

Advancing Animal Disease Traceability Road Map for Tennessee

A Three-Year Plan

Submitted by:

SAMANTHA BEATY, DVM

STATE VETERINARIAN

TENNESSEE DEPARTMENT OF AGRICULTURE

436 HOGAN ROAD, PORTER BLDG., P.O. BOX 40627, NASHVILLE, TENNESSEE 37204

(615) 837-5120

Submitted to:

K. MARK KRAUSE MS, DVM

AREA VETERINARIAN FOR TENNESSEE

VETERINARY SERVICES

ANIMAL AND PLANT HEALTH INSPECTION SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

430 HOGAN ROAD, JENNINGS BLDG., P.O. BOX 110950, NASHVILLE, TN 37220

(615) 781-5982

Date: January 3rd, 2025

Table of Contents

I.	EXECUTIVE SUMMARY	3
II.	CURRENT TRACEABILITY SITUATION	4
2.1	<i>Who are we?</i>	4
2.2	<i>Where are we now?</i>	5
2.3	<i>Strengths and Weaknesses</i>	8
2.4	<i>Opportunities and Threats</i>	9
2.5	<i>Inventory of existing infrastructure and suitability assessment</i>	9
III.	VISION AND MISSION CONTEXT FOR ADVANCING TRACEABILITY	10
3.1	<i>Vision Statement</i>	10
3.2	<i>Mission Statement</i>	10
IV.	TRACEABILITY REQUIREMENTS	10
2.1	<i>Strategic goal(s)</i>	10
4.2	<i>Programmatic goals (objectives)</i>	11
4.3	<i>ADT Trace Performance Measures (TPMs)</i>	11
4.4	<i>Data requirements</i>	12
4.5	<i>Information technology plan</i>	14
4.6	<i>Resource requirements</i>	14
4.7	<i>Organizational needs</i>	15
4.7.1	<i>Executive support</i>	15
4.7.2	<i>Coordination and oversight procedures</i>	15
4.7.3	<i>Policy</i>	15
4.7.4	<i>Staffing</i>	15
4.7.5	<i>Budget requirements</i>	16
4.7.6	<i>Outreach (required to be addressed within the Road Map)</i>	16
4.8	<i>Monitoring and reporting interstate movement activity</i>	17
V.	ADVANCING TRACEABILITY	19
5.1	<i>Ranking of priorities for advancement</i>	19
5.2	<i>Implementation of objectives</i>	19

I. EXECUTIVE SUMMARY

Tennessee is a major agricultural state and as such, safeguarding the livestock and poultry industries are a major concern for the Tennessee Department of Agriculture (TDA). An important element in the international and national marketing of livestock is the ability to trace an animal back to its origin with the goal to safeguard animal health and public health, which allows for quick response to a livestock disease event or incident of concern. The Tennessee Department of Agriculture (TDA) is coordinating efforts with USDA to implement the Animal Disease Traceability (ADT) Program through an industry-driven approach. TDA provides incentives to livestock markets and accredited veterinarians through the Market Cattle Traceability Program (MCTP) and the Tennessee Cattle Identification Program (TCIP) to increase the number of animals officially identified and to increase the amount of official identification collected electronically. TDA also works to provide official identification tags, when available, to livestock producers and to register more premises identification numbers.

One of the resources to improve the ADT program is the Tennessee Cattle Identification Program and the Market Cattle Traceability Programs, started in 2010, that allow official identification data to be entered directly into the new Tennessee State Vet Portal database from participating livestock marketing facilities and accredited livestock veterinarians. This information is then reviewed and sent into Tennessee Core One. This direct entry of animal identification data facilitates efficient documentation for conducting an animal disease inquiry or for documentation of disease-free status. Another resource to improve the ADT program in Tennessee is our new CVI processing database, CVI Central. Official Identification and movement records are pulled from incoming and outgoing livestock CVIs. This information is then available in Tennessee Core One.

The State of Tennessee currently has 40 livestock markets with 18 of the larger markets participating in the Market Cattle Traceability Program with outreach continuing. The primary goal of the program is officially identifying all eligible cattle in marketing channels with official 840 RFID tags and recording the information electronically. This work will advance animal disease traceability, not only in Tennessee, but will also interface with other states throughout the country. This system provides an ongoing method for continual monitoring of the livestock population for disease or other situations that might be injurious to animal and human health.

