under the NAIS. If the receiving premises fail to report, this self-policing crosscheck will help maintain the integrity of the NAIS, protect against liability of not knowing the final destination premises when cattle are sold, and verify that the reports are accurate and complete.

Required movement events are to be reported within 24 hours or the close of the next business day in order to track all animal movements within the 48 hour goal of the NAIS.

Confirmation shall be available to both the seller and buyer involved that the reported movement has been entered into the National Animal Records Repository.

State Brand Inspection Programs will continue to play an integral role in the cattle industry. The Cattle Work Group believes that the integration of State Brand Inspection protocol with the NAIS can work for the benefit of all. To assist in the recognition / integration of the two

identification systems, the Work Group recommends that the State Brand Inspection Certificate number be included in the NAIS database.

Private enterprise providers are expected to have a role in supporting the data collection and information system infrastructure. However, the ultimate oversight authority and responsibility for the tracking capabilities of the NAIS information system, remains vested with the USDA/APHIS, Tribal Nations, State animal health authorities, State animal identification agencies and/or other entities authorized by State law.

Reporting of Cattle Movements is OPTIONAL (not required) when:

- Cattle moving within premises or to other premises under the same person's control and / or ownership, even when commingled with other cattle under the same control or ownership.
- When adjoining premises under the same ownership and/or control cross state lines, cattle may move among the premises without officially reporting the movement, provided the approval of the respective animal health authorities.

VI.B.4. Import / Export Identification and Reporting Requirements

All cattle being exported from the U.S. must be identified with an AIN/RF Tag prior to being loaded for export. The Animal Identification Number, the Premises Identification Number from where the animal was last received, and the Premises Identification Number of the export facility must be reported to the National Animal Records Repository. The AIN of the animals being exported and the Premises ID Number of the export facility will also be recorded on the U.S. Origin Health Certificate which accompanies the animal(s) to the country of destination. USDA/APHIS port veterinarians will report to the National Animal Records Repository the AINs of the animals being exported, date of export shipment and validation that the animals have been received at the export destination location.

All cattle arriving into the U.S. must be identified with an official individual number of the country of origin and/or official RFID tag of the country of origin and be accompanied by a USDA/APHIS approved International Certificate of Identification which shall include a listing of the age and sex of all such cattle being imported. If an animal or groups of cattle do not contain any official RFID individual animal identification from the country of origin, the animal(s) shall be off-loaded at the U.S. border, or final destination location, and be individually identified with an AIN/RF Tag. USDA/APHIS animal health officials or port veterinarians will assume responsibility for reporting to the National Animal Records Repositoy all official individual numbers of imported cattle with

or without RFID tags, including any cross-referenced number on the animals at the time of entry, the date of import, date of tagging with the official AIN/RF Tag (if not previously tagged), premises of last destination prior to being imported into the U.S. and the destination premises within the U.S. where the cattle are to be shipped, with subsequent validation that the cattle have been received at their designated U.S. premises.

DRAFT OF THE STATE'S STANDARDS FOR IMPLEMENTING THE NATIONAL ANIMAL IDENTIFICATION PROGRAM (NAIS)

(Common Features Among Species)
Subcommittee of NAIS Subcommittee of the Secretary of Agriculture's Foreign Animal Disease Committee

- All involved species groups and governmental agencies have agreed to the goal of being able to trace individual animals or animal groups to their origins within **48 hours** of a foreign or reportable animal disease discovery.
- Premises registration numbers will be allocated by a federal system. Premises data storage and management information may be done either at the state level, federal level, privately or a combination of one or more of the aforementioned. Premises registration is the responsibility of each state or tribe.
- Clear consensus of data storage location of animals and group/lot could not be reached. The subcommittee moved to refer this decision to the USAHA ID committee.
- ID device locations for other species will be designated by the species working groups.
- Animals will be group/lot identified where production systems warrant. Animals will be individually identified where production systems warrant. RFID technology with individual visual number systems will be used where appropriate, however, may later be replaced by improved methods. RFID devices (tags, implants, etc.) when used will be ISO 11784 and 11785 compliant.
- Recording and reporting animal movement and sighting events will be determined by state and federal animal health officials minimally, however, **change of ownership** involving intrastate and interstate commerce, **interstate movement** and **animal commingling** by multiple owners such as occurs at exhibitions, markets, transport, rodeos or joint grazing will require reporting to the system. Consideration should be made to states or tribes which can demonstrate their Brand Inspections Program's ability to accomplish the **48 hour** trace back goal.

Current customary production practices will be considered in these decisions.

- Information will be accessed and used solely by state and federal officials for management of foreign or program animal disease occurrences.
- Auction markets and buying stations are not required to tag animals that arrive at their facility untagged; however, they are not prevented from applying to become an approved tagging facility if they desire.

PROGRAM STANDARDS FOR STATE IMPLEMTATION OF THE NATIONAL ANIMAL IDENTIFICATION SYSTEM

ADDENDIUM SUPPORTING CATTLE INDUSTRY IMPLEMENTATION

Implementation Guidelines:

- The NAIS will be conducted through cooperative agreements involving USDA/APHIS, State Animal Health Authorities, Tribal Nations and U.S. cattle industry utilizing the recommended USAIP standards for premises ID and (ISO code 11784 based) individual animal ID.
- Producer's data/information will be kept confidential / exempt from current Freedom of Information Act (FOIA) requirements including a FOIA exemption to block data from passing among varied governmental agencies.
- Only approved animal health authorities at the federal and state level will have access to the information system(s) supporting the NAIS.
- Only information essential to the enhancement of animal disease surveillance and monitoring shall be stored in any state or federally managed database under the NAIS.
- Event(s) that will trigger access to the data management system must be characterized as a regulatory need to accommodate disease traceback / traceforward under one of the following:
  1. A confirmatory positive test for List A diseases.
  2. The declaration of an animal disease emergency by the Secretary of Agriculture.
  3. Program diseases (Brucellosis, TB, etc.) traceback to determine the origin of infection.
- Existing State Brand Inspection Systems will be recognized and utilized, whenever possible, for traceback. USDA/ APHIS will integrate State Brand Inspection with the NAIS and State

Animal Health Agencies.

- Implementation of the NIAS will be directed by the establishment of Uniform Methods and Rules.

Methods of Identification:

- All premises that produce, manage and/or hold cattle are to be identified through the State or Tribal animal health authority to achieve a standard national premises system.
- ISO compliant RFID ear tags of distinct color, so as to readily disclose that the official ID device is intact, will be the technology used to officially individually identify cattle.
- The RFID code (3 digit country code for the United States - 840 and a 12 digit animal number) imbedded in the transponder is also to be printed on the RFID Tag.

Tag Distribution:

- **Official RFID ear tags may become available through any qualified person, group or organization that becomes certified by USDA to meet the requirements established for official US Animal Identification Number (USAIN) Managers or USAIN Tag Distributors.**
- Official identification devices should be distributed under a certified USAIN distributor and be readily available for producers to purchase directly, via telephone, electronically or written order from the retail sector.
- All certifiable distribution systems must have the ability to securely associate the USAIN to the appropriate premises number.

Individual Animal Identification Requirements:

- Any one of three basic events trigger the need for official individual animal identification:
  4. Change of ownership
  5. Interstate movement
  6. Multiple owners commingle their cattle.
- The owner / seller is the person ultimately responsible for applying the official RFID tag to all individual animals offered for sale, moved interstate or commingled with other owners cattle.
- It is considered commingling when multiple owners mix their cattle at a common place and time including when commingled on trucks or trailers, livestock markets, exhibitions, rodeos, joint grazing agreements, etc.

