ADVANCING ANIMAL DISEASE TRACEABILITY
ROAD MAP FOR MISSISSIPPI

A Three-Year Plan

Submitted by:

JAMES A. WATSON, DVM, DACVPM

STATE VETERINARIAN
MISSISSIPPI BOARD OF ANIMAL HEALTH
P. O. BOX 3889, JACKSON, MS 39207
601-359-1170

Submitted to:

KEN ANGEL, DVM, PhD.
ASSISTANT DISTRICT DIRECTOR FOR MISSISSIPPI VETERINARY SERVICES
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

345 KEYWAY DRIVE
FLOWOOD, MS 39232
601-936-8580

4/17/2018
Table of Contents

I EXECUTIVE SUMMARY .......................................................................................................................... 3

II CURRENT TRACEABILITY SITUATION ............................................................................................... 3
2.1 Who are we? .................................................................................................................................... 4
2.2 Where are we now? ......................................................................................................................... 5
2.3 Strengths and Weaknesses .......................................................................................................... 6
2.4 Opportunities and Threats .......................................................................................................... 6
2.5 Inventory of existing infrastructure and suitability assessment .............................................. 6

III VISION AND MISSION CONTEXT FOR ADVANCING TRACEABILITY ........................................ 8
3.1 Vision statement ......................................................................................................................... 8
3.2 Mission statement ..................................................................................................................... 8

IV TRACEABILITY REQUIREMENTS ................................................................................................... 8
4.1 Strategic goal(s) .......................................................................................................................... 8
4.2 Programmatic goal(s) (Objectives) ............................................................................................. 8
4.3 Animal disease traceability performance measures ............................................................... 9
4.4 Data requirements .................................................................................................................... 10
4.5 Information technology plan ................................................................................................... 12
4.6 Resource requirements .............................................................................................................. 12
4.7 Organizational needs .................................................................................................................. 12
  4.7.1 Executive support ............................................................................................................ 12
  4.7.2 Coordination and oversight procedures ............................................................................ 13
  4.7.3 Policy .................................................................................................................................. 13
  4.7.4 Staffing ................................................................................................................................ 13
  4.7.5 Budget requirements ......................................................................................................... 13
  4.7.6 Outreach .......................................................................................................................... 14
    4.7.6.1 Accredited veterinarians ......................................................................................... 14
    4.7.6.2 Livestock markets ................................................................................................. 14
    4.7.6.3 Industry as a whole .............................................................................................. 15
4.8 Monitoring and reporting interstate movement activity .......................................................... 15

V TRACEABILITY IMPLEMENTATION ................................................................................................. 15
5.1 Ranking of priorities for advancement ....................................................................................... 15
5.2 Implementation of objectives .................................................................................................... 15
I. EXECUTIVE SUMMARY
Since 2004 the Mississippi Board of Animal Health has been participating in animal identification and disease traceability programs. Early projects looked at utilizing reader panels at stockyards or feeder sales to show how electronic identification and readers could be used at speed of commerce. A lot of time in the early years was spent trying to encourage the use of electronic identification. As the Animal disease Traceability Rule evolved, and the decision was made to exclude cattle under the age of 18 months from identification requirements, the demand for electronic identification has all but disappeared. Mississippi is primarily a beef cow calf state, so the majority of our exports are feeder cattle to other states.

During the past 5 years, Mississippi has focused ADT efforts on improving the availability of electronic data for traceability purposes. As the Trace Performance Measures were developed, it was obvious that records needed to be accessible electronically to be able to meet the standards. As a result, the focus was on acquisition of an electronic data management system that could be used for tracing animal movements and disease outbreak management. Because over 90% of the movement and test documents containing official identification are in paper format, data entry is a crucial component of having the information available electronically. The utilization of TraceFirst/CoreOne and also “statevet.com” has allowed Mississippi to make huge strides in having electronic data available to meet disease traceability needs. One large area of missing animal movement data was the movement of animals to and from state-line stockyards. Farmers rarely, if ever, got movement documents as required by the ADT Rule to take animals home from a stockyard just across the state line. Cattle are tagged at the stockyard, information is collected on cattle from or going out of state and then entered into statevet.com, which provides real time movement information for state and federal partners that are connected to statevet.com.