Objectives of the Tennessee Animal Disease Traceability Program

1. Advance animal disease tracing capability by increasing the amount of electronic traceability data collected by interstate certificates of veterinary inspection and official test charts and by increasing the amount of electronically entered data by Tennessee veterinarians participating in the state's cattle traceability program.
2. Advance animal disease tracing capability and electronic data collected by the Tennessee Market Cattle Identification Program to increase the amount of official identification data collected by focusing on the point of commerce, primarily livestock markets utilizing accredited veterinarians, by linking official identification to the market sales identifier and premises.
3. Maintain and advance current animal disease traceability infrastructure within Tennessee.

4. Conduct outreach activities to producers, accredited veterinarians, livestock marketing facilities, harvest facilities and other industry shareholders.

II. CURRENT TRACEABILITY SITUATION

2.1 Who are we?

The State Veterinarian's office at the Tennessee Department of Agriculture has prepared the ADT Roadmap and will work with veterinarians, extension, and industry to implement the ADT plan.

- Who are the primary constituents?
 - Tennessee Department of Agriculture

- Who are the external constituents?
 - Licensed Tennessee Livestock Markets
 - Tennessee Accredited Veterinarians
 - Tennessee Agriculture Extension Service
 - Tennessee Farm Bureau
 - Tennessee Farmer's Cooperative
 - Tennessee Livestock Network
 - Farm Service Agency
 - Livestock Producers
 - Agricultural Universities

- What does statewide, tribal-wide, territory-wide mean?
 - State and federal field personnel visit livestock markets regularly on sale days for purposes of inspection and monitoring activities. This includes verification that all eligible cattle are identified according to traceability rules, that official ID is properly placed and that required recordkeeping and reporting of official ID data is being done in a timely fashion. Field personnel, currently consisting of three (3) field veterinarians and fourteen (14) animal health technicians, maintain relationships with the livestock markets and market veterinarians on all matters pertaining to the Federal animal disease traceability rule. TDA field personnel visit with accredited veterinarians and livestock producers to address animal disease traceability rules. Animal Health administrative staff review information relating to animal disease traceability, animal movements and identification, and the ADT Coordinator provides oversight to the program.

- How are traceability data used internally, externally?
 - TDA uses the Tennessee Core One and CVI Central programs to process and store data from official certificates of veterinary inspections (CVIs) and official identification allocation records. Information for official identification

distribution and allocations is electronically entered into Tennessee's Core One system along with the USDA AINMS system. Origin, destination and animal information from import and export CVIs is processed in CVI Central and the information is then transmitted to Tennessee's Core One system. Livestock markets and accredited veterinarians participating in the cattle identification program enter official identification data directly into the State Vet Portal website, which is then reviewed and transmitted to the Tennessee Core One system. The Core One system has increased the amount of animal disease traceability data collected and that is available to AHERS.

- What values guide the ADT system?
 - An important element in the marketing of livestock is the capability to trace an animal back to its origin with the goal to safeguard animal health and public health allowing for quick response to a livestock disease event or incident of concern.
- What is the make-up of the ADT advisory group?
 - The ADT group is made up of three (3) field veterinarians and fourteen (14) animal health technicians that perform ADT related work in the field on a daily to weekly basis. There are also four (4) veterinarians, to include the State and Assistant State veterinarians, and one (1) ADT Coordinator in the office that assist and review ADT related questions from the public and field staff. The ADT Coordinator, along with two (2) administrative assistants process ICVIs and official identification information in the State Vet Portal, CVI Central and Tennessee Core One Systems daily.

2.2 Where are we now?

- How is ADT currently defined? Is it viewed as a cross-cutting component to animal health information systems? Is it viewed as a stand-alone initiative?
 - Animal disease traceability is a critical aspect of animal health information systems. TDA identifies livestock premises and registers premises identification numbers for better, more efficient animal disease traceability. TDA staff visit livestock markets and accredited veterinarians to ensure compliance with ADT rules. TDA staff also provide outreach at exhibitions to exhibitors, attendees and staff regarding ADT rules and the purpose of animal disease traceability.
 - TDA currently has 18 livestock markets and 17 accredited veterinarians participating in the Cattle Identification program. The database for this system is an integral part of

the animal health information systems. Information from the system is available for TDA and USDA staff.