SPECIAL NOTE: The combined logistical issues of location, management and transportation may mean that, as a condition of trade,

individual ID when required, gets installed at some later point at the receiving facility (but prior to commingling with other cattle) and reported by the buyer or seller's agent for the seller utilizing only the seller's AIN tags as the official ID.

- Producers are encouraged to identify calves at birth or at the earliest date possible and to report birth dates to the National Animal Identification database to support animal disease issues when the age of an animal is needed.
  - ♦ When the precise date of birth is not known, the approximate birth date within 2 to 3 months is recommended.
- Producers are encouraged to utilize and record a second visible tag as a matter of "best management practices" to enhance day-to-day management needs serve as a cross reference in the event of a lost official tag.

Exceptions To The Individual ID Requirements Include:

- Cattle moving under a Brand Inspection Certificate that officially identifies the premises and owner, with individual identification occurring at the receiving location, if required.
- Cattle moving to another premises when they remain under the same person's control (ownership) and when they are not co-mingled with cattle from another owner's premises
- When adjoining premises under the same ownership and/or control cross state lines, cattle may move among the premises without requiring official individual identification with approval of the respective animal health authorities.

Reporting Cattle Movements (minimum requirements):

- Three basic events trigger the need for reporting cattle movements:
  4. Change of ownership
  5. Interstate movement
  6. When multiple owners commingle their cattle.
- All cattle that change ownership, move interstate, or are commingled with other producer's cattle are to have their official identification and subsequent movement reported to the National Animal Identification Database.
- Forms of reporting cattle movements may include:
  - ♦ electronic Interstate Certificate of Veterinary Inspection (ICVI), (where available)
  - ♦ electronic or hardcopy invoice
  - ♦ Other methods as deemed appropriate by state animal health authorities.

- Reportable commingling includes, but not limited to, cattle commingled with other producers cattle on:
  - ♦ trucks or trailers
  - ♦ livestock markets
  - ♦ exhibitions
  - ♦ rodeos
  - ♦ joint grazing agreements etc.
- The reporting of cattle movements shall be the sole responsibility of the receiving premises or person responsible for the animals at the receiving premises.

The receiving premises are the premises to which animals are moved and at which a responsible party (not necessarily the buyer) is responsible for reporting that identified animals have arrived.

SPECIAL NOTE: In private treaty transactions, where a marketing agent may not exist, the seller is encouraged to also report such movement events under the NAIS. If the receiving premises fail to report, this self-policing crosscheck will help maintain the integrity of the NAIS, protect against liability of not knowing the final destination premises when cattle are sold, and verify that the reports are accurate and complete.

- Required movement events are to be reported within 24 hours or the close of the next business day in order to track all animal movements within the 48 hour goal of the NAIS.
- **Confirmation shall be available to both the seller and buyer involved that the reported movement has been entered into the National Animal Identification Database.**

Reporting of Cattle Movements is OPTIONAL (not required) When:

- Cattle moving within premises or to other premises under the same person's control and / or ownership, even when commingled with other cattle under the same control or ownership.
- When adjoining premises under the same ownership and/or control cross state lines, cattle may move among the premises without officially reporting the movement, provided the approval of the respective animal health authorities.

Export Identification and Reporting Requirements:

- All cattle exported from the U.S. must be identified with an official NAIS RFID tag prior to being loaded for export.

- The official tag number, the premises number from where the animal was last received, and the premises number of the export facility must be reported to the NAIS Database.
- The official individual numbers of the animals being exported and the premises ID number of the export facility will also be recorded on the U.S. Origin Health Certificate which accompanies the animal(s) to the country of destination.
- USDA/APHIS port veterinarians will report to the NAIS Database the official individual numbers of the animals being exported, date of export shipment and validation that the animals have been received at the export destination location.

Import Identification and Reporting Requirements:

- All cattle imported into the U.S. must be identified with an official individual number of the country of origin and/or official RFID tag of the country of origin.
- All cattle imported will be accompanied by a USDA/APHIS approved International Certificate of Identification which shall include a listing of the age and sex of all such cattle being imported.
- Imported cattle lacking an official RFID individual animal identification from the country of origin shall be off-loaded at the U.S. border, or final destination location, and be individually identified with an official NAIS RFID tag.
- USDA/APHIS animal health officials or port veterinarians will assume responsibility for reporting to the NAIS Database all official information to include:
  - Individual numbers of imported cattle with or without RFID tags, including any cross-referenced number on the animals at the time of entry.
  - The date of import, date of tagging with the official NAIS RFID tag (if not previously tagged).
  - Premises of last destination prior to being imported into the U.S. and the destination premises within the U.S. where the cattle are to be shipped, with subsequent validation that the cattle have been received at their designated U.S. premises.

STANDARDS FOR STATE IMPLEMENTATION OF THE NATIONAL ANIMAL IDENTIFICATION SYSTEM

SWINE
Identification of Feeder Swine

Phase I and II

1. 9CFR 71.19requires interstate movement of swine to be accompanies by a Certificate of Veterinary Inspection (CVI) or movement certificate. The sellers name and address is required to be recorded on the CVI or movement certificate. The sellers premises ID must be recorded on the CVI or movements certificate.
2. Pigs moving to market, must be accompanied with travel documents that have the sellers premises ID number recorded in a visible numeric format and in a barcode format (both on the same label to avoid mistakes). Upon arrival at the packer, the premises number will be scanned or recorded, linking the packer's lot tattoo number and the animals' owner to the premises ID.
3. Intrastate and interstate movement of feeder swine. NAIS must comply with 9 CFR.

Farrow to Finish Operations

1. Swine that were born and raised on one premises may go to slaughter accompanied by travel documents carrying the premises ID of the premise of origin.

One off-site feeding premises (nursery/finisher operations, wean to finish barns, farrow to finish farms with light pig floors)

1. Upon arrival of pigs to the feeding floor (either nursery or wean to finish barn), a lot number or group/lot identification (G/L ID) should be created. A lot number or G/L ID can be generated for groups of pigs arriving from multiple shipping premises. These numbers may be created for both static and dynamic groups [*Note: The G/L ID may eventually be recorded into a database and will need to be a standardized, unique number. During Phase I and II, it will not be mandatory to assign a unique G/L ID rather any numerical identifier of groups or lots of swine will be acceptable for farm records. However, due to the fact that it is an easy means to create a unique number, production systems will be encouraged to adopt this system.*]
2. The receiving farm and production company must also maintain records capturing the date pigs were received, the num-

ber received and their origin, pig removals and destinations etc.

3. Swine moving to slaughter must be accompanied by a travel document carrying the premises ID of the last feeding premises. It is the responsibility of the last premises to have the link to or the actual documented history of the group.

Two off-site feeding premises (three site systems, nursery - light pig floor, finisher-light pig floor)

1. One or two Static groups moved to a Static group: For all movements, the pigs may arrive with travel documents bearing the individual animal numbers (if interstate out of production system) or the lot number or the G/L ID generated at the previous site. The second premises and/or production system will maintain records of dates, animal additions, removals, source premises and destination premises, etc. When the animals go to slaughter, the travel documents will bear the last feeding premises.
2. Static Groups or pigs from static groups to a Dynamic group: If the dynamic group exists within a production system, regardless if this occurs intrastate or interstate this may be allowed without individual animal ID, provided that proper pig movement records are maintained on site as well as within the production company. Thus, like 1 above, the pigs will arrive with travel documents bearing the individual animal numbers or the lot number or the G/L ID generated at the previous site. The second premises and/or production system will maintain records of dates, animal additions, removals, source premises and destination premises, etc. When moved to harvest, the travel documents will bear the last feeding premises. It is understood by the production system that if a trace-back is necessary, it may involve the whole system, when pigs from multiple sources are commingled.