What are the key elements in summary form?
- Conversion of paper movement information to an electronic format
- Support for electronic data processes such as EIDs, Automated electronic readers, eMovement Documents and Test Charts.
- Outreach and Education Activities
- Monitoring and Compliance of ADT Rule
- The annual costs of the Traceability Program in Mississippi is $190,663 with $102,454 covered by Cooperative Agreement Funding.

II. CURRENT TRACEABILITY SITUATION
Mississippi Board of Animal Health
The Mississippi Board of Animal Health (MBAH) is the official state agency charged with controlling and eradicating contagious diseases of animals, with the State Veterinarian as the Executive Director. The Board of Animal Health is made up of 15 members both Officio and Ex-officio members. The Officio Members are appointed by the Governor to 4 year terms. Ex-officio Members include; Commissioner of Agriculture and Commerce; Mississippi State University Dean of College of Veterinary Medicine; Mississippi State University Head of Animal and
Dairy Science; Mississippi State University Head of Poultry Science; Alcorn State University Head of Animal and Dairy Science. Officio Members include; Mississippi Veterinary Medical Association Member; Mississippi Poultry Association; Cattle Breeder; Dairy Breeder; Sheep Breeder; Farm Bureau Member; Horse Breeder; Livestock Marketing Association and Swine Breeder. Additional groups that are engaged in the ADT process are Mississippi State University Extension, Mississippi Farm Bureau and the Mississippi Cattlemen’s Association. The MBAH is the advisory group and meets every quarter, so regular updates and issues regarding traceability can be discussed. In addition, there are always representatives from other livestock groups in attendance. MBAH is a small state agency with a State Veterinarian, Deputy State Veterinarian, Business Administrator, 2 Office Administrative Assistants, One Data Entry Clerk and 20 Supervisory and Field Personnel. The partnership with our federal partners, USDA APHIS VS is a vital component of the ADT effort in Mississippi. While the Choctaw Indian Tribe is located in Mississippi, currently there is no known livestock production occurring on their lands. The MBAH would work with and coordinate with the Choctaw Nation should this change.

2.1 Current Status
Animal Disease Traceability is an important component of the activities of the MBAH. The primary function of the MBAH is to control and eradicate communicable diseases of poultry and livestock, therefore Animal Disease Traceability is a core component of its ability to carry out the mission and is carried out through it’s many daily activities. Cooperation with USDA APHIS VS is also a vital component of traceability. Within Mississippi, the current components of the ADT Program are as follows.
1. TraceFirst/CoreOne is used as the primary traceability data storage resource.
2. Animal movements are entered into CoreOne. Animal movements are collected in several ways.
   a. Incoming and outgoing CVIs may be paper or electronic based. In either case they are entered into statevet.com to be shared with other state’s systems. MBAH has a dedicated data entry person to enter the movement data into statevet.com to be uploaded into CoreOne.
   b. Interstate movements at private and public sales are collected after the sale occurs to get the animal identification and interstate movement information to enter into statevet.com/CoreOne.
3. All Official Identification from Test Charts is also entered into TraceFirst/CoreOne.
4. Official identification tags and Certificates of Veterinary Inspection distribution information is entered into the Trace First system.
5. Office staff review the incoming CVIs for quality control, any animals not meeting entry requirements are traced and dealt with accordingly.
6. Field personnel are at each livestock sale and are able to monitor ADT compliance. There are also several national shows that occur and field personnel are present to check CVIs on all animals entering the show grounds.
7. Animal traces are conducted for disease and exercise purposes.
8. There are multiple regional and state-wide meetings and shows that are opportunities for education by being present and passing out educational material. In assessing the existing situation, this section is intended to link inventory of existing infrastructure with a broader range of considerations.

2.2 Where are we now

For the past 5 years, Mississippi has not only been in an economic strain with regards to state revenues, but we have also been under very conservative republican leadership in both the executive and legislative branches of government. The MBAH has been given level or decreased funding for the past 5 years. There seems to be a decreased interest at the leadership level of the legislative branch to support animal agriculture in general, and specifically Animal Disease Traceability issues. State funding does not even adequately cover personnel and salaries for MBAH on an annual basis. Federal cooperative agreement funding is required to fund program work. Cooperative Agreement dollars have been level or decreased for many years, resulting in a “treading water” mentality with regards to moving traceability forward.

