ADVANCING ANIMAL DISEASE TRACEABILITY ROAD MAP FOR THE STATE OF DELAWARE

A Three-Year Plan

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I. EXECUTIVE SUMMARY

Why does Delaware need a traceability plan? The Delaware Department of Agriculture's Animal and Poultry Health Section takes pride in promoting and protecting the health of Delaware's livestock and poultry industries. Thus, an effective Animal Disease Traceability (ADT) Program is necessary for the protection of American agriculture and must be coordinated and consistent across states in order for the rapid response, containment and control of animal disease outbreaks. The capability to efficiently and effectively deal with livestock diseases of concern when they occur is not only important to the health of livestock populations in Delaware, but is also important in supporting rural economies, maintaining interstate and international movement of livestock and increasing consumer confidence in food production systems. The Delaware Department of Agriculture, with the help of USDA/APHIS/VS, has developed this roadmap as a business plan for marketing and implementation of a better approach to animal disease traceability than currently exists in Delaware. Furthermore, a traceability plan will be essential to facilitate an effective partnership with our livestock marketing stakeholders in identifying critical points in their systems and developing improvements that will strengthen our state traceability efforts.

Resources needed: It is crucial to spend time continuing to develop a plan for the promotion of traceability in Delaware. Time will be spent on database maintenance with updating premises and on outreach and education to producers, veterinarians, markets, and extension agents. RFID ear-tags will be distributed both through veterinarians and directly to producers. We plan to increase our monitoring at livestock facilities to improve compliance with traceability regulations and encouraging the application of official identification ear tags.

- *What is the fundamental problem(s) this plan addresses?* The Delaware plan will serve to improve data capturing methods as well as data sharing abilities to rapidly identify the origin of diseased livestock along with any location exposed animals may have been moved into and out of Delaware. Additionally, it will fill the educational gap that currently exists with our constituents on what serves as official identification in livestock and what does not.
- *What are the key elements in summary form?* Key elements are promotion of the traceability program to our stakeholders, outreach and education, data entry and tracking of ear-tag distribution, utilization of new technology, encouraging application of RFID ear tags, usage of electronic CVIs (Certificates of Veterinary Inspection) and constant evaluation of the plan.
- *What are the primary benefits?* The primary benefits are that Delaware producers and veterinarians will all feel a sense of ownership in the plan, due to our promotion of the traceability program and outreach. By keeping these stakeholders first with regards to information sharing and valuing their opinions, we will build a strong program that will have the support of Delaware's livestock producers.
- *How does this plan build upon previous efforts to advance animal disease traceability?* This plan proposes to encourage veterinarians directly to utilize electronic CVIs and perform outreach to constituents in a public forum (Delaware Ag Week) and through the Delaware State Fair. Because of COVID-19, DDA will utilize social media platforms and virtual forums to effectively communicate with constituents.
- *How does this plan fit within USDA's new framework for animal disease traceability?* This plan, when implemented, will enable Delaware to meet the priority objectives.

- *How does this plan support animal health information systems within the State/Tribe/Territory?* This plan proposes to encourage veterinarians directly to utilize electronic CVIs and to expand data entry in AINMS and Core One (SCS) so that the information is readily accessible to state and USDA personnel.
- *How does this plan support animal health information needs with other States/Tribes/Territories and USDA nationally?* This plan will allow us to assist our state partners and USDA in rapid response to an animal disease event.
- *What alternatives were explored?* There are not many economically feasible options outside of an Excel database and utilization of free applications such as Core One (SCS) and AINMS because of the very small size of our cattle industry (18,500 head of cattle - 2020 inventory estimate, NASS).
- *What are the projected costs for FY2022, FY2023, FY2024 and 2025?* In FY2021 we were awarded $4,646 annually; however, due to improving our program with newer technology we will receive $6,146 in FY2022 through the ADT Cooperative Agreement, and we hope to receive this increased award amount in subsequent years.