   When pigs move outside of a production system during transfer from a static to a dynamic group, unique individual ID is required, be it an interstate or intrastate transfer. For individual identification of feeder swine, USAIP will recognize metal tags, ear notches plus NPID tag of source premises, ear tattoo plus NPID tag of source premises and AIN tags. [*Note: the working group will re-address the ID devices.*] The second premises will maintain records of shipping premises, shipment dates, number of animals added and removed etc, linking the individual ID with the shipping premises. When animals from this site are moved to harvest, the travel documents will bear the last feeding premises ID.

3. Dynamic Group or pigs from dynamic group to Static Group: Pigs arrive with travel documents bearing the individual animal numbers (if interstate out of production system) or lot number or G/L ID generated at the previous site. The second premises will maintain records of shipping premises, shipment dates, number of animals added and removed, etc. When they move to harvest, the travel documents will bear the last feeding premises.
4. Dynamic Group to Dynamic Group: Pigs are allowed to exist in one Dynamic group in their lifetime. Movement from one dynamic group to another will require unique individual ID. For individual identification of feeder swine, USAIP will recognize metal tags, ear notches plus NPID tag of source premises, ear tattoo plus NPID tag of source premises and AIN tags. [*Note: the working group will re-address the ID devices.*] On farm records must link the individual unique ID with the shipping premises. When animals move from this site to harvest, the travel documents will bear the last feeding premises ID. Official tags should be collected at the plant and stay with the carcass as long as possible.

Three off-site feeding premises (nursery to finisher to light floor, nursery to finisher to isolation unit)

1. Static to Static to Static: See 1 above
2. Static to Static to Dynamic: see 2 above
3. Static to Dynamic to Dynamic: see 4 above
4. Static to Dynamic to Static: see 2 and 3
5. Dynamic to Static to Dynamic: see 4 above
6. Dynamic to Dynamic to Static: See 4 above
7. Dynamic to Dynamic to Dynamic: See 4 above

Phase III

Once the infrastructure is in place to allow for effective reporting of animal identification information, feeder swine that are required to carry a unique individual identification will be encouraged to use an AIN number. Ear notches may be used as a backup for or in support of a unique identifier

Identification of Breeding Stock

1. Presently there are multiple forms of official identification approved for use in breeding stock during interstate commerce outside of a production system (9CFR). These include metal ear tags with unique numbers, ear tattoos, ear notches, ear tags and back tags. One goal of the NAIS is to provide for a unique, recognizable, and uniform ID system for cull breeder

swine. Another goal is to allow rapid trace-back of cull sows and boars to the breeding farm in the event of a disease outbreak. USAIP will not negate other individual identification regulations from 9CFR for interstate commerce.

2. 9 CFR allows for multiple official ID devices. NAIS recommends three forms of official tags in breeding animals – a back tag, a national premises identification number (NPID) and an animal identification number (AIN). To enable uniform ID recognition through the marketing system one form of tag must be selected for the initial implementation. It is recommended that the NPID tag be used for the initial implementation in culled breeding swine.
3. NAIS NPID tags will remain with the animal from the breeding farm, through any collection channels and on to slaughter. NPID tags should be easy to remove at harvest with minimum hazard to the abattoir operator. The NPID tags should also be visibly distinct, easy to recognize as a NPID tag, yet at the same time adaptable enough to allow for the adoption of new technology. Industry recommends that a working group of packers and tag manufacturers conduct a USDA-funded implementation study to evaluate tag materials and styles with acceptable retention histories for ease of harvest. Based on the pilot results suitable tag system(s) will be recommended.
4. Regardless of which NAIS tag system is used, on-farm movement records must be maintained for introduction and removal of breeding stock from each premises.
5. It is recognized that replacement animals move interstate outside of production systems with required official individual identification. In addition, replacement animals may also move interstate within a production system without individual identification (9CFR). A NPID tag must be inserted, preferably on entry to the breeding herd, but at minimum, before they enter the marketing channels as cull animals.
6. 9 CFR requires first point of collection to be responsible for applying identification to cull swine via back tagging. Cull animals that arrive at collection points with NPID tags meet this identification requirement. All cull swine without NPID tags must be back-tagged at the collection point. The collection point will be reimbursed by the non-compliant producer/owner. Failure to properly apply a NPID tag before delivery is a process noncompliance which may require regulatory action against the submitting producer. [*Note: the NAIS Subcommittee has asked the Pork Industry Work Group to consider the need for unique individual ID applied at the farm for cull sows/boars delivered to an auction market or those that may not go directly to slaugh-*

ter following commingling.]

7. Animals that do not go to harvest after commingling will require identification to the collection point. Assurance of properly identified animals re-entering the market channels in this manner is the collection point's responsibility. Failure to properly apply identification before re-entering market channels is a process non-compliance which may require regulatory action against the submitting collection point. [*Note: the NAIS Subcommittee has asked the Pork Industry Work Group to consider the need for unique individual ID applied at the farm for cull sows/boars delivered to a collection point where re-entry into market channels is a possibility.*]
8. For animal welfare purposes it is vitally important to quickly and visually determine if sows and boars are bearing official identification, especially during hot weather. Since some animals will lose tags in transit/handling, any cull animals without a NPID tag will be required to be back-tagged by the collection point. This back-tag process will be available until replaced with superior alternatives. All collection points will maintain records of who they purchased animals from, the number purchased and the date of delivery, and to whom they sold animals, the date and the number sold, in accordance with the Packers and Stockyards regulations. Records must be kept for two years. There will be no need to routinely report this information, but it must be made available upon request for trace back purposes.
9. At the abattoir, practices must be implemented to: a) maintain the integrity of the lot and individual carcasses through the harvest process to the inspection station, b) collect swine ID and samples from the carcasses segregated by submission lot and c) record in-coming lot size. Official tags will be removed at the point at which mandatory blood samples are drawn and then will be physically associated with the carcass to meet USDA requirements.
10. The packers will maintain records of whom they purchased animals from, the number of head and the date, in accordance with the Packers and Stockyards Act. Records must be kept for two years. There will be no need to routinely report this information, but it must be made available upon request for trace back purposes.
11. When an electronic format for NAIS tags or other emerging technology is to be implemented, systems and responsibility assignments may be altered but the basic lot and carcass data described above must be captured.

Purebred and Crossbred Swine Identification – Show and/or Sale

Phase I and II

1. Count, state or national terminal market hog show
   a. Purebred pigs can be identified by ear notches and registration papers and/or carries another form of official identification upon arrival. Records reflecting past movements must be made available upon request.
   b. Crossbred pigs require official unique identification upon arrival. Records reflecting past movements must be made available upon request.
   c. Prior to shipping, show management will ensure the terminal show pigs have unique tattoos or official tags (depending on skinning vs. scalding market destination) positively correlating the pig's identification to its previous premises history.
2. Prospect pig show and sale
   a. Purebred pigs brought to the event can be identified by ear notch/registration papers.
   b. Crossbred pigs will require official unique individual identification.
   c. Show management will record the individual animal identification and the source premises. Premises identification labels provided by exhibitors and sellers may be required by show management to facilitate recording all sources of animals at the event.
   d. The pig owner will make records available concerning the pig's previous premises and movements upon request to show management or animal health officials. Upon sale, copies of the animal's movement records will be provided to the pig buyer.
   e. Pig buyer will be required to maintain animal movement and premises records for trace-back purposes for 24 months.
3. Jackpot (non-terminal) show
   a. Purebred pigs brought to the event can be identified by ear notch/registration papers.
   b. Crossbred pigs will require official unique individual identification.
   c. Show management will record the individual animal identification and the source premises. Premises identification labels provided by exhibitors and sellers may be required by show management to facilitate recording all sources of animals at the event.

d. The pig owner will make records available concerning the pig's previous premises and movements upon request to show management or animal health officials.
e. Exhibitors must document all events that the pig has been exhibited at during the past 24 months.