2.3 Strengths and Weaknesses

Strengths: the MBAH is a small agency, but has a staff dedicated to carrying out its disease control mandate. The agency has developed close working relationships with the major livestock industry groups within the state, the Mississippi Veterinary Medical Association, and has developed collaborative efforts with Mississippi State University Cooperative Extension Service. These alliances have allowed the state to leverage the ability to carry its ADT activities. By virtue of its size, the agency is able to be flexible and respond to new issues or needs in a very timely manner, without the encumberances often felt by larger organizations more political in nature.

Weaknesses: Mississippi is primarily a cow-calf beef production state, therefore most cattle movements are calves being exported to other states for feeding/grazing purposes. In most of these operations electronic identification is not seen as an advantage, so until there is mandatory identification and listing of ID on CVIs there will be little interest in EID usage. The vast majority of our traceability data is collected in paper format, there is a huge need for Official ID devices to be applied and then collected electronically at stockyards and private sales. This would
eliminate a huge amount of manual data entry work. Having to manually enter official identification from paper or electronically scanned movement and test documents is costly and prone to data entry error and leads to loss invaluable time when trying to trace diseased animals. Due to lack of state budget support (as has already been mentioned) MBAH is left without having personnel that can help manage IT issues related to traceability such as promoting and integrating electronic CVIs, testing data etc. As technology changes, and more electronic CVIs become available and as software systems change, keeping up with IT issues is a real struggle for small organizations such as MBAH. We are reliant on third party vendors and consultants to keep our systems current.

2.4 Opportunities and Threats

Opportunities: An ADT Program that is primarily based on electronic data is a huge opportunity for a small organization such as MBAH. The information is housed centrally, available 24/7 through internet and cloud based programs, allowing management by only a handful of personnel. As systems develop, the ability for large animal veterinarians to create CVIs electronically in the field and have the information submitted immediately to our office is a huge benefit to all concerned. During natural disasters such as hurricanes, flooding and tornados experienced during the past few years in Mississippi, having electronic animal identification readily available, has allowed the repatriation of animals back to owners. One of the largest opportunities the ADT Program has created, is the working relationships with the various segments of industry and other stakeholders to work toward a solution for disease traceability. The USDA APHIS VS and MBAH partnership has been strengthened because of this program.

Threats: The two primary threats to ADT in Mississippi are the lack of interest by industry in moving animal traceability forward and the lack of budget support to keep the program moving forward. As cooperative agreement funding stays level since 2011 (decreased in 2018) inflation robs more and more “real money” from the program. One hundred thousand dollars in 2011 does not purchase the same thing or pay the same salaries in 2018. Another threat I am concerned with is the number of states that allow registration tattoos and brands to be used as official identification. Many times, once the animal has entered a state using registration identification on the CVIs they have a NUES tag applied because of needing a test or for some other reason, and the registration ID and NUES or 840 tag doesn’t get correlated in the system, so traceability is lost. Lack of compliance enforcement is another real threat to the program. At the state level, there aren’t enough inspectors to do a good job of compliance, and when there needs to be enforcement action, there is not enough USDA APHIS VS support for IES agents to complete an investigation.

2.5 Inventory of existing infrastructure and suitability assessment

Below are the resources available to MBAH to carry out the ADT Program.
• Human resources
  o State Veterinarian oversees the ADT Program
  o Full time data entry clerk
  o 2- Office Support personnel that are available to help with permits and validating entry requirements of incoming CVIs as well as issuing PINs
  o Deputy State Veterinarian helps oversee quality control and data entry of movement and identification information
  o Livestock Inspector that oversees tag allocation management as part of job description
  o Livestock Inspector that oversees Movement Document (CVI) allocation as well as NUES Tag distribution as part of job description
  o 9 Livestock Inspectors that attend 20 stockyards, Disease Traces, Compliance activities as part of job description

• Space availability
  o Administrative Office in Jackson MS where State Veterinarian and administrative support is housed, provided by State of Mississippi.
  o Field Office in Hattiesburg MS where Deputy State Veterinarian and Poultry Division is hired. Provided by State of Mississippi. This is where the data entry clerk works.