- What measures of traceability capability are currently being used?
 - Tennessee ADT staff complete all National Priority Trace (NPT) exercises assigned and enter the information into EMRS to test the efficiency of our programs and staff for trace-backs. Each NPT involves tracing official identification from sources that can include certificates of veterinary inspections, official test charts, livestock market records and official tag distribution and reallocation records. In addition to the NPT exercises, TDA staff also complete actual disease trace backs as needed.
- What are the specific values and associated interpretation?
 - Measures currently in place are the USDA traceability standards to measure animal traceability capability which are:
 - Time to trace a referenced animal to a certain location (previous location, origin, or destination)
 - Time to trace animals detected and traced for program diseases such as brucellosis and tuberculosis.
- How is coordination being currently achieved within the unit?
 - The USDA ADT Coordinator works closely with the TDA State Veterinarian and ADT Coordinator. The TDA field staff coordinates the Animal Traceability Program through the livestock marketing facilities and accredited Veterinarians.
- How is coordination currently being achieved statewide, tribal-wide, territory-wide?
 - The livestock market veterinarian and market personnel apply official 840 RFID tags to all back-to-farm breeding cattle. The livestock market electronically enters the 840 RFID tag number, linked to the corresponding back tag, into the Tennessee Core One system through the State Vet Portal. This information is then available to TDA and USDA staff.
- How does the present unit coordinate activities with other existing agencies/units?
 - TDA provides incentives and field support for the livestock markets to facilitate the Market Cattle Traceability program. The livestock market veterinarian and market personnel apply official 840 RFID tags to all back-to-the farm cattle over 18 months of age and all dairy replacement females,

- bulls, and steers. The livestock marketing facility submits the official identification linked to the corresponding back tag to the TDA State Vet Portal electronically for storage in the TN Core One system, which is then available in AHERS. TDA and USDA can access the data for traceability efforts if needed for cattle diseases and food safety issues.
- TDA works with industry stakeholders who assist with dissemination of traceability information to their organizations.
- What standards for traceability are currently being used? Are they appropriate?
 - The Tennessee program seeks to continue objective assessment of animal disease traceability by using the recommended Preliminary Traceability Performance Measures.
 - What is the state of technology infrastructure? Capability in terms of size? Compatibility within and outside the agency/unit/dept. etc. for sharing data when needed.
 - Information can be entered into the State Vet Portal directly as a web-based system. The information is then transmitted to the TN Core One system, which is also available to USDA personnel. Direct entry reduces the risk of data entry error and provides more efficient documentation. The Core One system is cloud based and can store an unlimited amount of data.
 - Are requests for information available 24/7, or only available M-F, 40 hours per week, if authorized personnel are present?
 - Information is available Monday through Friday during normal business hours from 7:00 AM to 4:30 PM CST. All CVI information entered into CVI Central, which transmits to TN Core One, making the information accessible 24/7 in AHERS in an emergency.
 - What is the impact of state, tribe, or territory funding on capability? How does Federal funding fit into the plan?
 - Federal funding greatly increases the ability of TDA staff to perform animal disease traceability work. Federal funding is used to assist TDA in promotion of the traceability programs and activities in the state. This is done through outreach from field staff, staff veterinarians and program coordinators. Federal funding also enhances our ability to complete outreach and surveillance for traceability compliance at shows, fairs and other events within in the state. With state

only funding, TDA is much less able to complete traceability work due to less funding for increased traceability measures and programs.

2.3 Strengths and Weaknesses

- What are the strengths of the organization in terms of technology, human resources, personnel capabilities, etc.?
 1. The TN Core One database is the core piece of the Tennessee traceability system; identification data can be entered directly into the TN State Vet Portal by participating livestock market facilities and accredited livestock veterinarians. This direct entry of identification data makes for efficient documentation of animal identification with decreased risk of data entry error.
 2. The strength of the program is the state and federal field personnel that visit the markets regularly to address issues regarding the animal traceability rules. These regular visits are for inspection and monitoring activities, including verification that all eligible cattle are identified and that required recordkeeping and transmission of identification data is being carried out. Field personnel, consisting of fourteen (14) animal health technicians and three (3) staff veterinarians, maintain relationships with livestock markets and market veterinarians on all matters pertaining to the federal traceability rules and the market cattle identification program. Federal funding plays an integral part of the plan since TDA field personnel are involved in numerous events yearly that help maintain and advance animal tracing capability of the Tennessee ADT Program.
 3. Traceability data is captured from cooperative disease programs. Every official identification from Tuberculosis, Brucellosis testing, and Brucellosis vaccinations is being entered into TN Core One. TDA has a full-time data entry person, along with the ADT Coordinator, to transfer all identification from import and export CVIs, both paper and electronic), as well as tag distributions and allocations into the TN Core One system.
 4. The Tennessee legislators have provided incentives for livestock markets to facilitate the ADT program since 2006. The TDA has received major legislative appropriations to support the animal industries of the State with a particular focus on the animal identification program. Over 40 million dollars have been appropriated to provide co-funding for a variety of initiatives with funding contingent upon premises identification being a requirement for program enrollment. The allocation of State money designated for agriculture includes projects that would facilitate producers, livestock markets, and other livestock assembly sites to procure premises identification by

linking state co-payments for purchases of animal handling facilities equipment, herd bulls, herd evaluations, plus incentives for markets and veterinarians to purchase scanners, software and computers related to the collection of animal identification data.