4. Breeding stock show and sale
   a. Purebred breeding stock brought to the event can be identified by ear notch/registration papers.
   b. Crossbred breeding stock will require official unique individual identification.
   c. Show management will record the individual animal identification and the source premises. Premises identification labels provided by exhibitors and sellers may be required by show management to facilitate recording all sources of animals at the event.
   d. The breeding stock owner will make records available concerning the animals' previous premises and movements upon request to show management or animal health officials. Upon sale, copies of the records will be provided to the pig buyer.
   e. Buyers will be required to maintain animal movement and premises records for trace-back purposes for 24 months following sale or termination.
5. Private treaty seed stock sales
   a. Swine must be identified by official methods.
   b. Source premises identification and destination premises identification records must be maintained by both seller and buyer for 24 months following sale or termination.
   c. A premise tag identifying the current owner must be present at the first point of sale for food animal market purposes.

Phase III

Once the infrastructure is in place to allow for effective reporting of animal identification information, purebred animals will be required to carry a unique individual identification for shows or sales. Ear notches do not represent a unique number and therefore will not be a functional means of identification in a database. The use of an AIN number will be encouraged. Ear notches may be used as a backup for or in support of a unique identifier.

Identification of Out and Off Market Swine
Definition of "Out Market" Swine:

Out market swine are those swine that are not accepted for slaughter at the first or subsequent receiving packer for processing. Many of these hogs were unintentionally shipped to the packing plant. Reasons for non acceptance can include but are not limited to the follow-

ing:

1. Swine whose live and or projected carcass weights are above or below the specification set forth by the receiving packer
2. Swine with physical abnormalities and or blemishes
3. Swine who show evidence that their carcass composition will not meet receiving packer specifications
4. Swine who show evidence of not possessing desired genetic heritage

Definition of "Off" Swine:

"Off " swine are those swine that have been identified at the farm as not conforming to the specifications of a standard packing facility (see list above) and are thus sent through alternative marketing channels directly "off" the farm. These alternative markets comprise light or blemish hog auctions, collection stations and dealers. When a large enough group is assembled from multiple sources, the swine will be transported to a packing plant set up to receive non-standard animals. In some cases, the swine will be concentrated through two collection points in order to create a large enough load to enable transport to a packing plant.

Identification of "Out Market" Swine

Upon arrival at the first receiving packer those swine that are not accepted for processing and are intended to be transported from the first receiving packer premises to either a collection point or a second packer, will be tattooed with a letter or number sequence (lot id) correlating to the premises and owner from which they originated. Records linking the lot id with the owner and premises of last feeding will already be generated when the packer scans in the number of the premises of last feeding and links it with the owner. The first receiving packer shall keep a record of the tattoo administered to the out swine and the premises from which it originated.

If the swine are sent directly to a second receiving packer, they will be tattooed with the lot ID to correlate with the owner of record at the time the swine is accepted for processing.

If the swine are sent to a collection point, dealer or sorting facility, they will be identified with a tattoo identifying the premises that received the swine. Records of the collection point will be maintained to document the shipper of the swine, previous premises, date of receipt and date of identification required under 9CFR

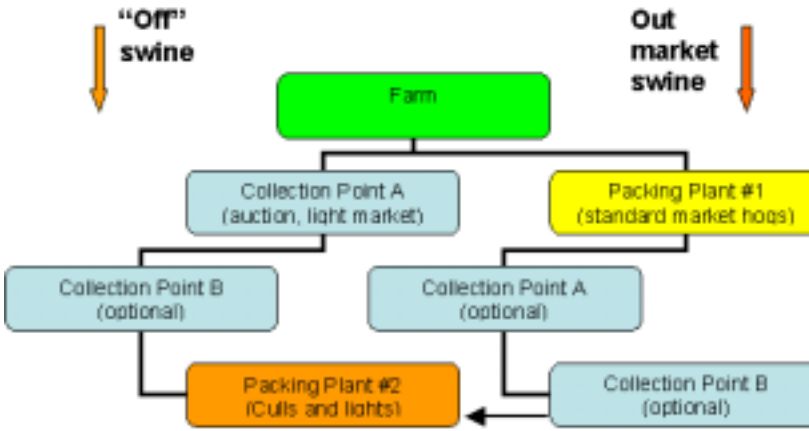
If the swine are sent to a second collection point, they will be tattooed again to that dealer/collection point and records will be maintained to document the shipper, the date received and last owner from which it was received.

Identification of "Off" Swine

Upon arrival at the first receiving collection point, the swine will be tattooed with a letter or number sequence (lot id) correlating to the premises from which they originated. Records linking the lot id with the owner and premises of last feeding can be generated when the collection point scans in the number of the premises of last feeding and links it with the owner. The first receiving collection point shall keep a record of the tattoo administered to the off swine and the premises from which it originated.

If the swine are sent directly to a second receiving packer, they will be tattooed to correlate with the owner of record at the time the swine is accepted for processing.

If the swine are sent to a second collection point, dealer or sorting facility, they will be identified with a tattoo identifying the premises that received the swine. Records of the collection point will be maintained to document the shipper of the swine, previous premises, date of receipt and date of identification required under 9CFR.



Premises ID

The collection points may choose to use premises ID labels for shipment to the packer. The premises ID number should be both in a visible numeric format and in a barcode format (both on the same "label" to avoid mistakes) and attached to the travel documents. Upon arrival at the packer, this number will be scanned or recorded, linking the packer's lot tattoo number and the animals' owner to the premises ID.

Tattooing Program

[*Note: Off and out hogs are being tattooed to the collection points 2-3 times. The Working Group members associated with these mar-*

kets felt that this system is currently working well. It was proposed to put together a working group to evaluate this system and be able to report on it back to NAIS.]

Tattooing can only be used if the off and out hogs are destined for a scalding market destination. If the market destination employs skinning, official individual identification must be used to provide for trace back. The use of the AIN is recommended.

Dr. Woods stated that regarding the APHIS-VS ICVI project, I feel we will do our industry a great disservice if we do not give markets a system in which they can participate. I am happy we are moving forward with that system. We will have a way to move and identify group/lot animals and still meet 48 hour traceback requirements. In markets, premise retrieval is a challenge. Relative to NAIS distribution of AIN tags, we need to develop a mechanism to make tags readily available to producers and market operators to enable rapid effective identification of livestock in marketing channels. Based on experiences with animal disease control Uniform Methods and Rules, this document will require frequent review and upgrading as we progress with implementation of the NAIS.

Dr. Hillman – Thank you Dr. Woods for the great amount of work that you and your subcommittee members expended in development of the draft State Standards for Implementation of the National Animal Identification System. We will discuss actions relative to the report in the Business Session of our Committee meeting.

Database Management Relative to Animal Identification System for an Effective Disease Control System

Management of animal identification data remains one of the major points of disagreement among stakeholders and agencies. In order to address the data and database management issue, representatives of several stakeholder groups and USDA were asked to discuss their needs and expectations. These presentations follow:

Report from the IT Working Group **– Presented by Robert Fourdraine, Chair.**

Seven conference calls were held with 30 committee members.

The purpose of this document is to identify the different benefits between two data repository architectures as applied towards the United States Animal Identification Plan (USAIP).

