

Advancing Animal Disease Traceability Roadmap for Hawaii

A Three-Year Plan

Submitted by:

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I. EXECUTIVE SUMMARY

Hawaii's role in the process of animal disease traceability is unique when compared with the continental states of the United States. As a member of the country, Hawaii is committed in supporting the efforts of USDA to mitigate the potentially devastating impact of the foreign animal disease event. Participation in the Animal Disease Traceability Program is designed to increase the state's capability to support tracing disease animals to their farm of origin and identify any potential cohorts. Hawaii has a diverse livestock industry although is relatively small in comparison to other states. Due to the location in the Pacific, transits time are more extended than interstate road trips, however, with increasing speed of tanker ships it has been found that disease agents can survive and find new hosts, a capability that was not there a generation ago. The mission of the Animal Industry Division is to detect, diagnose, prevent and eradicate animal diseases of high consequence than may impact animal and public health.

Since traceability is a key component to protecting and limiting the costs to industry associated with an animal disease outbreak, a strong educational program needs to be a component of this program. The need for change must be understood and supported by all stakeholders to have a successful program. In this state we have been very successful in the eradication of several federal program diseases and have achieved a "Free" status with both Brucellosis and Tuberculosis. This often leads to complacency by producers as there has been a resulting decrease in testing and tagging requirements for animal movement. We need to respond quickly during a disease outbreak and limit economic losses to the industry and protect producer's livelihoods. In order to limit the spread of disease with limited response capacity, a strong traceability program though animal identification going forward is essential.

Our current disease traceability is done by searching interstate and international certificates of veterinary inspection (CVIs) which consist currently of paper files. We also heavily rely on the institutional knowledge of experienced employees with the Animal Disease Control section that have worked with all the establish livestock producers that move animals. We can also search testing paperwork done for export to help identify animals during a disease investigation. Our state has personnel that have undergone introductory training in SCS and the AIMS. Establishment of standardized procedures for initial investigative procedures and training newer personnel to ensure operational succession would be the next challenge faced in supporting the program.

Our goal is to marry the existing databases currently used by the experienced animal disease control staff with available systems such as SCS. At this time, SCS is used for some applications and data has not been completely moved over. The plan is to decrease and eventually stop usage of the local databases and migrate all tasks to SCS with great accessibility for personnel on the other islands that are also performing inspection and tag distribution activities.

The Animal Industry Division of Hawaii relies heavily on federal cooperative funding to support the administrative functions, personnel and activities associated with the Animal Disease Traceability (ADT) regulatory requirements and policies.

II. CURRENT TRACEABILITY SITUATION

2.1 Who Are We?

The Animal Industry Division of the Hawaii Department of Agriculture is dedicated to the mission of detecting, diagnosing, controlling and eradicating diseases of animals that have high consequences that impact the economy, industry or public health.

Within the Division, livestock movement and disease control fall under the Animal Disease Control Branch and the Veterinary Laboratory. Within the Animal Disease Control Branch there are field group spread across three counties and the Receiving, Inspection and Compliance Section that operates at the main point of entry, the Daniel K. Inouye International Airport.

2.2 Where Are We Now?

Hawaii uses a variety of methods to track livestock movement that are tied to traditional paper based methods. Statues established use of the Livestock Ownership/Movement Form which is used for each movement of the livestock within the state. The form establishes ownership for animals during transport when questioned by the authorities to prevent rustling. In addition, the Permit to Ship is the permit that is issued for animals moving out of quarantine zones and for inter-island transport.

All livestock that enter the state are required to have individual official identification with the exception of horses. Horses are identified by color and markings as established on test charts. Swine are required to have a permit issued for entry.

Certificates of Veterinary Inspection are submitted to the office ahead of imported animals to guide producers through the importation process and educate them on follow up inspection and testing requirements. The information is held in local databases.

Exportation of livestock are accompanied by a CVI issued by the Animal Industry Division.

For disease investigations and surveillance testing, state veterinarians or livestock inspectors will apply official identification which assists with follow up visits and are listed on official test charts.

