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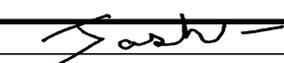
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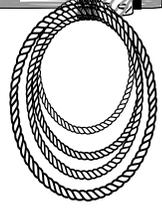
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Check out the web site at <http://cetehama.ucdavis.edu> or <http://ceglenn.ucdavis.edu>

A full copy of this paper can be obtained at both the Tehama and Glenn County UCCE offices.

Where We Are with Animal ID: A Survey of State
Animal Identification Pilot Projects
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 University of California Cooperative Extension

In June 2005, USDA announced that it would distribute \$14.3 million to states and tribes in order to continue the establishment of premises registration and National Animal Identification System (NAIS) programs. This is the second year that USDA distributed funds to states for premises registration purposes. First year funding was initially released in August of 2004, distributing \$11.64 million to 29 states and tribes. In October of 2004, another \$1.5 million was released to additional states and tribes for animal identification purposes. As of November 7th, fifty states, five tribes, and two territories have registered just over 147,000 premises. Current funding distributed to each state by USDA is proportionate to the population of cattle. Thus, states have received funding in a range from \$78,343, such as Maine, to \$1,214,579 allocated to multi-state and tribal project run by the Colorado Department of Agriculture.

University of California Cooperative Extension sent a list of questions to states that received higher portions of national funding. The informal survey was an attempt to capture feedback from the initial year of animal identification projects and premises registration. The survey included inquiries into the types of livestock identified, technologies used for identification, and the impressions of participants involved in the experimental projects. Following California's current summary is a comparative summary of the verbal and written responses received from 17 of the 28 States and Tribes that were contacted. Information from several states that did not reply was obtained through pilot project summaries and presentations.

California's Current Status in NAIS

California's Department of Food and Agriculture (CDFA) objectives for animal identification have been registering premises, initiating animal tracking pilot projects, and facilitating outreach efforts. The current program for premises registration is voluntary and became compliant on January 18, 2005. At the end of August, 1,500 premises were registered in California, with a compliment of 1,100 added premises registered in Oregon. Oregon premises registration is complementary to California's system because of a large number of cattle being shipped across state borders throughout the year. In order to make shipment of animals from numerous states efficient, CDFA has developed an "Interstate Livestock Entry Health Permit System" that is accessible online along with the premises registration system.

Problems encountered thus far in registering premises in California include: the complexity of registering certain types of premises, registration data only flowing in one direction (state to national repository and not the reciprocal direction), and the currently used producer identification systems do not uniformly collect the information needed by the state premises system.

As the largest dairy producing state in the U.S., CDFA has focused attention on a pilot project to track dairy animals in California, Arizona, Oregon, and Texas. With a large number of dairy animals being harvested each year, the dairy industry not only produces milk and cheese, but also a large quantity of beef. In particular, the targeted trace back animals are one-day-old heifer and bull calves, and older cows that are destined for harvest. Fifty-five thousand animals are currently targeted for trace back (approximately 40,000 being from California), with 12,400 animals having RFID tags placed in their left ear. The first objective of the project is to test the implementation of animal movement tracking and reporting. Information from this objective should provide valuable information on data capture devices, software, and the methods and costs of data reporting. The second objective is to examine the possible role of the currently used brand inspection program. Results of the project will be available in 2006. For additional reading on the South West Pilot project visit the CDFA Animal Health Branch website at: http://www.cdfa.ca.gov/ahfss/ah/id_swproject.htm

In order to meet outreach goals, CDFA has distributed approximately 3,000 copies of premises ID and animal ID booklets, created an animal ID web site, developed producer updates and documents, and attended over 60 producer events. Furthermore, CDFA sponsored the University of California Cooperative Extension to produce a series of fact sheets on NAIS, to develop an animal ID demonstration table, coordinate a training session for UC Extension, and to conduct animal ID producer workshops.