The September 2003 USAIP proposal indicated that USAIP could be administered as a single, central database, and/or as a decentralized collection of linked databases (page 9). This centralized database concept consists of two components, a Premises database and a National Animal Identification database. This centralized database repository would be the sole storage area for all the USAIP required data.

The data stored in this repository is to be used by the USDA to perform a 48-hour trace-back of animals and premises exposed to an incident of a Foreign Animal Disease. Per the USAIP, the USDA is tasked with administering this centralized database.

Recently, a proposal was submitted by the Beef Information Exchange (BIE) to describe how a decentralized approach could work in harmony with the centralized system. The BIE is a consortium of five independent companies whose mission is to meet the identification/tracking needs of the Beef Industry.

The BIE proposal fleshes out the decentralized approach mentioned in the September 2003 USAIP document and defines a new role in this architecture known as a "Data Trustee." This "Data Trustee" role allows for decentralized data repositories, to be managed by private companies or by state animal health officials, which will work in conjunction with the USDA centralized database. The Data Trustee approach is viewed as an option to producers and processors, not as a replacement for the single, central USDA database. The main purpose for this proposed change is to address the Beef Industry participants' concerns regarding data confidentiality and privacy of reported information.

The "Data Trustee" role in the decentralized architecture allows for multiple entities/companies to register with USDA for the privilege of storing USAIP data for their clients in lieu of immediately transmitting full movement data to the centralized USAIP repository. These Data Trustees will transmit at a frequency deemed appropriate by USDA the USAIN of each animal in their database along with the fact that data for these animals is being held by the reporting data trustee. Full data on each animal would be reported to the USAIP central repository only when a Foreign Animal Disease incident (or approved "triggering event") occurs or USDA launches an animal investigation/surveillance; and then, the data transmitted from the Data Trustee to the USAIP system will be limited to specific animal/premise data associated with the health incident. This process could help ensure information privacy for the production chain participants as the Data Trustees only share data with the central system on a "need to know" basis. It is envisioned that there would be many different data trustees and that producers and processors would contract with the Data Trustee they trust. USDA would need to certify each Data Trustee and could assign the industry trade association for that species or other designee to provide oversight, auditing, and recommendations for re-certification of each Data Trustee. The Data Trustee model is based upon the same high level architecture as is used for the global credit card system.

The proposed Data Trustee approach is intended to work in parallel with a centralized system and be offered to certain species groups and industry groups who have issues with the centralized system. The Data

Trustee approach is not intended to replace the centralized system architecture. In the remainder of this document, an analysis is performed outlining the strengths each of these architectures has over the other.

Centralized Repository "Strengths"

The following are the strengths of using a centralized repository design as compared to a de-centralized repository design for the USAIP application.

1. Simpler/Less Complex Design

By the very nature of the centralized repository design, it is less complex than the de-centralized repository design. There are fewer systems and processes involved with the centralized architecture which does make it easier to manage. In the BIE proposed de-centralized architecture, there is a new process defined involving the Data Trustee. The de-centralized design involves the following steps:

- **The "pushing" of data from the IT Service Provider (a data collector) to a Data Trustee (which may in fact be one in the same)**
- **The "pulling" or requesting of data by the USDA centralized system from each Data Trustee**

The centralized architecture, by contrast, only involves "pushing" data from the IT Service Provider to the USDA centralized system.

There are numerous implications to adding this additional layer to the design. One implication is that problems become more difficult to diagnose as the number of components are added to a system. Isolation of issues involves more time and coordination of many different groups in order to resolve the issue. When fix agents from different organizations/entities become involved in resolving problems, you lengthen the mean-time-to-repair (MTTR) especially at the point of interface between systems. At that point many things beyond direct control of the system applications can occur such as network issues, security issues (firewalls), etc. that will exponentially add to the time to fix an issue. In order to address these issues, routine testing of the system using automated testing tools should be utilized to ensure that the networks are up and working.

A second implication with a more complex system is that any system enhancements can become more challenging to implement. As systems evolve and more features are added, these changes must be deployed throughout the components of the architecture. Changes to the interface (such as added data fields or additional data checks) between system components are especially challenging. This challenge involves more time to communicate changes, plan/coordinate the changes and added risk that the changes may not immediately work on first pass. However, the Data Trustees may actually simplify the process for USDA, as interface changes with USDA must only be imple-

mented between USDA and the Data Trustee as opposed to between all data collectors and USDA. Since there would be many fewer Data Trustees than data collection companies, this would be less work. The Data Trustee will be responsible for multiple system interfaces with other service providers/customers.

In some situations, a more complex/de-centralized system is the solution needed to meet business requirements. An example of this was one of the supporting "arguments" for the USAIP de-centralized architecture. This supporting argument states that the world's credit card authorization system is based on a complex, de-centralized system and, even with increased complexity, operates very efficiently. However, the credit card authorization system does not exactly fit the same business model as the USAIP/NAIS but is similar. Chief among these is the fact that the primary data of interest is not located in a single, central database. In the case of the credit card system, the depository information on each cardholder is kept in the cardholder's bank, not the credit card company's central database. This is a similar approach the Data Trustee architecture being proposed. Secondly, what does exist in the central credit card database is only a directory of each card number, pointing to the banking database which contains the information needed to complete a credit card transaction. Again, this is similar architecture recommended for the USDA Data Trustee. And, finally, many credit card transactions require information be pulled more than one bank which is the case with most animal health investigations – information will need to be pulled from more than one Data Trustee. The primary difference between the two systems is the type and amount of data (cardholder credit information versus animal location history).

To summarize, in the credit card system, all the account information for a credit card is maintained in one de-centralized database (the bank's or account issuer's system). This de-centralized architecture is logical because the validation system simply needs to know what credit card issuer manages the account and can query that system for the account information. In the proposed USAIP de-centralized architecture, the account information is basically the animal data. As designed, it is highly probable that not a single de-centralized database will own all the "movement" information for any one particular animal. In other words, the data for an animal will be spread across multiple repositories as it moves through the food production chain (meaning multiple premises "transferred-to" for that animal in that production chain will likely be entered into multiple Data Trustee systems). Because this spreading of animal "account" information occurs across multiple systems, the analysis of that data becomes a more complicated process versus the less simple centralized design. The data would first be "pulled" into the USDA system, which can occur in a matter of minutes to a few hours depending upon the number of animals whose informa-

tion would need to be pulled. USDA would need to utilize a "cross-reference" directory in which Data Trustees have information for each animal and/or premises involved in the disease outbreak investigation. At the beginning of an analysis, USDA would create a centralized database of all animal movements for all animals and premises in the search. The analysis tools would then only be used on the single USDA database. The search tools would not be intended for use across on data residing at multiple locations. Based on the initial data request and analysis a second round of requests will need to be made by USDA to the appropriate Data Trustees for additional data to accommodate a widening investigation.**

As outlined in the above paragraph, one added complexity of the de-centralized repository will be for the centralized system to contain other data tables that cross-references each electronic animal ID to a Data Trustee holding a movement/transaction for that animal and cross-references each premises to each data trustee. With the additional messaging, processing and logic to manage these cross-referencing tables, the overall design adds another layer of complexity that would not be needed in a centralized design. Experience has shown that maintaining one or two, additional tables does not add materially to the system complexity, but this will need to be tested to be confirmed.

Overall, in a going forward basis, the more complex de-centralized architecture introduces more to manage than that of the simpler, centralized design.

2. Quicker Report Turn-Around (when Disease Incident Occurs)

One advantage of the current USAIP proposed centralized architecture is that, at the most critical time of processing, it is the most time-efficient design.