II. CURRENT TRACEABILITY SITUATION

2.1   *Who are we?*

The Delaware Department of Agriculture (DDA) is the primary lead in the ADT Program in Delaware with cooperation with the USDA. Traceability data allows DDA and USDA to manage reportable diseases efficiently and effectively, positively affecting the animal industries that we serve. In Delaware, the constituents that will be primarily affected by this plan are the dairymen, livestock exhibitors, beef and swine producers, and private field veterinarians providing services to these groups. Other stakeholders include legislators, agency administration, farm bureau, livestock boards, and universities/extension agents.

2.2   *Where are we now?*

Traceability requires the ability to accurately and quickly determine the movement of diseased, exposed, or at-risk animals in efforts to minimize the number of producers affected during a response. Because we strive to protect our state's industries and recognize the importance of agriculture to Delaware's economy, DDA is always seeking ways to improve our traceability efforts. Currently, we use a paper system for filing CVIs by species and month after they are reviewed, and because of the small number received, it is generally a rapid process to find an individual CVI during a trace performance exercise. CVIs are then scanned and uploaded as PDF documents into our database. We currently support our single USDA-approved livestock auction in application of RFID tags for cattle and tagging of other animals upon entry. The auction is required keep track of who purchases and sells animals each week. We have observed that the concept and importance of animal disease traceability has become increasingly familiar among our constituents, evident through the increase in RFID tag requests from our office. Even with such progress, there is still work to be done. We plan to perform marketing and outreach that will present the traceability concept as relevant to all producers, regardless of the size of their operation. We can then identify constituents who raise and produce species of interest

by gathering appropriate data. These efforts will allow us to update our master list of Delaware swine, dairy, and beef cattle producer premises and cross-reference it with premises already found in USDA's Emergency Management Response System 2.0 (EMRS2) database. Furthermore, the purchase of up-to-date technology (i.e., wand readers) to replace the outdated equipment will encourage progression of stakeholder outreach. This will give our department the ability to scan and record RFID tag numbers quickly and accurately.

Requests for information are available M-F, 37.5 hours per week, if authorized personnel are present. Federal funding has been and will continue to help Delaware as we continue to provide economical traceability options for producers and veterinarians.

2.3   *Strengths and Weaknesses*

The Delaware Department of Agriculture has a history of strong relationships with animal producers in the state. Our staff is well-liked and respected because of our professionalism and ability to connect with local producers. This creates trust and understanding between the agency and the constituents we serve. Since we are such a small, tight-knit state, fostering this relationship is crucial to facilitating a successful program. Our state also has strong extension/4-H and FFA programs that cooperate and communicate with state and federal agencies.

Currently, we are limited to 2 animal health inspectors for the entire state, so it will be necessary to utilize other staff members' time to reach our objectives. We do not employ a traceability coordinator: the duties have been shared between the Deputy State Veterinarian and one of the animal health inspectors.

2.4   *Opportunities and Threats*

This plan will improve our ability to respond to all types of catastrophic events, including foreign animal disease incursions, flooding, hurricanes, blizzards, suspected agro-terrorism, or contamination of feed supplies. The traceability plan will provide the opportunity to standardize inspections while encouraging collaboration within the industry. This plan will allow us to provide our state partners with quick response using updated data to any inquiry they have about suspected disease in a group of animals that may have originated in our state.

Possible threats include animal swap meets, purchasing and selling livestock through social media avenues, and animal movements that lack the proper official identification and/or documentation (CVIs).

2.5   *Inventory of existing infrastructure and suitability assessment*
  - Human resources: We currently employ two animal health inspectors, one deputy state veterinarian, and an administrative assistant who will be primarily responsible for carrying out the traceability plan.