Objectives of State Projects

The primary objective of most states surveyed was registering premises. For a state's USDA proposal to even be considered for funding last year, it must have contained a premises registration component. Current results of premises registrations are far from future targets, and there is high variability in the number of premises registered between states. The main cause for this variance between states seems to be the initial proactive stance taken on embracing NAIS. States that began developing a program early have met a greater proportion of their premises registration goals. As the state with the most premises registered, Texas reported having 2,200 premises registered at the end of July 2005. Over 2,000 premises registered represents a large number of operations, but it is only one percent of the state's target goal. Texas' goal is to have all of its 200,000 premises registered by January of 2008, which is currently more premises than are registered nationally. As a result of the current participation, USDA has made premises registration a primary goal.

All states surveyed reported animal identification coordinators spending a great deal of time on education and outreach directed towards producers affected by NAIS. As stated above, states that developed a program early have been able to do more education and outreach toward landowners and managers needing to register premises. In turn, they have proportionally more premises registered. The array of outreach methods includes educational booths at major shows and fairs, and speaking at producer organizations and committee meetings. In Nebraska, producers are provided with a free voucher for ear tags when they register their premises.

Several states have been granted larger sums of money from USDA, which added an additional objective to create collaborative projects that test efficient methods of tracking animals back to their herd of origin within 48 hours. Those states already employing existing brand, scrapie, and swine health systems have had great interest in finding ways to integrate their current identification systems. Included in this research are several very interesting projects testing ID technologies cost effectiveness, reliability, and labor intensity. Some specific technologies tested are presented in a later section.

Species Targeted

All current projects surveyed were working on identification systems involving cattle. Common projects initially began with an emphasis on cattle and then branched out to other species that are important in each State. Additional species in NAIS include swine, sheep, goats, cervidae (e.g., deer, elk, etc.), horses, bison, llamas, alpacas, and poultry.

Technologies Used

Many states have not had the opportunity to operate and test new animal identification technologies. In many cases, the states did not receive federal funding to conduct these projects or it was not part of their project objective. Those states

that have done research with technology devices primarily started with radio frequency identification; however, several are testing alternative forms of technology. Below are some samples of current pilot projects that various Departments of Agriculture have initiated with USDA funds. A listing of all state pilot projects can be found on the web at: http://animalid.aphis.usda.gov/nais/subjects/state_tribe/index.shtml.

North Dakota State University researchers are conducting a pilot project that has tagged over 4,000 calves on 25 different ranches. Results from this project can shed light on future problems that could face multiple segments of the cattle industry. Although many of the RFID wand and tag technologies worked, researchers experienced great difficulty tracking cattle back to their herd of origin due to challenges created along the production chain. The blame for these problems was placed on troubles with education, poor communication, and compliance. For example, 79% of calves sent to backgrounding lots had their EID tags cut out by the time they arrived. The researchers claimed to have superior results with the traceback using manual paper methods and brand inspector inquiries.

Kansas is currently working on a project with EID readers mounted on semi trailers. These readers use radio frequency in the same manner as a handheld wand to capture cattle IDs as they are loaded onto the truck. The data is captured on the truck and submitted to the Kansas animal health authorities using cell phone technology. If the truck is in an area where there isn't cell phone service, the truck computer retains the data and automatically sends it when cell phone service is available. Kansas's authorities think this is a beneficial system for states with large packing and feedlot industries. In states like Kansas, a large number of cattle are imported or trucked within the state. Pilot project researchers feel they could reduce the "workload" of ranchers by training a much smaller group of truckers in the proper use of ID technology. Current plans for the research project are to place readers in 40 trucks and use about 40,000 EID tags on cattle.

In extensive RFID testing, Idaho has obtained useful results on several factors relating to technology. The state has reported greater performance in reading half duplex tags rather than full duplex tags. Differences in traceback success were also found between brands of tag readers. Their findings also revealed the impact of environmental factors on the success of the project. These factors included: working facilities, cattle handling, and procedures of handling the equipment. Above all other factors, these seemed to be the most crucial in making an RFID system work. Examples of problems that project implementers ran into were cattle moving too quickly to accurately read tags, bad computer connections, too much metal in the proximity of reading devices, incorrectly placed tags, and excessive noise in running AC equipment that powered RFID devices.