The most critical time for the overall USAIP system will be when a Foreign Animal Disease incident occurs. Per the USAIP specifications, a 48-hour trace-back is required when an animal health incident occurs. With the centralized database maintaining all the USAIP required data, a query simply needs to be run against the database to extract that information. In order to be effective, the Data Trustee model must only add a few minutes of additional time in the process between query initiation and completion of the query to be effective.

With the proposed de-centralized architecture, the following is the process for executing a trace-back report:

- **The USDA centralized system must query the cross-reference table at the national level to determine which Data Trustee systems need to be queried for specific animal movement information. Only those Data Trustees having relevant information would be queried.**

- **The USDA centralized system must then query all appropriate Data Trustee systems for the necessary animal movement information.**
- **The USDA system must wait for a response from each Data Trustee system containing information on the requested animal or premises to confirm all data is received prior to analysis.**
- **The USDA will then parse the received data to build the history for an animal(s) involved in the health incident. (NOTE: If based on the initial analysis there is "missing" continuous chain of custody data all Data Trustee systems including those not having any data pertaining to the request must respond to the centralized system to confirm a "negative hit").**
- **If a "step" in the animal movement is missing or the history data "paints" an incomplete picture, a re-request may have to occur (NOTE: an example of this would be an animal's history shows that a "to" premise that doesn't match the next movement's "from" premise as the audit trail is built). (It should be noted that this is also a possibility in a centralized federal database. This is an area that this committee feels needs further discuss and should to be addressed in the near future.**

All the above activities in the de-centralized architecture are occurring when time is of the essence. Further complicating the process in a de-centralized architecture is that any step in the process or any component/system in the above steps experiencing a problem could put the goal of achieving the objective of a 48-hour report turn-around at risk.

Finally, one major advantage the centralized design has over the de-centralized design is in the area of "follow-up" queries. When a health incident occurs with an animal, the initial query will inevitably precede follow-up queries as the USDA officials try to isolate all the possible impacted animals and premises associated with the initially isolated/detected animal. Each of these queries will involve the same set of complex transactions listed above. As a result, the subsequent follow-up queries will inherit all the same breakpoints that could slow down the process. Having the data centrally stored will allow for subsequent queries to be simply executed against the database to retrieve the results.

Overall, the USAIP central repository design will allow for quicker processing when time and accuracy are at its most critical (during the trace-back process).

3. Less Costly Overall

It would be expected that a centralized repository design would be less costly than a de-centralized design. The centralized design, which will be managed by the USDA, will involve a large system capable of processing and storing all the data associated with the USAIP. The centralized design will include configuration for system redundancy to ensure 24x7x365 operation. The centralized system will also require periodic data backups as well as staffing to support an around-the-clock operational system. All of these items will add to the costs to implement the system. One such cost is ensuring data integrity in a centralized and or de-centralized system is resolving inaccuracies in the data. The cost of reconciling inaccurate records is high. Data Trustees, being closer to the data collection point, may be able to provide a higher level of data accuracy, but this needs to be determined.

With an accompanying decentralized architecture, the centralized system will most likely not require that same storage space as it would in a centralized-only architecture. However, the centralized system in a de-centralized architecture will most probably require as much processing power, staffing and other expenses as the same system in centralized-only architecture. In addition, each Data Trustee in a de-centralized architecture will have similar hardware, processing, staffing, etc requirements as the centralized system.

While the overall costs may be larger for a de-centralized architecture, later in this document costs will be addressed from a “private-funded” versus “publicly-funded” aspect. As viewed from a perspective of using less publicly-financed resources, the de-centralized architecture would move cost away from the public sector.

There will need to be a thorough analysis of the Total Cost of Operation (TCO) in the near future of both systems to gain an accurate cost to benefit analysis. Determining the TCO for the public sector and the private sector for each approach will require operating both systems during pilot projects. It is only through empirical analysis that true costs can be identified.

4. Less Governmental Oversight Required

While the main reason for proposing a de-centralized architecture for the USAIP is data privacy, from both the government and others, deploying a de-centralized system for this initiative will require additional government oversight to ensure smooth operation. Oversight of the network will need to be automated in order to keep costs as low as possible.

With the USAIP allowing a de-centralized architecture, an oversight organization will have to be established to ensure specified standards will be met by Data Trustees. Without these standards, serious legal and operational issues could arise. The standards that would

apply to Data Trustees are generally the same standards that would apply to data service providers as described in the USAIP, with the exception of higher levels security, data integrity and 24x7x365 accessibility.

This "standards" certification of Data Trustees will need to include such checks as: establishment and adherence to data privacy policies, security/access rules and operational service level agreements. The service level agreements will be formal documents and address operational issues such as data storage requirements (types of back-up/storage, frequency of back-ups, etc.), system response times, system availability, on-call staff support (including management escalation contact lists), etc.

It is envisioned that an annual review will be required by the agency responsible for certifying Data Trustees to ensure compliance. Plus more frequent reviews of operational metrics (e.g. monthly review of system response times & availability) will be needed to ensure ongoing performance standards are met. USDA could designate an industry trade association group or other group to provide this oversight and audit function and have these services optionally funded by the Data Trustee.

This additional government oversight required to certify Data Trustees is one of the trade-offs for establishing an architecture that may allow additional data privacy while still meeting the objectives of the USAIP.

There will be added costs and time involved with this certification process. This certification process is necessary, however, to ensure the implementation of the USAIP is successful and any legal exposure is minimized.

5. Less Risky

While "risk" was indirectly addressed in earlier sections of this document, it needs to be emphasized that a de-centralized architecture will be more "at risk" of problems than a centralized architecture as applied towards the USAIP. There are several "risk" areas that can be touched on but the two most significant would be data integrity and process-critical operational performance.

In a centralized architecture, the USDA through its system can directly control data stored. Data not meeting standards can be immediately rejected from the IT Service Provider (field data collection). In a de-centralized architecture, the Data Trustees handle the data acceptance role from the IT Service Providers. If invalid data is accepted, problems could arise with performing the trace-back process during an animal health incident. USDA will need to indirectly control most data validity by establishing standards in the Data Trustee SLA, and can test these during "fire drills". Such "fire drill" exercises will be needed

to test the effectiveness of either a centralized or decentralized system. Still, any variance on how these data checking rules are applied across the Data Trustees could cause issues.

Note that data validity not only addresses confirmation that the data fields have accurate values (e.g. ensuring the right-most digit of the Premises ID is the correct "check digit" OR that the first 3 digits of the Animal ID contains the country code) but also that the data transmitted is accurate in terms of historical information. Data Trustees can easily validate the information in the data fields. However, as animals are moved through the production chain, the centralized system could confirm that the premises "moving out" the animal had previously "received-in" that same animal. With Data Trustees' recording animal movements, it is very likely that each movement of an individual animal will be stored in separate Data Trustee systems (e.g. a producer using one Data Trustee sells to a feedlot using another Data Trustee who then sells to a packer that uses a different Data Trustee). This means that only when the centralized system receives queries back during a trace-back would a "missing" movement be detected. This type of problem would make the trace-back less effective in quickly finding all the locations the infected animal was processed. This argument assumes that as the data is received USDA will reconcile all animal movements. Some questions for further discussion include:

1. Will USDA do this reconciliation on all animal movements to confirm/audit continuous chain of custody?
2. Should this capability be built into Data Trustees Systems?

The second "at-risk" area with the de-centralized architecture is in the area of functionality during the critical track-back process.