- What are the weaknesses in terms of “lack of” technology, human resources, personnel capabilities, etc.?)
1. The State of Tennessee currently has a thorough traceability program. Eighteen (18) of the largest licensed livestock markets in Tennessee and seventeen (17) livestock veterinarians are currently participating in the voluntary Tennessee Cattle Identification Program (TCIP). This leaves twenty-two (22) markets that have chosen not to participate.
 2. The department is working on ways to increase the use of electronic CVIs by accredited veterinarians. TDA charges for paper TN CVI books. Our goal is to have 90% of accredited livestock veterinarians using electronic CVIs in the next 3 years.
 3. Weaknesses from handwritten documents (CVI’s, official ID redistribution records, etc.) include legibility of the documents, which can cause inaccurate recording of official identification tags and owner/destination information. Other weaknesses include the time required to receive documents, which can greatly reduce traceability efforts in a disease outbreak.

2.4 Opportunities and Threats

The Market Cattle Traceability Program traces back all market cattle to the livestock marketing facilities. This traceability system still relies on the market keeping good records of all business transactions of the seller and buyer. Several of the smaller livestock markets do not participate in the voluntary program, so TDA can only trace cattle from these markets with USDA-approved backtags and market records.

TDA expanded the animal identification program for accredited livestock veterinarians in July of 2011. This program has the veterinarians entering official animal identification plus premises identification of the farm of origin into the TN Core One program.

TDA staff continue to encourage and promote electronic CVI options by offering a free PDF version of a CVI template for accredited veterinarians. TDA is also in communication with Trace First as they are developing a new eCVI program.

The web-based data programs (State Vet Portal, CVI Central and Core One) are all cloud based and accessible from any computer with the correct login information.

2.5 Inventory of existing infrastructure and suitability assessment

Currently, participation of livestock marketing facilities in the TDA sponsored market cattle traceability program is voluntary. State and federal personnel visit markets regularly on sale days for inspections, monitoring activities, and to address issues about the traceability rules. They verify that all eligible cattle are identified and that required record-keeping and transmission of data is being done. The field staff work closely with the State ADT Coordinator and the USDA ADT Coordinator.

The central repository for the data for the Market Cattle Identification Program is the State Vet Portal, which then transmits the data into the TN Core One system. In the State Vet Portal, the Premise Identification information is linked to the official identification of the animal. This direct entry of identification data facilitates efficient documentation of animal identification with less room for errors.

In addition to the field staff, the ADT Coordinator and two clerical data personnel work with the Tennessee Core One system in Nashville. This clerical data entry of identification data originating from Interstate Certificates of Veterinary Inspection is completed in CVI Central and then transmits to TN Core One. Electronic CVIs have official identification information automatically pulled by CVI Central and then TDA staff review to verify the information and tie to the correct origin and destination premises in CVI Central. This information is also then transmitted to Core One.

III. VISION AND MISSION CONTEXT FOR ADVANCING TRACEABILITY

3.1 Vision Statement

The Tennessee Department of Agriculture works to ensure a healthy, growing animal industry. TDA partners with private veterinarians and livestock industries to provide programs aimed at preventing, controlling, and eradicating certain infectious or communicable diseases of livestock.

The Tennessee Animal Disease Traceability Program strives to have an effective disease surveillance program by continuing to improve every aspect of animal traceability.

3.2 Mission Statement

The Tennessee Animal Disease Traceability Program assists in the overall objective of having an animal disease traceability system to support an effective disease surveillance and response program. The intent is to continue improving the accuracy and efficacy in every aspect of animal traceability. The overall objective of advancing animal disease traceability in Tennessee is to have searchable epidemiological information as needed for disease inquiries and response. This data is essential for supporting interstate animal activity, an effective animal disease surveillance plan and for planning continuity of operations.

IV. TRACEABILITY REQUIREMENTS

4.1 Strategic goal(s)

The TDA plans to continue to improve the current traceability program by continuing to utilize the Tennessee Core One management system. The data collected by CVI Central, the Tennessee Market Cattle Traceability program and the federal Brucellosis and TB programs will be entered

into Core One, making the data accessible to AHERS. Tennessee has 40 livestock markets with 18 markets participating in the voluntary market cattle identification program (MCTP) currently, with recruitment for the program continuously ongoing. The CVI Central and the MCTP data recorded in Core One moves Tennessee closer towards the goal of identifying the majority of eligible cattle in interstate movement and marketing channels. CVI Central also automatically sends CVI records to other states electronically with other state CVI Central users being able to download animal information that has been entered by Tennessee.