Field veterinary staff are equipped with RFID readers to capture applied tags for disease surveillance purposes. The ease of capturing the ID numbers and input them into test charts increases efficiency.

2.3 Strengths and Weaknesses

The strength of the animal disease traceability program is tied to the presence of experienced and well-established personnel within the Animal Disease Control Branch. These key individuals have well established relationships with the limited number of transport companies that move the animals. Once the animals have entered, the relationships assist with finding where the animals may have gone once the quarantine or follow up activities have been completed. Use of established relationships to trace animals that are involved with disease investigation has increased efficiency in locating animals and discovering if they have clinical signs.

Our weakness would be a heavy reliance on the institutional knowledge of established and experience personnel without clear line of succession for operations. The established relationships of these individuals and their ability to navigate through established local systems factors heavily in the speed of participating in the trace performance measures. When employee matriculation occurs, it will be challenging to replicate the speeds at which they are able to locate animals until new personnel are established.

2.4 Opportunities and Threats

Many opportunities exist to educate producers through continued dialogue. We also have the opportunity to obtain more premise identifications. With identification of populations at risk the quality of the response will be improved. More accurate information for location of populations at risk improves the speed and efficiency of the response. Both strategic aims are enhanced via this plan.

Threats exist in related to acceptance and wariness of the producers in participating in government regulatory activities. Cost associated with tag application and review of movement documents that may cause disruption of commerce can lead to reluctance in seeing the advantages in participating in the process.

2.5 Inventory of Existing Infrastructure and Suitability Assessment

Currently our primary field staff consists of seven Veterinary Medical Officers and 7 Livestock Inspectors. The Veterinary Medical Officers are located across the state while the Livestock Inspectors are located on the island of Oahu. Honolulu is the main port of entry into Hawaii however in recent years there has been increased livestock traffic going directly to the neighbor islands of Maui and Hawaii.

There is sufficient bandwidth available at office locations, however, connectivity in the field can be limited due to areas of inadequate internet access in the state. There currently are limited funds available to increase IT infrastructure for needed storage space and support for an automated data capture system. Paper documentation handling system with archiving of data onto disk space is a current unmet need, both for data redundancy as well as data accessibility.

Although inroads have been made to increase staff accessibility to the USDA database, it is limited and of concern to the state. With new staff members who have not been trained or do not have access to the databases, we often have to rely on limited federal resources to access the databases as needed. Timely training and access to databases will resolve this issue going forward.

III. VISION AND MISSION CONTEXT FOR ADVANCING TRACEABILITY

3.1 Vision Statement

Be able to identify a location involved in any disease situation within 48 hours of notice and move necessary resources into place in order to begin control of the matter.

3.2 Mission Statements

Mission statement for Animal Industry Division:

The Division is charged with the responsibility of safeguarding the State's livestock and poultry industries by controlling and preventing the entry and spread of pests and diseases; operating the rabies quarantine program; conducting investigations into violations of animal quarantine/importation statutes; and providing veterinary laboratory support for diagnosing animal diseases.

Mission Statement for Animal Disease Traceability Program:

State veterinarians are responsible for testing programs, epidemiology of disease outbreaks, conducting disease investigations and implementing control measures. In addition, veterinary staff and livestock inspectors monitor movement of livestock and poultry ensuring compliance with regulations. The office staff gathers and maintain records on calfhood vaccinations, herd records, test results, import and export requirements.

As part of an agency goal to eradicate infectious and contagious livestock diseases throughout the state. Hawaii is free of Brucellosis, Tuberculosis and Pseudorabies.

IV. TRACEABILITY REQUIREMENTS

4.1 Strategic Goals

To build upon and continue to develop and implement a State-wide animal disease traceability infrastructure that identifies animals and correlates that information with movement information to give confidence to producers and consumers through our ability to identify and mitigate animal disease outbreaks.