- Space availability: This will not be a problem for our agency.
- Connectivity resources, both in office and in the field: Each field staff member is equipped with a smart phone allowing for versatile sharing of information in the field. Other technology used will be Nomad Trimbles with the corresponding blue-tooth app to be used from cellular phones and laptops.
- Access to USDA animal disease traceability and animal health information resources: Level 2 e-authentication through EMRS and EMRS2Go is established for all relevant personnel.
- Organization of all existing paper record systems used to access animal disease traceability or animal health information: this mainly involves CVI filing. Our agency files CVIs by species and month, for example "January 2021 cattle." We also scan and electronically save CVIs by quarter and year for easy retrieval over the retention period. We will continue to use Excel spreadsheets, Core One (SCS), and AINMs to document ear tag distributions, tuberculosis and brucellosis test charts and vaccination (*Brucella*) and hand-enter CVIs for cattle and swine.

III. VISION AND MISSION CONTEXT FOR ADVANCING TRACEABILITY

3.1   *Vision Statement*

The vision of our group is to continue to develop robust programs that will serve to enhance our response to animal disease events and unexpected catastrophic events, thereby minimizing damage to livestock and poultry industries.

3.2   *Mission Statement*

The mission of our group is to protect Delaware's domestic livestock from the introduction and spread of contagious diseases, including those which may affect humans. A critical component of protecting our domestic animals is to be able to quickly identify the source of potentially infected animals which have either originated in Delaware or have come into our state through interstate commerce. We also strive to maintain good working relationships with our producers and establish easy channels of communication to better facilitate our program.

IV.   TRACEABILITY REQUIREMENTS

4.1   *Strategic goal(s)*

Our goal is to develop State-wide infrastructure for advancing animal disease traceability compatible with State, Tribe, Territory, and USDA standards.

4.2   *Programmatic goals (objectives)*

The objectives in support of achieving our strategic goal are outlined in the Timeline seen below:

YEAR 1:
UPDATE STATE AND
FEDERAL PRODUCER RECORDS
WITH ACCURATE SURVEILLANCE DATA

By the end of Year 1:

- Have created a producer surveillance form to be completed by constituents attending livestock auctions, exhibitions, weigh-ins, and extension events with relevant traceability data.
- Have created an internal surveillance form to be completed by appropriate staff on documenting location and relevant animal data from livestock investigation cases, at large or displaced animal cases, tag dispensing, dealer permits and livestock sampling/testing events.
- Have developed an internal agency data workbook with updated producer premises and livestock information to cross-reference with the USDA EMRS2 Database.
- Have explored USAHERDs and make decision on data transition.

YEAR 2: IMPROVE INTERNAL USAGE OF
eCVI TECHNOLOGY AND RFID TECHNOLOGY,
TRANSITION SHOW ANIMALS
TO RFID APPLICATION

By the end of Year 2:

- Have purchased the most updated All-Flex Wand Reader and begin training staff with its usage in the field
- Have begun routine usage of RFID wand readers and Nomad Trimbles (or other appropriate technology) by animal health inspectors
- Offer RFID tags or utilize previously applied RFID tags as acceptable ID for animals entering the Delaware State Fair and other county livestock exhibition events
- Analyze the number of pigs and cattle that arrive at shows and livestock markets that are in compliance with state and federal regulations (i.e., RFID official identification)
- Have DDA Poultry and Animal Health Section transitioned from issuance of paper CVIs to eCVIs for animals moving interstate for shows and fairs
- Have performed one-on-one outreach and outreach via social media and Delaware Veterinary Medical Association regarding RFID availability and use of eCVI platforms to all production animal veterinarians in the state.

YEAR 3: CONTINUE OUTREACH & EVALUATE
EFFECTIVENESS OF TRACEABILITY PROGRAM

By the end of Year 3:

- Have increased engagement with cattle and swine producers on the availability and benefits of RFID tags

- Have hosted/provided one formal outreach event for Delaware cattle and swine producers (e.g., Delaware AG Week) on RFID and the animal disease traceability process
- Have trained staff evaluated on traceability response using database exercises facilitated through USDA and state partners
- Analyze the number of pigs and cattle that arrive at shows and livestock markets that are in compliance with state and federal regulations (i.e., RFID official identification) and compare numeric data from Year 2.
- Have conducted a survey to constituents regarding their familiarity of animal disease traceability
- Have collaborated with stakeholders on state regulation improvements or changes.