4.2 Programmatic goals (objectives)

The overall objective of the Tennessee animal disease traceability program is to have searchable electronic epidemiological information prior to responding to any disease inquiry or natural disaster. The Animal Identification program supports an effective animal disease surveillance plan which is essential for supporting interstate animal activity and for planning continuity of operations.

Objective 1: Maintain and advance the animal disease tracing capability of the Tennessee Animal Disease Traceability Program by increasing the amount of electronic traceability data collected by APHIS/VS State-federal cooperative program activity, interstate certificates of veterinary inspection, and the Tennessee Cattle Identification Program.

To accomplish this objective, TDA staff will continue to collect data in CVI Central from hand-written CVIs, TDA CO/KS eCVIs, GlobalVetLink, Vet Sentry, USDA VSPS, and other electronic CVI systems. Compliance for proper and complete information on ICVIs, Official Test Records, and other movement documents will be monitored as the CVIs are received by the Tennessee State Veterinarian's office. Non-compliance activity will be recorded and housed in the TN CVI Central database.

Objective 2: Conduct outreach activities to producers, accredited veterinarians, livestock markets, harvest facilities and other industry shareholders.

In addition to weekly visits to sales at livestock markets, field staff participate in various opportunities for ADT traceability outreach in their contacts with food animal veterinary practitioners, feed stores, livestock associations, etc. Outreach activities consist of personal contact, verbal communication, and distributing printed educational materials.

Animal health staff also continue to encourage electronic CVIs to accredited veterinarians for faster, more accurate animal identification information for more efficient animal disease traceability.

Objective 3: Establish objective assessment of animal disease traceability by completing National Priority Traces during the period of the roadmap using the four standard Traceability Performance Measures.

Objective 4: Improve Animal Disease Traceability Infrastructure within Tennessee. The Tennessee Cattle Identification Program compiles official identification information that traces cattle movement in Tennessee livestock marketing facilities and allows sharing of animal disease traceability data. 840 RFID tags are the official identification devices used and originates from cattle

premises or licensed livestock markets, with both having registered premises identification number as the location identifier. Eighteen licensed livestock markets in the State currently participate in the voluntary traceability program. The TDA has received legislative appropriations of \$300,000 to support the animal industries of the State with a particular focus on the cattle identification program. The livestock market veterinarian and market personnel apply official 840 RFID tags to all back to farm cattle over 18 months of age, and all dairy cattle. The livestock market electronically transmits the 840 RFID tag number and cattle information to the TDA data system via the State Vet Portal website.

The goal of the Tennessee Cattle Traceability Program is to identify cattle through an electronic database. This data is migrated to the TN Core One System after being input into the State Vet Portal website by the market or veterinarian. The information is then easily searchable in the Core One system and available in AHERS.

Objective 5: In another component of the traceability program, accredited livestock veterinarians have been encouraged to participate in the Animal Identification Program. Participating veterinarians are utilizing official identification (840 RFID) tags to identify cattle for their clients. The accredited veterinarian receives an incentive for promoting and performing animal identification in his/her practice area. This program requires that participating herds have a premises identification number. Identification data is entered directly into the Tennessee animal health database from the veterinarian's office via the State Vet Portal website. The information is then easily searchable in the Core One system and available in AHERS.

Objective 6: Compliance is a major priority of the Tennessee traceability plan. The Tennessee Ag Crime Unit is a separate department within the Tennessee Department of Agriculture that has assisted the State Veterinarian with monitoring livestock movement along the Tennessee Interstate System. The Ag Crime Officers are licensed law enforcement officers and can conduct inspections of interstate cattle movements.

4.3 ADT Trace Performance Measures (TPMs)

The Tennessee ADT Program seeks to continue objective assessment of animal disease traceability by providing baseline measures during the funding period by using the recommended Preliminary Traceability Performance Measures.

In addition to actual disease trace backs, the Tennessee ADT Staff complete all National Priority Trace (NPT) exercises assigned and enter the information into EMRS to test the trace-back efficacy of the program. Each NPT involves the tracing of official identification from sources that include official test charts, certificates of veterinary inspection, and market and official tag distribution records.

NPT exercises are given priority as they would be in a real disease outbreak. State ADT staff tracing the official identification number locate information through Core

One, AIMS, and CVI Central to determine trace performance measures (TPMs) below:

TPM 1: In what State was an inbound animal officially identified prior to entering your State?

TPM 2: Where in your State was the animal officially identified?

TPM 3: From what State was an inbound animal shipped?

TPM 4: From what location in your State was an outbound animal shipped?