4.2 Programmatic Goals (Objectives)

- Over the next three years our goal is to increase the electronically collected data on ownership and movement of animals through a combination of manual data entry and automated data transfer from electronically generated sources such as eCVIs.
- Continue to integrate existing legacy database system information into USDA approved system, SCS CoreOne. Working towards the goal of ending use of legacy systems and use of approved systems that will enhance ability to share pertinent information with other states.
- Integrate surveillance and traceability data through CoreOne integration.
- Provide education to accredited veterinarians on electronic gathering and reporting for movement and testing to facilitate animal movement.
- Attend association meetings as well as county fairs and livestock events throughout the state as presenters or exhibitors to educate producers on the need for ADT and how this benefits the industry.

4.3 Animal Disease Traceability Performance Measures

It is our goal maintain the current ADT process which currently takes approximately 48 hours to complete. Having established, experienced personnel has been a key

component to the success of the tracebacks performed.

The program is looking to ways to document procedures to facilitate training of new employees when that becomes necessary.

4.4 Data Requirements

Hawaii is using standards which were created by the USDA under the NAIS system for determination of locations and there is no foreseeable change in this in the near future.

Official ID in Hawaii consists of NUES tags and 840 tags as well as registered tattoos when the complete registration number is recorded on the CVI and is accompanied by the registration paperwork. Registered brands will be used for animal identification for intrastate movement.

Currently tags are applied by accredited veterinarians, state veterinary or livestock staff, as well as producers that order their own 840 tags and scrapie tags. Imported livestock are required to have official identification for entry into Hawaii.

4.5 Information Technology Plan

Over the next three years our goal is to increase the electronically collected data on ownership and movement of animals through software and synthesize existing data into a single database such as SCS CoreOne. IT planning for future needs involve developing portals that may allow issuance of movement documents on-line with automatic data capture.

4.6 Resource Requirements

The Hawaii Department of Agriculture shares IT personnel among all the Divisions. It would be a benefit if we had someone with a strong understanding of animal health and how to efficiently set up a system for traceability. We currently do not have the manpower to translate hardcopy movement documents into electronic forms. The Certificate of Livestock Ownership/Movement Form is used for in-state movement of livestock. The form captures brand images that are hand drawn and personnel enters the information into a database. Translating this form into an electronic form will require expertise in programming and integration of databases to ensure ease of use. Funds to integrate these types local movement forms to work with systems like CoreOne would increase user compliance and reduce the paper inefficiencies.

4.7 Organizational Needs

Existing State organization and staffing is only able to conduct the minimal requirements of this program.

4.7.1 Executive Support

The current administration realizes that an ADT system will benefit both the livestock and poultry industry as long as it does not interfere with commerce.

There are benefits for increasing efficiency during disease investigations where there is testing and multiple visits to premises involved with outbreaks.

4.7.2 Coordination and Oversight Procedures

The Office of the State Veterinarian coordinates and oversees the current plan and will continue to do so going forward. The administrative office works in close contact with the Animal Disease Control Branch that receives import information and the Veterinary Laboratory for official test charts and recordkeeping.

Since we are staff spread across a state of islands, generally, primary duties are often over seen by one individual, tasks are often shared so there is a continuity of duties should it be needed.

4.7.3 Policy

Use of premises registration and official identification of livestock is mandatory during disease investigations. By statute, cattle, sheep and goats are required to have individual official identification. Swine imports must obtain a permit for entry and comply with traceability rules for interstate movement.

4.7.4 Staffing

Currently a combination of personnel share duties associated with animal disease traceability. Livestock Inspector and state veterinarians will perform duties such as tag distribution and inventory, data entry, and outreach.

4.7.5 Budget Requirements

ADT support for equipment, travel, and supplies are funded by the cooperative agreement. Continued funding for these items have worked out with due to sharing of duties among existing personnel. Increases in funding would likely go to further IT development and if applicable, allowing for integration of in-state used movement forms with data collection. It is expected that state economic health will decrease in the next few years, and it is important for federal funding to be sustained at its current level. Without the additional funds it will be difficult to maintain ADT activities, especially in the area of outreach since inter-island travel is only accomplished by air.