• Connectivity resources, both in office and in the field.
  o In both offices, connectivity is provided by the state.
  o Field connectivity requires laptops and wireless connectivity, as Livestock Inspectors all work from home.

• Access to USDA animal disease traceability and animal health information resources
  o The state has access to USDA CoreOne System

• Organization of all existing paper record systems used to access animal disease traceability or animal health information
  o Due to extremely limited storage space, the previous years worth of paper records are kept in the office, the other records are sent to be scanned onto a DVD. The paper documents are then sent to archives to be kept for 4 years then destroyed.

• Computerized data management capability, including present storage size, speed, security, etc.
  o All Official Animal ID information and movement information is currently being uploaded in a state version of CoreOne by TraceFirst by using “statevet.com”. This information is entered by a data entry clerk and overseen by the Deputy State Veterinarian.
  o Security of data is protected by virtue of the internet access being provided by the State ITS system with its firewall
and other security systems. MBAH falls under the State of Mississippi ITS security protocols. CoreOne also provides security to its system.

- Internet speed is not an issue due to high quality internet provided by the State ITS Agency.

- MBAH has purchased wands, panels and hand held devices to assist with automated data collection. In the past, MBAH has collaborated with livestock markets, veterinarians, extension and private producers to demonstrate automated data collection techniques. Currently there are no ongoing projects. MBAH has 840 EIDs available for distribution to producers or others as needed, and will loan out or send personnel to operated electronic data collection devices for sales or demonstrations.

III. VISION AND MISSION CONTEXT FOR ADVANCING TRACEABILITY

3.1 Vision Statement
Mississippi should have a traceability system in place that utilizes electronic identification devices, entered into electronic management, movement of testing systems which can be seamlessly submitted to the State Animal Health Official, whether the animal is an imported or exported animal. This would allow the state to quickly, in real time identify and locate animals that may be a part of a disease or disaster response.

3.2 Mission Statement
The MBAH, as the authorized entity in Mississippi, would have the resources and personnel to oversee an adequate ADT Program in coordination with USDA APHIS VS that protects the economy of Mississippi by overseeing disease and disaster responses in a manner that prevents further spread of disease or loss of livestock. Mississippi State Code authorizes the State Veterinarian under the authority of the Board of Animal Health to promulgate regulations and to initiate programs as necessary to prevent and control contagious diseases of animals.

IV. TRACEABILITY REQUIREMENTS

4.1 Strategic goal(s)
For MBAH to develop, implement and maintain a State-wide, infrastructure for advancing animal disease traceability compatible with USDA standards.

4.2 Programmatic goals (objectives)
1. Maintain IT Systems necessary for electronic data entry and retrieval.
2. Data collection and entry from movement documents, test documents etc. into electronic retrievable formats following standards that will allow data to be shared with USDA and other states systems. The documents need to be examined for quality and accuracy so that the entered data is correct.
3. Ensuring that movement documents and tag distribution data are accurately captured into the electronic system.

4. Continued issuance of Premises Identification Numbers. MBAH issues PINs to all farms visited as a result of animal health work.

5. Program oversight. It is important that an Animal ID Coordinator be available to direct the program and to stay in touch with stakeholders, and stay current on new issues regarding ADT.

6. An IT person available to work with stakeholders that wish to utilize electronic records such as CVIs and making sure the state has appropriate systems in place to integrate that data into electronic data systems.

7. Increase compliance monitoring activities. Until there is monitoring for compliance, many people are not convinced of the necessity to participate in the program.

8. Outreach Activities. A successful ADT Program is one that routinely reaches out to the stakeholders with relevant, pertinent information, using all the outreach mediums available, to include websites, newsletters, brochures and meeting attendance. Developing messages and continuing education for the veterinary community.

9. Exceed the Trace Performance Measurement Standards.

4.3 Animal disease traceability performance measures (required)

- Mississippi has been fortunate to not have many actual disease traces, so we rely mainly on Trace Exercises. Below is the result of the 2016 TPM exercises. In one category Mississippi was deficient for a trace which was the result of improper reporting by an accredited veterinarian of tagging distribution charts. Both the MBAH and USDA APHIS VS work with Accredited Veterinarians to make sure they understand the responsibilities under the ADT Rule.
Trace exercise are a valuable tool as they provide insight as to whether or not the data being entered is correct, and whether or not there are other holes in the traceability system.