4.4 Data requirements

The Tennessee Department of Agriculture (TDA) implemented a system to assist livestock producers to officially identify cattle on their premises. Tennessee producers can obtain official 840 RFID tags at no cost from the TDA Animal Health office with their premises identification number (PIN). If a producer does not have a PIN, the TDA Animal Health office will get their information for a PIN application and complete a PIN for them. Official USDA 840 RFID tags are shipped directly to the livestock producer for use in livestock on their premises. The Tennessee state legislature provides funds on a yearly basis for the department to purchase approximately 80,000 RFID 840 tags to provide livestock producers, livestock markets and veterinarians to identify cattle and swine. This program promotes the identification of cattle with official identification and links the official ID with a PIN. The Tennessee Agricultural Enhancement Program (TAEP) provides cost share dollars to livestock producers, veterinarians, and markets for the purpose of purchasing EID readers and equipment for scanning RFID tags. TDA also has RFID readers on hand that are available for lease to veterinarians and livestock markets for efficient, accurate reading of RFID tags. TDA staff maintains electronic records of official USDA identification devices distributed to livestock producers, livestock market facilities, tagging sites and accredited veterinarians in the TN Core One database and the USDA Animal Identification Number Management System (AINMS). TDA has a web-based data system, the State Vet Portal, that allows official identification data of cattle to be entered directly into the TDA database from participating livestock marketing facilities and veterinary offices.

Tennessee Cattle Traceability Program

The TDA provides incentives and field support for livestock markets to facilitate the program. The livestock market veterinarian and market personnel apply official 840 RFID tags and USDA approved back tags to all back to farm beef cattle over 18 months of age, and all dairy cattle. Market cattle going direct to slaughter have only USDA approved back tags applied. Livestock markets in Tennessee utilize the back tag as their market sale tag, thus tying animal identification directly to the market records of the seller. The livestock market electronically transmits the official USDA identification, linked to the corresponding back tag, to the Tennessee State Vet Portal. It is expected that accredited veterinarians will continue to apply official identification while performing regulatory animal disease work. Livestock markets participating in the program apply the 840 RFID tags because of the incentive paid to the market.

Accredited livestock veterinarians participate in the Tennessee cattle identification program on a voluntary basis. Participating veterinarians utilize permanent 840 RFID tags, to identify cattle for their clients. The accredited veterinarians receive an incentive for promoting and performing animal identification in their practice area. Participating cattlemen are required to have a premises ID, along with a physical farm address, to participate in the program. Identification data is entered by the veterinarian's office directly into the Tennessee State Vet Portal website.

The Tennessee animal disease traceability information is compatible and interoperable with other States/Tribes/Territories, and USDA, for sharing animal disease traceability data. The individual identification used is official and originates from legitimate cattle premises or licensed livestock markets, with both having premises identification as the location identifier. The individual identification devices are 15-digit 840 RFID ear tags. Validation of data is verified with field trace-back exercises using actual identification data from program records and movement documents. The availability of traceability information to other jurisdictions is usually during normal business hours, however, it can be up to, and including, 24/7 if the level of emergency warrants such coverage. All methods of transmission are generally available and would be used appropriately, with response times being variable and dependent on the complexity of the trace-back.

4.5 Information technology plan

The central repository for the data for the Tennessee Cattle Identification Program is the State Vet Portal that allows identification data to be entered directly into the TDA database. The information, once approved, is then transferred into TN Core One. The Premises Identification information is linked to the official identification of the animal. This direct entry of identification data facilitates efficient documentation of animal identification for conducting an animal disease inquiry or for documentation of disease-free status. Trace First houses their data in the cloud and has a security plan in place for protection of the data.

4.6 Resource requirements

- Is specific expertise needed that is not currently available?
 - Currently, handwritten certificates of veterinary inspection (CVIs) are being scanned and submitted to CVI Central, where all information is being pulled and entered manually. The information then transfers into the TN Core One system for easy access. Program disease and vaccination records are also manually entered into Core One.
- Is a continuity of operation plan (COOP) in place and how frequently is it tested?
 - The Tennessee Department does have a continuity of operation plan (COOP) in place and is tested every 12-24 months.
- Are automated data capture resources needed?
 - Yes, CVI Central is used to capture information from electronic TN PDF CVIs, Vet Sentry CVIs, USDA VSPS

CVIs, GVL CVIs and other accepted electronic CVIs for livestock and horses.

4.7 Organizational needs

4.7.1 Executive support

- The State Veterinarian is very involved in the Animal Identification Program. The State Veterinarian meets regularly with the Commissioner of Agriculture to obtain feedback on the implementation of programs including Animal Disease Traceability and other matters dealing with the department.
- Since state funds are used in the support of animal traceability the Tennessee Department of Agriculture is subject to state audits.

4.7.2 Coordination and oversight procedures

The animal disease traceability stakeholder team is made up of several industry and private groups. The industry stakeholders assist TDA with the dissemination of ADT information to their respective groups. Representatives of these groups meet as needed to discuss ADT related issues and information.

The TDA Emergency Support Coordinator coordinates with the Tennessee Emergency Management Agency and regularly participates in TEMA exercises.

4.7.3 Policy

The Tennessee Department of Agriculture's Animal Health division supports an effective animal disease surveillance plan in all departmental programs. The overall objective of the Tennessee animal disease traceability program is to have searchable epidemiological information prior to responding to any disease inquiry or response need. This is essential for supporting interstate animal activity.

4.7.4 Staffing

TDA animal health technicians and staff veterinarians are responsible for maintaining direct contact with livestock marketing facilities, accredited veterinarians, feed stores, livestock associations, etc. in their specific sections of the state. These personnel participate in statewide and regional industry and veterinary organizations. The State administrative veterinary staff consists of two data clerk entry personnel, the State ADT Coordinator, and the Assistant State Veterinarian. Animal Disease Traceability Program is a vital, individually coordinated unit of the Tennessee Department of Agriculture Animal Health.

4.7.5 Budget requirements

The Tennessee ADT program is funded by both federal and state funds. USDA-VS Cooperative funding provided \$145,219 annually to support ADT in Tennessee. Since 2006, animal health has received legislative appropriations to support the animal industries of the State with a particular focus on the animal identification program. The Tennessee Cattle Identification Program has been allocated \$300,000 for the Market Cattle Identification Program for this fiscal year. To continue the traceability program the next three years, TDA will have to continue funding at the same or increased levels to improve the present Animal Traceability initiative in the state of Tennessee. The various components are somewhat dependent on the amount of success the Market Cattle Identification Program incurs. TDA will continue this program as long as state funds are available; federal funds are used primarily for salaries and benefits and to partially fund work in all aspects of animal traceability.

Over 40 million dollars have been appropriated during the past sixteen (16) years to provide co-funding for a variety of initiatives, with funding contingent upon premises identification being a requirement for program enrollment. The allocation of State money designated for agriculture includes projects that facilitate producers, livestock markets, and other livestock assembly sites to procure animal handling equipment, herd bulls, herd health programs and herd evaluations. This program also provides incentives for markets and veterinarians to purchase RFID scanners, software and computers related to the collection of animal identification data.

4.7.6 Outreach

One of the main objectives of the Tennessee Animal Disease Traceability Program is to conduct outreach activities to producers, accredited veterinarians, livestock marketing facilities, harvest facilities and other industry shareholders.

In addition to the weekly visits to sales at livestock markets, field staff participate in various opportunities for program outreach through their contacts with food animal veterinary practitioners, feed stores, and livestock/poultry associations. At the statewide and regional levels, staff personnel conduct outreach activities through participation in statewide and regional industry and veterinary organizations.

4.7.6.1 Accredited veterinarians

In addition to the outreach mentioned above, accredited livestock veterinarians have been asked to participate in the Tennessee Cattle Identification Program on a voluntary basis. Participating veterinarians utilize 840 RFID tags to identify cattle for their clients. The accredited veterinarian receives an incentive for promoting and performing animal identification in his/her practice area.

Tennessee accredited veterinarians have access to several electronic CVI options. A Windows based PDF version through TDA, Global Vet Link, Vet Sentry, and USDA VSPS CVIs are all currently available and we plan to offer more electronic CVI options to TN accredited veterinarians within the next one to three years. TDA administrative staff currently monitor all certificates

through CVI Central. This includes hand-written and PDF CVIs that are forwarded to the state veterinarian's office from the issuing veterinarian.

To advance animal disease traceability and compliance, the Tennessee Department of Agriculture office staff monitors all Certificates of Veterinary Inspection sent in by accredited veterinarians. The Tennessee ADT staff review all CVIs. ICVIs are monitored for proper completion. Accredited Veterinarians are notified by letter of all non-compliance issues. These non-compliance issues are recorded electronically in CVI Central by individual veterinarian. All veterinarians with multiple non-compliance issues are visited by a TDA or USDA staff veterinarian. Livestock markets are visited regularly for ADT compliance. Also, Tennessee Ag Crime officers check livestock carriers transporting livestock interstate through Tennessee for proper interstate Certificates of Veterinary Inspection.

4.7.6.2 Slaughter plants

The field staff participate in outreach opportunities to slaughter plants on a quarterly basis and more frequently as needed and as they are able. Outreach includes providing contact information for slaughter plants on who to contact with any questions or concerns regarding anything, but especially disease concerns in livestock and poultry. Disease signs to watch for are discussed with slaughter plant owners and employees.