Funding Requirements

The current grant is \$24,408. Hawaii is dependent on federal cooperative support to advance ADT. Increases or decreases to cooperative funding will proportionally impact the amount of resources we can provide to support roadmap objectives.

Due to lack of funds to invest in software and the resources to create our own data base, we have investigated the option to utilize the StateVet.com program. This will

allow us to have our data into CoreOne which we already utilize on a limited basis.

While not required under the grant, partial cost sharing is achieved via Animal Industry budgeted dollars being applied to field personnel, all of whom do support this program.

4.7.6 Outreach

4.7.6.1. *Accredited Veterinarians*

Animal Industry has presented outreach materials at the annual meeting for Hawaii Veterinary Medical Association.

Animal Disease Traceability is presented during in-state accreditation meetings for veterinarians that may be involved with disease investigations.

4.7.6.2. *Livestock Markets*

Hawaii does not have livestock markets.

4.7.6.3. *Industry as a Whole*

The Animal Industry Division executes a number of programs for disease surveillance and control and on visits, animals receive official identification. Information is given at association meetings such as the Hawaii Cattlemen's Council Annual meeting and working with Cooperative Extension Service to provide information on correct identification requirements and movement rules.

Cooperation with Extension Services has extended the reach of information material at 4H and county fairs and individual producers that may not move animals but may find themselves involved in disease investigation surveillance zones.

4.8. Monitoring and Reporting Interstate Movement Activity

Outbound interstate livestock movements and the animals associated with the movements are recorded on CVIs by state accredited veterinarians and sent to the Office of the State Veterinarian. These are then sent on to the state of destination. For inbound movement we issue entry permits for swine and receive test charts and official CVIs that detail animals being moved. All livestock imports are reviewed prior to entry to mitigate any issues since the cost and time involved with travel to Hawaii is greater than within the continental US. As our IT plan is implemented more will be able to be accomplished electronically.

V. TRACEABILITY IMPLEMENTATION

5.1 Ranking of Priorities for Advancement

The first years of the program have had many successes, yet there is still room for improvement in the identification of animal movement in and out of the state as well as intrastate movement of animals. We know that the use of an electronic database for the interstate movement as well as the addition of a program and devices to collect

data and shift field inspection from a paper process to electronic will give us increased speed and accuracy in tracing animals. This will help us to obtain the goal of locating an animal that has come into the state or moved again through the state in less than 48 hours. Our priorities are:

- Maintain current ability to collect animal health movement information and to make it electronically searchable as funded.
- Shift use of electronic information for entry Livestock Inspection from a paper process to electronic data collection using electronic data capture devices and programs to increase availability of electronically searching intra and interstate animal movement.
- Utilize cooperative resources to support data entry and staff to train electronic gathering officers on the equipment to gather movement information or performing data entry for field operations when that capability comes online.
- Provide outreach and education to veterinarians and livestock associations to advance ADT.
- Provide accurate quarterly reports and traceability exercises by implementing the above.

Measurements of success will include an increased number of eCVIs where paper verification is not necessary and automatic capture of that data into appropriate databases and use of electronic devices capable of communicating directly with databases for input of data.

5.2 Implementation of Objectives

Animal Industry Division advancing of ADT work over the next 3 years will proportionally have to adjust to annual federal cooperative resources received to support these roadmap objectives.

Outreach objectives will be met primarily through contact with veterinarians and livestock groups and in cooperation with Cooperative Extension Service to increase reach to individual producers that may not move livestock but may find themselves part of a disease investigation.

Our efforts over what we are doing will increase electronic data collection and data entry over the first two years to get our database searchable funding dependent. Applying funds for technical equipment to replace non-repairable RFID wands and ensuring that field staff have an adequate number of RFID tags. The goal would be to establish the capability for electronic transfer of the field data with field hardy equipment to decrease the number of paper documents moving interstate to the data entry points.