### 4.4 Data requirements

Once records of individually identified cattle are received at the MBAH, they are entered on Excel spreadsheets by a data entry person who uploads completed spreadsheets daily to StateVet.com. Uploaded records in StateVet.com are then approved daily by the Deputy State Veterinarian for movement into Core One. The MBAH maintains its own state Core One system which allows for data privacy and for more regular updates and modifications to its system. MS uses StateVet.com due to its ability to quickly record data into Core One but also because it sends data not only to MS but also to the state the cattle are moving to/from.

Electronic health certificates are received by the MBAH StateVet.com account. An office administrator reviews the certificates for approval then sends them to the Core One system.

Quarterly reports for movement are generated manually by the office administration and through the Core One reporting system. Trace exercises assist us in testing our records system.
Paper copies of movement records and health certificates are stored internally in locked office buildings, and then moved to the Mississippi State Archive Office. Before storage in archives, paper health certificates are scanned and discs are kept at the MBAH office for 5 years or longer.

- Fully describe standards to be used for location identification, if used:
  - All data standards necessary to issue PINs through the federal allocator are used, to include physical address and GPS Coordinates.
- Fully describe standards to be used for official animal identification, including arrangements with other States, Tribes, Territories, as well as official identification methods/devices used within the cooperator’s jurisdiction:
  - Animal Disease Traceability standards are utilized, with the addition of recognizing Registration Tattoos and Brands if accompanied by the Registration Paper as Official ID.
- Will the State/Tribe/Territory be using official metal ear tags beyond the current system involving accredited veterinarians only applying the tags at the time of performing regulatory animal disease work? What formats? What volume is expected for use? How will they be distributed? What is the plan for distributing taggers? VS Memo 578.12 is to be used for reference guidelines. (required to be addressed within the Road Map [option to distribute NUES tags direct to producer is determined by State or Tribe)
  - Mississippi allows producers to request and use NUES Tags if requested. Tags and taggers can be distributed through our office or can be shipped from the USDA central warehouse.
- What tag distribution record keeping systems will be used? (required to be addressed within the Road Map)
  - All distributed tags are recorded in an excel spreadsheet with regards to tag numbers, and name of recipient. If the recipient is a veterinarian, then records of animals tagged are to be returned to the State Vets Office. This information is all then entered into Core One.
- What data requirements exist for commuter herd agreements?
  - NA
- What forms are approved for interstate movement in addition to ICVIs?
  - Owner shipper statements for animals moving from stockyards on state-line back to farmers premises,
- How and when will data be shared with other States, Tribes, Territories, and USDA? (required to be addressed within the Road Map)
All movement data is entered into statevet.com to be uploaded into CoreOne. The out of state data is then available to any federal or state entity that is set up to receive movement data from statevet.com. **Mississippi has been doing this for over 4 years and is a very successful way to share data with other state and federal partners.**

- How will group/lot official numbers be handled within the system?
  - NA

4.5 Information technology plan
The projected IT costs for ADT for FY 2018, 2019, 2020 include:
1. $3600 per year for State ITS support.
2. $3600 per year for “statevet.com”.
3. $15,200 per year for TraceFirst/CoreOne data management system
4. $3000 per year computer hardware
5. $3500 per year for field internet connectivity,

4.6 Resource requirements
- Is specific expertise needed that is not currently available?
  - Additional Data Entry person
  - Dedicated Animal Disease Traceability Coordinator
- Will consultants be needed?
  - No
- Is a continuity of operation plan (COOP) in place and how frequently is it tested?
  - The ADT system is cloud based, allowing the work load to be spread over two locations in different cities. Therefore the work can be accomplished wherever there is internet connectivity.
- Are automated data capture resources needed?
  - No, we already have some on hand
- Will additional or new space be required?
  - No

4.7 Organizational needs
The organization is currently structured to administer the ADT Program.

4.7.1 Executive support
Agency and Industry support for ADT is not an issue, however as has been previously mentioned, the Executive and Legislative Branch of the government are not interested in providing any increased funding for agricultural entities, unless there is a disease outbreak or disaster that needs short term immediate funding. The goal of the legislative budget leadership is to shrink state government at all levels

4.7.2 Coordination and oversight procedures
The Mississippi Board of Animal Health, headed by the State Veterinarian is the Agency tasked with livestock and poultry disease control within the state of Mississippi.