If information is needed for traceability, slaughter plant records would be reviewed and further traceback performed based off of slaughter plant records.

4.7.6.3 Industry as a whole

The field staff participate in several different program outreach opportunities to industry and producers. Contacts include food animal veterinary practitioners, feed stores, livestock and poultry associations, livestock markets, extension offices, etc.

The allocation of State money designated for agriculture includes projects that facilitate producers, livestock markets, and other livestock assembly sites to procure animal handling equipment, herd bulls, herd health programs and herd health evaluations.

The animal disease traceability stakeholder team is made up of several industry and producer groups that include but are not limited to: Tennessee Department of Agriculture, Tennessee Agriculture Extension Service, Tennessee Farm Bureau, Tennessee Farmer's Cooperative and private veterinarians. Representatives of this group meet as needed to discuss animal disease traceability related information and updates.

4.8 Monitoring and reporting interstate movement activity

- How will the number of animals and the number of shipments be monitored that move interstate?
 - TDA monitors animal numbers and numbers of shipments being exported to other states and into Tennessee by electronic CVIs and handwritten CVIs. The totals can be

- pulled separately, or a report can be pulled from Core One to determine the total number of shipments and animals by species for a certain time frame.
- TDA staff also send a yearly report to USDA National Agricultural Statistics Service (NASS) of the number of animals and movement documents for import to Tennessee and export from Tennessee.
 - The ADT Coordinator also generates a quarterly report of the number of exported and imported livestock for Tennessee.
 - How will the data be verified or validated?
 - Tennessee Ag Crime officers check livestock carriers transporting livestock interstate through Tennessee for proper interstate Certificates of Veterinary Inspection.
 - Animal Health field staff check livestock at exhibitions and events to ensure they have proper documentation and testing, including Certificates of Veterinary Inspection and Equine Infectious Anemia testing.
 - The following data should be tracked and available upon request.
 - Number of ICVIs and other interstate movement documents created within the State/Tribe/Territory on a year-to-date basis for move-out animals.
 - Number of ICVIs and other interstate movement documents received for move-in animals.
 - Number of animals by species and class for move-in events associated with ICVIs and other interstate movement documents, indicating the number of animals officially identified and the number not officially identified.
 - Number of animals by species and class for move-out events associated with ICVIs and other interstate movement documents, indicating the number of animals officially identified and the number not officially identified.
 - Volume of distribution for each official numbering system/device issued by the State/Tribe/Territory and/or AVIC office, including backtags by market or slaughter facility.
 - The above data is collected and tracked by TDA personnel in an electronic record. The information can also be obtained through the Core One system.
 - The ADT Coordinator also generates a quarterly report of the number of exported and imported livestock for Tennessee, as well as the number of movement documents, outreach activities and the number of official identification devices, by type.

V. ADVANCING TRACEABILITY

5.1 Ranking of priorities for advancement

- A. Continue to increase the use of Electronic Certificates of Veterinary Inspection and official identification (840 RFID tags) in the interstate movement of cattle. TDA is currently reviewing additional eCVI options to offer to TN accredited veterinarians.
- B. Market Cattle Identification Program- focus on the point of commerce and high-risk cattle classes (over 18 months and dairy females, bulls, and steers) at livestock marketing facilities.
- C. Promote the use of RFID 840 tags on the farms of livestock producers by continuing to offer RFID tags at no charge to producers.
- D. Continue to encourage TN accredited veterinarians to participate in the Tennessee Cattle Identification Program, which pays the veterinarian an incentive payment for all RFID tags applied and reported for Tennessee producers.

5.2 Implementation of objectives

- A. 2025-2028 - Tennessee Cattle Identification Program- focus on the point of commerce and high-risk cattle classes at livestock markets. Increase our outreach to the livestock markets that are not participating in the voluntary Market Cattle Identification Program. Increase the number of market cattle officially identified in the electronic data base during the next 3-year period. Increase the incentive amount paid for tagging cattle as part of the TCIP agreement.
- B. 2025-2028 Veterinary Cattle Identification program- focuses on high-risk cattle classes. Promoting RFID, web-based interface self-entry. Increase number of veterinarians using eCVIs and participating in the cattle identification program by personal visits from the TDA field staff.
- C. 2025-2028 Increase the amount of electronic data (ICVI and animal identification) uploaded into TN Core One.
- D. 2025-2028 Continue to promote the tracing of interstate movement of cattle using electronic CVIs and low frequency and ultra-high frequency (UHF) RFID tags.