The de-centralized repository architecture involves many more systems and includes inter-system data transfers during the most critical process of the application (track-back). Because of the additional systems and processing, the overall system is more susceptible to problems arising. If any one of these processes or systems break-down, delays will occur in getting the track-back data reported-on. The great advantage to de-centralized systems is that if one component is disabled, other components can still function and provide their service. However, in the de-centralized architecture as applied towards the USAIP, all the components are needed to build the complete animal movement history "snap-shot". This means that ALL the de-centralized systems in the design MUST be operating to receive the required results.

Overall, including redundancy and other features in the design can minimize these inherent risks with the USAIP de-centralized architecture. However, in this USAIP application, the centralized architecture is less-risky during the most critical process of the USAIP.

De-centralized Repository "Strengths"

The following are the strengths of using a de-centralized repository design as compared to a centralized repository design for the USAIP application.

1. Data Privacy

The main reason the de-centralized architecture was proposed as an enhancement for the USAIP was to provide data security for food production chain participants.

During feedback sessions on the USAIP, concern arose from among all sectors of the production chain regarding use of the data being collected by the USAIP. Data privacy concerns ranged from other governmental uses of the USAIP data (e.g. enforcement of environmental regulations) to the public's access to the data via the Freedom of Information Act (FOIA) to business competitors gaining insight into another organization's operations.

To alleviate these concerns, the BIE proposed a de-centralized data architecture that would keep data private except on a "need-to-know" basis for specific animal health incidents. This approach would limit an inquiry to only that data needed to research the animal incident and nothing more.

While more details of how this de-centralized repository design would work are needed, the goal of increasing data privacy may better be met by the BIE proposal. Data Trustees would manage their repositories and would establish "confidentiality agreements" with their clients to best keep this private (while still meeting the USDA SLA of providing the specific data "as needed").

Note that the Data Trustee's ability to maintain data privacy is still being debated in terms of FOIA requirements. One opinion from legal counsel has stated that confidentiality issues with respect to FOIA will not be resolved under the decentralized architecture. This opinion further stated that to ensure Data Trustee-held data remains "private", legislation would be required to address the situation.

A second legal opinion would assert that if Data Trustees are not funded by the government, there is no way information in Data Trustee private hands would be subject to FOIA.

We feel this sub-committee is not in a position to provide an opinion concerning data privacy and FOIA requirements and will defer this issue to the NAIS Subcommittee of the Secretary's Advisory Committee. A final decision on data privacy will however, impact the cost benefit analysis of the overall system.

2. Less "Public Funds" Needed to Implement

Cost of the two architectures was addressed earlier in this document. In that analysis, it was determined that the de-centralized architecture would likely be more costly to deploy than a centralized archi-

tecture. However, as proposed, it is envisioned that the marketplace would "pay" for the greater data privacy that would be available in the de-centralized architecture. Under this business model, many food production chain participants would pay a maintenance fee or transaction fee to the Data Trustees to provide the service of meeting the USAIP reporting requirements YET keeping the data as private as possible. Under this model, private funds would pay for that service thereby lessening the amount of public funds needed to startup and maintain the system. That means private industry would fund all parts of the de-centralized architecture except the centralized system managed by the USDA.

Therefore, it is possible that the overall cost for the government in a Data Trustee environment would be lower than in a centralized-only environment while the overall cost for a de-centralized option will be larger than the centralized-only architecture when private and public costs are combined.

3. Establishes a Repository for Industry-Desired "Value-Added" Data

One of the advantages of using Data Trustees to maintain repositories is the capability of storing additional "value-added" data for the industry.

Value-added data provides food chain participants with additional information to help them better market, evaluate and produce their product. An example of value-added data can include such items as vaccinations or health plan information.

As with any data, this information could be placed in any repository. However, private industry would prefer this information to be stored in an area where they can manage the sharing of this information individually. Private industry would prefer these data be managed without governmental involvement for concern of who might use these data. If this information was stored in a Data Trustee's or service providers repository, the food chain participant can selectivity choose who and what type of data to be shared (this could be part of the contractual agreements between the Data Trustees or Service Provider and their clients) as described in the USAIP.

Expanding the food-chain data stored for business purposes in addition to the regulatory purposes of the USAIP will create a more efficient and knowledgeable marketplace that would benefit all food chain participants. Establishing a system that supports maintaining these data would be a long-term benefit that will be more effectively employed as its use broadens.

Conclusion

As illustrated in this document, there are trade-offs when analyzing

the type of architecture to be allowed under the USAIP. Both systems have advantages as well as shortcomings. What the food production industry, government, and especially the members of the USAIP Information Technology subcommittee must determine is the "business" priorities going-forward for this USAIP effort. Once these priorities are determined, the pros and cons of these two architectures can be mapped towards priorities and an analytical decision can be made.

Mr. Fourdraine addressed a number of questions and comments relative to a centralized versus a decentralized data management system.

State Veterinarians Needs and Expectations

Bret Marsh
State Veterinarian, Indiana

Thanks to all of those individuals who have worked so hard over the last few years to develop the template for the National Animal Identification System (NAIS). As a State Veterinarian, I am especially grateful for the leadership provided by Drs. Hillman, Woods and Siroky on this important issue. Without the dedication of many individuals and organizations, the industries we are charged to protect would continue to be vulnerable.

Identification of animals is not new to any of us. Animals have had individual identification by a variety of means for centuries. Our challenge today is to combine an individual identification with a specific premise to accomplish the goal of rapid traceback.

States have collected data on premises and individual animals for decades to support the goals and missions of state animal health agencies. Therefore, all 50 states have served as data trustees throughout the decades, and states have taken very seriously the task of being stewards of the data. Some of these state systems are robust with sophisticated database systems, while others are simply drawers full of documents. Nonetheless, the state systems have supported the needs of state animal health officials for animal health purposes, theft investigations, truck wrecks and for determining herds in areas for circle testing. The database systems under development must recognize the significant resource this data represents to the states for use in efforts in addition to response to a foreign animal disease.

There has been a lot of discussion about the development of a database system that will receive data from all of the states, and yet there is an enormous need to build infrastructure at the state level before we can effectively "push" data anywhere. In building a superstructure for storing, maintaining and retrieving data there must be more discussion about providing support for building the necessary infrastructure at the state level.

Our overarching goal is to protect the agricultural assets of the country, and the development of the database must recognize this fundamental tenet. While there are times for states to act individually, there are also times when we must act as 50 united states, and this is one of them. State veterinarians have traditionally worked very closely together, but this issue will compel us to become even more closely aligned. To support the goal of protecting the nation's assets we must be unified in our approach.

Although there may be some producers across the country that would choose to participate in a private system, the federal government must continue to aggressively develop a national system. This endeavor must be equipped to support all producers, especially those who choose not to participate in offerings from private companies.

The issue of confidentiality is often the "show-stopper" in nearly every meeting I attend on animal identification. I am concerned that this issue has taken the focus away from the goal. For example, I recently refinanced my home, and I then began to receive letters for various mortgage companies offering me their services. These letters contained my current mortgage balance, the current interest rate and the tax rate on my home. I also can within minutes find a satellite image of my home on the internet simply by entering my mailing address. The information available today to any curious person is remarkable, and I would hope that the need to offer the small number of data elements that are needed to make this identification database successful would not be a road-block to progress.

I would encourage all of us to keep our sights on the goal of protecting the nation's agricultural assets, because the economic viability of our country depends on it. Considering the United Kingdom destroyed over 10 million head of livestock to eradicate foot and mouth disease, a country the size of the state of Oregon, is it essential that we make immediate progress. This is further supported by the USDA's tabletop exercise in late 2002 that simulated the intentional introduction of FMD virus. The results of the exercise indicated that within 10 days 35 states could be affected.

There are a lot of people domestically and internationally counting on us to be successful. The stakes are high, likely never higher. I am confident we can find the solution before it is too late.