4.3   *Animal disease traceability performance measures*

The table below lists the performance measures Delaware will use to document progress and accountability of our ADT program. Delaware has demonstrated exceptional performance to date with TPMs and National Priority Traces. Our ADT coordinator and participating staff will continue to work with our AVIC to do some practice trace exercises to assure that we are still able to demonstrate rapidity and accuracy in completing the activities listed below:

Table 1 Traceability Performance Standards

Number	Activity	Performed by	Measure
1	Determines the State in which the animal was officially identified and notify that state of the reference animal's official ID number	State that received the reference animal	85% Excellent Ratings
2	Confirm that it has documentation that an official ID number was issued within its jurisdiction and that it has contact information for the person who received that number	State where the reference animal was officially identified	
3	Determine the state from which the animal was moved interstate into its jurisdiction and notify that state of the reference animal's official ID number	State that received a reference animal	
4	Determine the address or location from which the reference animal was shipped	State that receives notification that a reference animal moved interstate from its jurisdiction (may be the same State in #2)	

4.4   *Data requirements*

While it will likely not be possible to completely replace paper records with electronic documents and data, the appropriate use of modern information processing technologies in key areas will significantly improve our ability to trace animals in the event of a disease. Both Type II accredited veterinarians and DDA Poultry and Animal Health Staff must adopt utilization of eCVI technology to improve management of animal movement and identification records.

We plan to continue to utilize RFID 840 tags for distribution to markets, producers, and veterinarians. Distribution of tags will be administered through our office by tracking which series of tags are handed out to which producers and veterinarians and on what date. Producer and veterinarian agreements are distributed along with the tags as triplicate carbon copy forms to ensure that producers understand the importance of applying those tags assigned to them to their OWN animals, exclusively, and to retrieve data from veterinarians on distribution of tags.

Our group will need to expand utilization of Core One and AINMS databases to record distributions of ear tags and to hand-enter CVI data. Because of the small number of CVIs that we receive for livestock species such as cattle and swine, the goal of manually entering CVI data into Core One for data access by State and Federal personnel is achievable.

Quarterly reports to USDA will contain records of number of tags distributed and number of CVIs entered to our database. Aside from routine quarterly statistics, Delaware traceability data will be shared with other states and with USDA on an as-needed basis.

We intend to extend data collection efforts in the field through the use of wand readers and Nomad Trimbles during routine animal inspections. We also plan to promote RFID traceability to the livestock board of the Delaware State Fair so that RFID utilization can be integrated and ultimately replace plastic tags for animals entering the fair.

4.5   *Information technology plan*
Delaware projects to have minimal new IT needs for FY2022, FY2023, and FY2024.

4.6   *Resource requirements*
- Is specific expertise needed that is not currently available? To monitor the progress of our traceability program, it may be necessary to set up teleconferences or visits to neighboring states to learn more about how they successfully implement their programs and enforce regulations. We will also need instruction in setup, utilization, and software installation for the RFID wand readers, livestock data logger, and Nomad Trimbles.
- Will consultants be needed? We do not expect to need consultants.
- Is a continuity of operation plan (COOP) in place and how frequently is it tested? Our Agency has a COOP in place, and it is tested about once/year.
- Will automated data capture resources be needed? Not at this time.
- Will additional or new space be required? No.

4.7   *Organizational needs*
- Does a need for organizational change exist? No. Agency superiors (Secretary of Agriculture, Deputy Secretaries) are supportive of this process, and embrace it.
- Can additional resources be leveraged within the current administrative structure? Yes, we will use other groups within the agency to assist if needed.

4.7.1 Executive support
As mentioned in 4.7, Delaware's Secretary of Agriculture supports the traceability plan and values the benefit which this system will impart to the well-being of the livestock industry in Delaware.
- Is additional support from executive management needed? It will be necessary to ask the Secretary or his Deputy to speak openly about their approval of the program whenever possible.
- How are officials briefed on progress and baseline measures of performance? Updates will be sent to the Governor in the agency's "weekly report," with the Secretary's approval, of course. Other updates will be made to the Secretary as milestones are reached.

4.7.2 Coordination and oversight procedures
The State Veterinarian and her staff are responsible for advancing animal disease traceability. We will develop an outreach and promotional plan to present to animal producers and veterinarians in a manner that is non-confrontational and transparent.
- Our agency has one liaison with the State Emergency Management Agency. We have already made them aware of the gap we are attempting to fill by creation of the Traceability plan.
- How is compatibility with other States, Tribes, Territories, and USDA monitored? We meet with regional state veterinarians regularly at meetings and speak frequently to them on-on-one. The objective is to have some consistency in enforcement within our region, so that producers know what to expect when moving animals to auction, for example. The states which Delaware has reached out to are Ohio, West Virginia, Virginia, Maryland, New Jersey and Pennsylvania.

4.7.3 Policy
In Delaware we do not currently have existing mandates which could limit our traceability plan. Our current regulations state that animals must be individually identified and accompanied with an ICVI for entry to the State.

4.7.4 Staffing
Because our State is very small and has a manageable number of cattle and swine, we predict that we will not need any additional FTEs. To update our producer premise information, we do plan on training our Livestock

Investigator on filling out the appropriate traceability documentation during investigations.

4.7.5 Budget requirements

- How are you funded for animal disease traceability? State funded and federally funded (ADT Cooperative Agreement.) To date, Delaware has utilized salary dollars for research and development of the roadmap and for attendance at general meetings to learn and make decisions being presented in this document. Federal funds have been used to purchase official ID tags, wand readers, Nomad Trimbles, and the livestock data logger.
- What are the funding requirements projected by year for FY2022, FY2023, and FY2024 for implementing this plan? The 2022 budget is presented within the Cooperative Agreement 2022 work-plan.

4.7.6 Outreach

All constituents who might be impacted by the traceability program will be addressed in the outreach campaign. This will include veterinarians, producers, livestock markets, legislators, agency administration, farm bureau, 4-H/FFA leaders, and universities/extension agents.

4.7.6.1 Accredited veterinarians

- Our marketing and outreach plan will include as a priority providing education to accredited veterinarians with regards to availability of RFID tags and uptake of eCVI technologies.
- What continuing education is being planned for improving data quality relative to animal health information systems being used? We will continue to provide veterinarians with a blank form that can be used to fill out in the field (by hand or electronically) for tracking of tag distribution. The form will be in a format that can be easily entered into the access database by administrative staff in our office. We will also do one-on-one outreach to veterinarians and use other means of outreach such as social media and the Delaware Veterinary Medical Association.
- What is the plan for enhancing the use of eCVIs, if any? See above regarding continuing education.
- What role, if any, does the accredited veterinarian have in providing low-cost, official identification tags/devices to producers? There are only 2 or 3 veterinarians in Delaware who practice with cattle in our state. During the outreach portion of the plan, we will encourage vets to provide and or apply tags to

all producers they visit while completing appropriate premise documentation.

4.7.6.2 *Livestock markets*

- Our marketing and outreach plan will include as a priority providing education to the single livestock market in Delaware.
- We already have a system of accessing paper trails (buyers, sellers) from our livestock market. This market is attended by an animal health inspector each week, and inspectors support the market in application of RFID tags for cattle and tagging of other animals upon entry. Tag distribution, date, buyer, and seller information is recorded.

4.7.6.3 *Industry as a whole*

Our promotional and outreach plan will include as a priority providing education to the livestock stakeholders in Delaware. There are 23 dairies in Delaware that sell Grade A milk, and my staff has a good working relationship with the dairy industry. Our beef industry is very small, with just one feedlot in the state and the remaining are small-scale producers. The swine industry is comprised of one commercial grower-to-finish farm, exhibition producers and small, niche market farms. The sheep and goat producers have monthly meetings, which will provide a great opportunity for outreach without scheduling extra sessions.

- What other resources are available for industry outreach? University and extension colleagues can be brought in for additional support.
- As mentioned earlier, Delaware has no more than 17,000 head of cattle. There are approximately 3,000 sheep and goat (combined) and 6,000 swine. The majority of our industry is broiler chickens, which will move under the lot system and will not require individual identification when moved to processing.
- Outreach to producers will include continued distribution and marketing of RFID tags, presentation to commodity groups in a public forum such as Delaware Ag Week, and hopefully implementation of RFID for Delaware State Fair cattle and swine entries.

4.8. *Monitoring and reporting interstate movement activity*

- How will the number of animals and the number of shipments be monitored that move interstate? By tallying CVI data for quarterly ADT Cooperative Agreement reporting, we will be able to print a report showing # of shipments and # of animals by species that move interstate.
- The following data (reporting elements) will be reported in the quarterly reports beginning with calendar year 2012:

- o Number of ICVIs and other interstate movement documents created within the State/Tribe/Territory on a year-to-date basis for move-out animals
- o Number of ICVIs and other interstate movement documents received for move-in animals
- o 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
- o 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
- o Volume of distribution for each official numbering system/device issued by the State/Tribe/Territory and/or AVIC office, including backtags by market or processing (slaughter) facility
- o Number of Category II accredited veterinarians using eCVI applications and the applications used

V.   ADVANCING TRACEABILITY

5.1   *Ranking of priorities for advancement*

In summary, the priorities in Delaware's traceability program are shown here in bullet form, and included in more detail within the ADT Cooperative Agreement work-plan for 2022:
- Update state and federal databases with accurate producer premise data by encouraging constituent documentation and data gathered from other animal health measures.
- Perform outreach to producers and veterinarians to increase utilization of RFID tags and eCVI applications
- Increase DDA's usage of up-to-date electronic technology and data capture to better manage animal identification and movement data

5.1.2   *Historical priorities for advancement*

In summary, the 4 goals of the 2014 and 2015 work plan were as follows (submitted budget $12,000):
- Perform outreach and education
- Monitor identification and interstate movement activity
- Administer test exercises to establish traceability performance standards
- Maintain electronic record of ear-tag distribution (switching to RFIDs) and enter data from brucellosis and TB testing records, and from brucellosis vaccination records

In summary, the 7 goals of the 2016 through the 2019 work plan were as follows (submitted budget $6,000):

- Administer trace exercises to establish traceability performance measures
- Distribution of official identification devices
- Information sharing
- Perform outreach and education
- Maintain electronic record of ear-tag distribution (switching to RFIDs) and enter data from brucellosis and TB testing records, and from brucellosis vaccination records
- Compliance and Enforcement of traceability regulations
- Identification and interstate movement activity

In summary, the 8 goals of the 2020 and 2021 work plans were as follows (submitted budget $4,600):

- Administer trace exercises to establish traceability performance measures
- Distribution of official identification devices
- Information sharing
- Perform outreach and education
- Maintain electronic record of ear-tag distribution (switching to RFIDs) and enter data from brucellosis and TB testing records, and from brucellosis vaccination records
- Compliance and Enforcement of traceability regulations
- Identification and interstate movement activity
- Utilization of up-to-date technology to monitor animal movement during competitive livestock shows and at the local livestock market.

5.2   *Implementation of objectives (2022)*

It is expected that implementation of the 2022 goals listed above (section 5.1) can commence with the FY2022 work plan.

END DOCUMENT