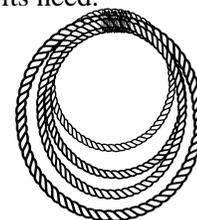
In a project expected to last a year, nine different scenarios are placed on the trace back process in Montana. The project is a joint effort with Montana State University (MSU). MSU has been working on animal identification projects for about five years. The cooperative project with the Department of Agriculture will build on previous research by MSU. The primary species in the project, sheep and cattle, are identified with electronic identification tags, conventional ear tags, or a hot iron brand. Extension specialists in beef and sheep will document the problems encountered with the traceback of selected animals. The project coordinators hope to document problems to improve producer compliance with NAIS.

Beyond RFID ear tags, boluses, and implants, Colorado's pilot projects include various other technologies such as biometrics and ultra-high frequency tags in elk. Projects using biometrics have evaluated both retinal scanning and DNA testing. These trials have provided the state with knowledge of the use and limitations of this technology. In order to streamline the transportation of species, such as horses, trials are also conducted using smart card technology. Smart cards are able to store data that is placed on the card at transportation sites, transfer of animal sites, and check-in points.

A pilot project in Florida is working with 30 producers to encourage identification of older cows in a cull cow program. State funds match participating producer costs of EID tags "one for one." The program lists premiums to producers of five to ten dollars for source verified cattle. The state has also used its NAIS funds to support equipment costs in one major packing plant to initiate the program.

Producer Impressions of Technology and NAIS

According to many Departments of Agriculture, most livestock producers view NAIS with caution and skepticism, but also with a receptive and proactive nature. The cautious nature of producers' stems from the uncertainties associated with NAIS protocol. The large variability in pilot project results has created doubt as to the feasibility and value of many tested means of identification systems. Furthermore, there are still many concerns among producers, which will be addressed below. There are two reasons some producers have taken a proactive approach toward NAIS. First, many believe that a mandatory NAIS is inevitable. Second, many fear the consequences of not having any ID system in place when an event causes its need.



Top Concerns of NAIS

Cost and data confidentiality are the two greatest concerns of producers across the U.S. Confidentiality is a significant concern among livestock producers in North Dakota and the state has already passed legislation addressing confidentiality issues with animal identification. After our short survey was completed, USDA Secretary Johanns announced USDA-APHIS would work toward having animal identification information stored by private industry. This action is rooted in the belief that private industry can more effectively maintain confidentiality than a government run database, therefore alleviating many concerns about confidentiality.

Computerized technology for identification adds a potentially large expense to an industry with marginal profits. It becomes especially burdening to smaller producers without the ability to recoup high overhead costs. Several states with reported worries of high producer cost are including low-tech systems of animal identification in their projects. An example of this is Montana's work with conventional hot iron brands. Other concerns that are lower in priority than cost and confidentiality included: liability, ID systems efficiency and value, added labor expense, and excess government involvement.

States Involved

A special thanks to those states, listed below, for taking the time to respond to this survey. All other information was drawn from the USDA NAIS web site and the NIAA web site:

1. <http://animalid.aphis.usda.gov/nais/index.shtml>
2. http://www.animalagriculture.org/proceedings/2005IDProceedings.asp#General_SessionIII

Alabama	Arkansas	California
Colorado	Delaware	Florida
Georgia	Idaho	Illinois
Indiana	Iowa	Kansas
Nebraska	North Dakota	Oklahoma
South Dakota	Wyoming	

Montana- info obtained from the web at: <http://www.discoveringmontana.com/liv/animalhealth/NAIS/pg1.asp>

Texas- info obtained from the web at: <http://animalagriculture.org/newsarchives/2005/July2005/TXRealID.htm>

Wisconsin- info obtained from the web at: http://www.animalagriculture.org/proceedings/2005IDProceedings.asp#Breakout_Session

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