- The 15 member Board of Animal Health is the Advisory Panel

### 4.7.3 Policy

There are no policy issues regarding ADT. The mission of the MBAH recognizes the need for ADT.

### 4.7.4 Staffing

There are several staffing issues mentioned in the roadmap that need to be addressed to move the ADT Program forward in Mississippi. Animal Disease Traceability functions are embedded within several areas of MBAH activities.

- A full time Animal Disease Traceability Coordinator
- Another data entry clerk
- IT person

### 4.7.5 Budget requirements

- How are you funded for animal disease traceability? State, Tribe, Territory versus Federal?
  - MBAH is funded by state General Funds and USDA Traceability Cooperative Agreement.
- What are the funding requirements projected by year for FY2018, FY2019, and FY2020 for implementing this plan?
  - With continued level funding, there is no way to make further progress within the state. Funding is needed to support data entry activities to increase the amount of electronic data available for electronic traceability and an ADT Coordinator to focus on increased outreach, training support for electronic movement data.
- How is cost sharing achieved?
  - It is limited by the amount USDA gives the State of Mississippi
- How can the applicant insulate against budget cuts and shortfalls?
  - Continued outreach and involvement by stakeholders and partners to pressure the state legislature to increase funding for MBAH.
- Can other funding sources be leveraged to support this plan?
  - There are no other known funding sources

### 4.7.6 Outreach

Outreach is a long standing part of MBAH’s ADT Program.

#### 4.7.6.1 Accredited veterinarians
• What is the plan for informing accredited veterinarians of the new framework and the specific three-year plan for implementation?
  o All veterinarians are visited by MBAH or USDA VS personnel and given ADT material. In addition, there are state and federal personnel at the State VMA Meetings to answer any questions.
  o Regulatory lectures are given by the State Veterinarian to veterinary students several times during their education process.

• What continuing education is being planned for improving data quality relative to animal health information systems being used? Submitting official forms in a timely manner?

• What is the plan for enhancing the use of eICVIs, if any?
  o Veterinarians are encouraged to use electronic CVIs that meet the USAHA data standards.

• What role, if any, does the accredited veterinarian have in providing low-cost, official identification tags/devices to producers?
  o Most of our large animal veterinarians keep NUES Tags and apply them when needed for interstate movement or testing purposes.

4.7.6.2. Livestock markets

• What continuing education efforts are being planned for addressing the concerns of the livestock markets in the jurisdiction?
  o State and Federal Inspectors are at each sale-barn and available to monitor for compliance or provide assistance.

• What is the plan for accessing or requesting traceability information from livestock markets?
  o All back to farm adult cattle are tagged with NUES Tags.
o After each sale, all out of state movement information, as well as the information on tagged cattle is collected and entered into statevet.com

4.7.6.3. Industry as a whole

- What constitutes industry? What species are involved?
  - Mississippi is primarily a beef cow calf state.
- How are under-represented and under-served communities being included in the outreach plan?
  - NA

4.8 Monitoring and reporting interstate movement activity

All reporting is completed as required by the Cooperative Agreements and utilizing provided templates and instructions

V. TRACEABILITY IMPLEMENTATION

5.1 Ranking of priorities for advancement

- What specific steps are needed to advance from where the initiative currently resides?
  - **The priority is to get a new Data Entry person.** Currently we are behind significantly with being able to enter data from paper sources.
  - **The second priority is to get funding for a dedicated ADT Coordinator.** Currently the ADT Coordinator responsibility is being spread over several people. For progress to be made in moving traceability, there needs to be one individual that can oversee the program, look for areas to make progress, and to increase outreach activities. This would allow more meetings to be attended, more outreach resources developed for print or web distribution.

- Is a phased-in approach appropriate over the three-year period?
  - Data Entry is the most critical need followed by the ADT Coordinator.

5.2 Implementation of objectives

As long as budgets do not increase, it is impossible to increase the amount of work being done to move ADT forward. Important things that are needed:
1. Increased Data Entry
2. Individual Manager of the Program
3. Increase compliance activities