

Bovine Tuberculosis

Michigan UPDATE



Michigan Department of Agriculture • Michigan Department of Natural Resources • Michigan Department of Community Health

Spring 2007

Progress Report

by **Bridget Patrick**

Bovine TB Eradication Project Coordinator

For the past 12 years, Michigan citizens have supported bovine TB testing in cattle and wildlife, the depopulation of 41 TB positive cattle herds, regulatory compliance, and disease transmission investigations. