



**Legislative Report
April 9, 2021**

Bovine Tuberculosis Eradication Program Quarterly Update
Provided by the Animal Industry Division
Michigan Department of Agriculture and Rural Development (MDARD)

Act No. 166, Public Acts of 2020, approved by the Governor September 30, 2020, EFFECTIVE DATE: September 30, 2020.

- (1) On or before October 15, 2020, the department shall provide to the subcommittees, the fiscal agencies, and the state budget office a report on bovine TB status and department activities.
- (2) For each fiscal quarter following the report required in subsection (1), the department shall provide an update to the subcommittees, the fiscal agencies, and the state budget office. The quarterly update reports shall identify significant impacts to the program, including new incidence of bovine TB in this state, department activity associated with specific new incidence of bovine TB, any changes in USDA requirements or movement orders, and information and data on wildlife risk mitigation plan implementation in the modified accredited zone; implementation of a movement certificate process; progress toward annual surveillance test requirements; efforts to work with slaughter facilities in this state, as well as those that slaughter a significant number of animals from this state; educational programs and information for this state's livestock community; and any other item the legislature should be aware of that will promote or hinder efforts to achieve bovine TB-free status for this state.

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A. MDARD Bovine Tuberculosis Eradication Program Activities

Why We Do What We Do

Michigan's Bovine TB Eradication Program protects citizens from exposure to the zoonotic bovine tuberculosis (TB) organism. The Michigan Bovine TB Program was established under Public Act 466, of 1988, as amended, the Animal Industry Act, and is required by Federal Law for Michigan producers to participate in interstate commerce of animals (9CFR Part 77) and to maintain a state status (9CFR Part 92). Bovine TB has economic and human health implications, and the program is of high visibility and interest to farmers, producer groups, hunters, and the federal government. The disease is also of high interest at the national level, and other states would close their markets to Michigan cattle, meat, and milk products if the program were reduced or eliminated. Approximately 12,000 cattle producers in Michigan maintain over 1.15 million cattle. The Michigan bovine TB program works to prevent, detect, and respond to cases of bovine TB and provides access to national and international markets for Michigan producers. The 36 dairy producers located within the Modified Accredited Zone (MAZ) can sell Grade A milk because of the program we have in place and the herds in the remainder of the state (AFZ) can freely move milk because of our split state status.

B. Special Surveillance Areas

Beginning April 1, 2020 surveillance is required in MAZ Buffer Counties:

(Cheboygan, Crawford, Iosco, Ogemaw, Otsego, and Roscommon Counties)

MDARD's MOU with MDNR and USDA, signed in December 2019, and the current zoning order, effective April 1, 2020, require that 150 cattle herds be tested for TB annually for at least two years. Herds are selected for whole herd surveillance testing from the combined counties of Cheboygan, Crawford, Iosco, Ogemaw, Otsego, and Roscommon. As of March 31, 2021, 156 herds have been tested. We have found one TB positive animal through this testing in Cheboygan County. That herd has been designated as Herd #81. We have begun surveillance testing for the 2021-2022 testing season in these buffer counties.

Beginning April 1, 2020 surveillance required in Presque Isle County:

MDARD's MOU with MDNR and USDA, signed in December 2019, and the current zoning order, effective April 1, 2020, require all cattle herds in Presque Isle County which have not completed a whole herd bovine tuberculosis test since January 1, 2019 to complete a whole herd bovine tuberculosis test prior to December 31, 2020. There are 28 herds that have been identified as requiring a test under the new requirement and at this time 27 herds have been tested and one is under quarantine pending testing.

Beginning January 1, 2021 surveillance required in Presque Isle County

MDARD's MOU with MDNR and USDA, signed in December 2019, and the current zoning order, effective April 1, 2020, require all cattle herds, except Freezer Beef herds and approved feedlots, in Presque Isle County to have an annual whole herd TB test beginning January 1, 2021 and to obtain a movement permit prior to movement beginning on July 1, 2021.

C. Bovine Tuberculosis Affected Herds

Infected Feedlot #4

On October 10, 2016, a bovine TB-positive steer was discovered during routine slaughter surveillance at a federally inspected slaughter plant. The animal originated from a feedlot in Huron County, which was declared affected on October 25, 2016, and placed under quarantine. All cattle have been slaughtered with no further finding of disease. This quarantine was released in March 2021.

Infected Herd #75

As part of required triennial whole herd testing in Presque Isle County, a small cow-calf beef herd was found to be positive for bovine TB in March 2019. This was the first positive herd in Presque Isle County since 2000. The herd was depopulated; the premises has been cleaned and disinfected. The quarantine on this herd was released in March 2021.

Infected Herd #77

A medium-sized beef herd in Alcona County was found to be infected with TB during an annual whole herd test in December 2019. Seven animals from that test went to MSU VDL in January with six of the animals having lesions consistent with bovine TB. Confirmation of infection was made by PCR at the USDA's National Veterinary Services Laboratory (NVSL) on January 13, 2020. Subsequent testing has led to a total of 44 animals found to be culture positive for *M. bovis* in the herd. The Whole Genome Sequence (WGS) of the bTB was consistent with an Alcona County bovine TB strain, indicating infection was likely due to exposure to TB-infected free-ranging deer. A test-and-removal program is ongoing, and a wildlife biosecurity plan has been implemented to protect this herd from re-infection in the future.

Infected Herd #79

A small-sized dairy herd in Montmorency County was found to be infected with TB during an annual whole herd test in July 2020. One animal from that test went to MSU VDL in June and had lesions consistent with bovine TB. Confirmation of infection was made by PCR at the USDA's National Veterinary Services Laboratory (NVSL) on July 1, 2020. This herd has been previously infected with TB. At this time, two positive animals have been found in the herd. Whole Genome Sequencing is most closely related to an elk harvested from Montmorency County in 2017. The owner of the herd has elected to no longer operate as a dairy herd, and the milking animals have been moved to a federally inspected slaughter plant. No evidence of TB was seen in any of these animals. The calves and feeder cattle remaining in the herd are continuing a test-and-removal program. The wildlife protection program for this herd has been implemented.

Infected Herd #80

A medium-sized beef herd in Alpena County, located in the Enhanced Wildlife Biosecurity (EWB) area of the MAZ, was found to be infected during a TB test performed for a movement permit on October 12, 2020. One animal from that test was sent to VDL for postmortem examination. Upon necropsy, conducted November 4, 2020, this animal had lesions consistent with bovine tuberculosis. On November 6, 2020, NVSL reported that the animal had microscopic lesions that were compatible with Mycobacteriosis and confirmed the animal as positive for bovine TB by PCR on November 10, 2020. The WGS from the infected animal shares a most recent common ancestor with a deer harvested in Alcona County in 2017. This herd is in the Enhanced Wildlife Biosecurity area (EWB), with full implementation of the enhanced biosecurity completed in June 2020. It is plausible that this herd became infected prior to full implementation of the biosecurity plan. A test-and-removal program is ongoing in this herd.

Infected Herd #81

A medium sized beef herd in Cheboygan County was found to be infected on March 11, 2021. This herd was identified by the buffer county surveillance testing program that began last year. On October 16, 2020 one animal in the herd was found to be a suspect on comparative cervical testing. The animal was sent to MSU VDL on March 2, 2021 for post-mortem examination. On this test, the animal was found to have lesions consistent with bovine tuberculosis. The lesions were then found to be histocompatible for bovine tuberculosis at USDA's National Veterinary Services Laboratory (NVSL) on March 8, 2021 and confirmed positive for *Mycobacterium tuberculosis* complex by PCR on March 11, 2021. Discussions are underway with the herd owner to develop a herd plan for release of quarantine. This is the first positive bovine TB herd found in Cheboygan County since the surveillance program began in 1998. MDARD expects whole genome sequencing results by May 2021, which may provide information on the possible source of infection in the animal.

D. Wildlife Risk Mitigation and Enhanced Wildlife Biosecurity

The Wildlife Risk Mitigation Project began in 2008 with a goal to enroll all commercial cattle farms. Under this program, farmers implement measures that reduce the risk of cattle exposure to bovine tuberculosis from infected free-ranging white-tailed deer. The following steps help prevent disease transmission to cattle:

- Store feed behind a fence or in a building
- Feed cattle away from deer habitat
- Feed cattle daily so feed is not left over
- Provide water to cattle where it cannot be contaminated by deer
- Use Disease Control Permits from DNR to keep deer numbers down on cattle farms

Presently, 349 of the 441 active commercial farms (79%) in the present TB surveillance zone (MAZ and Presque Isle Counties) have a verified Wildlife Risk Mitigation plan in place.

Because of higher bovine TB prevalence in free-ranging white-tailed deer in the core area of the MAZ, the risk to cattle herds is greater than in other areas. Therefore, the TB Program, in conjunction with the TB Advisory Committee, developed an Enhanced Wildlife Biosecurity (EWB) Program to assist farmers with protection of their herds. Herd owners in the EWB Area work with specialized staff to evaluate their farm's specific risks and are provided a plan of action to mitigate the risk. Some risks may be addressed by changing the farm's management practices, while in other cases the pressure from wildlife necessitates an investment in physical improvements – primarily fencing. Producers in the EWB area were able to participate in a 90% State/10% Producer cost-share program to construct fences and protect feed storage facilities. Any commercial producer in the EWB area that is not verified under that program is limited to selling cattle direct to slaughter only.

New cost-share projects underway:

- Funding which remained after the EWB effort was completed was then used to provide cost share assistance to producers for feed storage protection outside of the EWB area. This is a 90% State/10% Producer cost share program. There are currently 19 herds in Presque Isle county that are being scheduled to evaluate possible cost-share projects and 15 herds in the MAZ that have also inquired and will be evaluated.
- A limited amount of cost share money will be available in FY2021. A workgroup has been convened consisting of agency staff and external stakeholders to be held in April 2021. This workgroup will assist with how best to utilize the available cost-share funds.

E. Movement Permits

Under the new Zoning Order, effective April 1, 2020, all movements of cattle from herds in the MAZ counties (Alcona, Alpena, Montmorency, and Oscoda) and from herds in the Accredited Free Zone (AFZ) County of Presque Isle require a movement permit. Below is the movement permitting data for these counties.

| | Number of Movement Permits | Number of Animals Moved |
|--|----------------------------|-------------------------|
| MAZ (Alcona, Alpena, Montmorency, and Oscoda Counties) Permits issued January 1, 2021 – March 31, 2021 | 209 | 648 |
| TB Free Surveillance Zone (Presque Isle County) Permits issued January 1, 2021 – March 31, 2021 | 24 | 161 |

F. Communications/Outreach

Goals:

- To ensure that cattle producers, hunters, and Michigan's citizens have a high level of trust and understanding of what we do and why.
- To provide information routinely to cattle producers, hunters, and community members about bovine tuberculosis program activities and initiatives.

MDARD has been working to keep the informational resources for producers and the general public about the details of the bovine tuberculosis (TB) program accurate and up to date. For example, brochures of the current TB requirements in the MAZ and Presque Isle County were sent to both current and new producers in those areas.

As for outreach, the program has written and sent letters to producers, informing them about unique cost-share opportunities to better protect their herds. Also, the program has designed a number of presentations to inform those outside of the state of Michigan about TB and the measures taken to mitigate the spread of the disease.

MDARD is working together with the DNR to finalize a spring issue of the *Herd and Hunter* newsletter. The content of the upcoming newsletter is intended to present the same type of information that would have ordinarily been discussed during a public meeting.

With the start of the 2021 deer surveillance season, MDARD and DNR are collaboratively developing a one-pager that will help MDARD field staff to better answer producers' key questions about bovine TB surveillance in free-ranging deer and the submission of deer heads for testing. In addition, Agency staff and external stakeholders have created a workgroup to further refine and plan communication objectives, strategies, and messages, which will help to meet the white-tailed deer surveillance goals this year.

G. Michigan's Bovine TB Memorandum of Understanding and Zoning Order

A Memorandum of Understanding (MOU) between the Michigan Department of Agriculture and Rural Development (MDARD), the Michigan Department of Natural Resources (MDNR), and the United States Department of Agriculture (USDA) was signed on December 16, 2019. This MOU required MDARD to issue a Zoning Order, which became effective April 1, 2020, and can be found at: www.michigan.gov/emergingdiseases in the livestock information section under bovine TB. The current MOU expires in December 2021. Negotiations with USDA will occur this year on possible changes to the new MOU. The finding of herd #81 in Cheboygan county may have an impact on MOU requirements.

H. USDA's Review of Michigan's TB Program

In August 2020, a USDA Team conducted a review of Michigan's TB eradication program. MDARD has received the final review report and has returned an action plan for responding to the recommendations of the team. The team found MDARD to be in compliance with the provisions of the MOU.

I. COVID-19 Impacts on Michigan's TB Program

Throughout the pandemic, MDARD field staff have been able to continue with TB testing while following precautions to limit the spread of Covid-19. MDARD office staff continue to work remotely until at least July 12, 2021. Despite the Covid-19 restrictions, MDARD staff met the additional surveillance requirement goals outlined in the December 2019 MOU and maintained compliance with all other requirements of the MOU.