Livestock Industries Needs and Expectations

Allen Bright
Intioch, NE

I have been called 'not grass roots' while talking with producers since being elected President of Nebraska Cattleman's association. Most producers did not get in business to produce food. After a while,

most of us develop a passion to produce food and keep business afloat. We are talking about constitutional things when it comes to producer confidentially.

Brucellosis eradication challenges – is an example of problems that can occur with producers acceptance and participation in a government program. The local vet is not always trusted. Producers consider State and Federal Government Veterinarians as "Government" and thus the trust level is affected.

We have an opportunity to do this (NAIS) the best possible- the first time. There is confusion among producers about NAIS. They see that it may be voluntary….and if it is mandatory, unless it puts dollars in their pockets, producers will not participate in a voluntary program. Mandatory - if we are hoping to avoid ID becoming mandatory by achieving a high level of voluntary participation, we have some challenges.

Funding is a challenge. As an example - the funding current funding commitment is approximately $.50 per tag allocated next year (1/2 of the funding - 30,000,000 new calves).

The brucellosis program was never labeled as mandatory – but if you wanted to sell heifers – it was mandatory.

Demand for source verified cattle continues to grow. When I look at the level of funding and the federal and state budget challenges; there is a shortfall. Where is the money going to come from?

I suggest that participation needs to be quite high for this to work. Process and source verified cattle will provide value to an identification system.

I am in favor of a private database system. I may be wrong, but I do not think so. We must assure that discussion occurs openly and we need to make sure we have it right.

Don't cram a centralized database down producers' throats. We have around 800,000 beef producers, but professional animal agriculture cattle owner numbers continues to shrink.

Let's work together.

Livestock Market/Processor Needs and Expectation

Dick Jurgens
Towanda, IL

System must be simple and easily accessible.

System must not have an added COST FACTOR for the markets.

System must have MULTI SPECIES capability.

System must not have an added COST FACTOR for the markets.

System must have the capability to MONITOR and TRACK the movement of Livestock ACROSS DESIGNATED BOUNDARIES.

System must possess strict DATA SECURITY.

System must provide for seamless, QUICK TRACKING.

We must have consistent application among all species. We need to incorporate auction market vet into the process in order to provide data he needs for certification of animal movements. Any transaction that occurs at a market needs to be prepared to be an interstate bound transaction, and reported once.

Incorporate other disease programs, which are already in place, into the ID and reporting system to streamline required data.

We also have data security and accountability issues. An example is queries from banks of cattle sold out of trusts.

USDA Needs and Expectations

John Clifford
Washington, DC

The U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS), in cooperation with State and Tribal animal health authorities, is responsible for the administration of national animal health programs. These would include eradication and surveillance programs for diseases such as bovine tuberculosis, brucellosis, and pseudorabies.

An integral component of the National Animal Health Surveillance System is a national animal identification system (NAIS). By allowing for rapid tracing of infected and exposed animals during an outbreak situation, the NAIS will help limit the scope of such outbreaks and ensure that they are contained and eradicated as quickly as possible.

To ensure that animal heath officials have immediate, reliable, and uninterrupted access to essential NAIS information in the event of a disease concern, certain basic data must be maintained at the Federal level. Accordingly, such information needs to be maintained within data repositories managed by APHIS. These information repositories must also be integrated with current information systems already established for animal disease control, monitoring, surveillance, and eradication programs (e.g., the Emergency Management Response System, the Generic Data Base and the National Animal Health Laboratory Network). The NAIS data systems will also need to be well integrated with other systems as they are developed and implemented (e.g., the Interstate Certificate of Veterinary Inspection System).

There are two main NAIS information repositories: the National Premises Information Repository and the National Animal Records Repository. The information maintained in the National Premises Information Repository will incorporate the twelve basic data elements defined in the former U.S. Animal Identification Plan (USAIP):

National Premises Information Repository: Data Elements
Premises Identification Number
Name of Entity
Owner or Appropriate Contact Person
Street Address
City
State
Zip/Postal Code
Contact Phone Number
Operation Type
Date Activated
Date Retired
Reason Retired

The National Animal Records Repository will have the capability to maintain animal identification and movement data as defined in the USAIP, but will only require essential data elements necessary for animal tracebacks. Specifically, these elements include:

- the animal's official identification number;
- the premises number of the location where the animal was identified or sighted;
- the date of the sighting;
- the event code that is associated with the reportable sighting.

In addition, when an entity reports information to the repository on behalf of another party, the record reported must include the nonproducer participant number of the entity reporting the data. This will help animal health officials determine whom they may contact to obtain additional information about certain animals or premises, if necessary.

Animal identification and tracking systems maintained by the States or regional alliances will be an integral part of the overall NAIS information infrastructure. These systems will be maintained and operated at the discretion of the States, and essential data will be pushed from them to the national repositories.

Once participating state/regional and third party systems have been evaluated for data compliance, USDA will support the establishment of interfaces between them and the national repositories. The State/regional systems will be able to collect and maintain more information than is required for the NAIS, but only the required data needs to be sent to the national animal records repository.

Old Business

The Committee reviewed Resolution 19, from the 2003 Committee

meeting and determined that the intent of the three points contained in the resolution were either accomplished or progress was being made toward accomplishment. No additional action was necessary.

The Committee reviewed and amended its Mission Statement. The new mission statement is as follows:

The purpose of the Committee on Livestock Identification is to coordinate and evaluate methods of livestock identification and to make recommendations to USAHA for the adoption or rejection of animal identification systems.

The goal of the committee is to meet the expanding needs in livestock identification, both national and international, and be prepared to reach conclusions that are not only reasonable to the livestock industry, but fulfill the purposes for which each livestock identification system is designed.

New Business

1. New Business Item 1 – Resolution

SUBJECT MATTER: National Animal Identification System

A resolution, entitled National Animal Identification System, was presented, discussed and approved by the committee. The resolution urges the expeditious development of data management systems that will meet all stakeholders' needs.

2. New Business Item 2 - Resolution

SUBJECT MATTER: Web based Interstate Certificate of Veterinary Inspection

A resolution calling for implementation of the web based ICVI in all states was presented, discussed and approved by the committee.

3. New Business Item 3 - Recommendation

The committee approved a recommendation that the Committee accept the report of the State Standards for Implementation of the NAIS Subcommittee as a work in progress, to be forwarded to USDA for development into a draft Uniform Methods and Rules with subsequent distribution of the draft UM&R to all stakeholders for review, comment and amendments.

4. New Business Item 4 -

Dr. Hillman discussed the potential development of a NAIS Oversight Subcommittee under the USAHA Committee on Livestock Identification. This idea was discussed at the ID EXPO in Chicago. This concept was suggested as a means to provide stakeholders the opportunity for input into the development, implementation and management of the NAIS. Early in the development of the USAIP, oversight was an issue of concern. Many persons believed that an Advisory Com-

mittee was needed, while others felt an Advisory Committee alone would not provide sufficient opportunity for stakeholder input.

Subsequent to the Chicago meeting, Secretary Veneman formed the NAIS Advisory Subcommittee under the Foreign Animal and Poultry Diseases Advisory Committee. The Subcommittee has met and one of its actions was to continue the species working groups as a mechanism to provide stakeholder input to the NAIS development, implementation and management. With this mechanism in place the need for an oversight subcommittee as part of the Committee on Livestock Identification is questionable at this time. Therefore, the Chair has not appointed such a subcommittee. The Chair requested input from the Committee relative to this issue. The Committee did not believe that an oversight subcommittee was needed, in that the Committee on Livestock Identification itself provided a venue for stakeholder input.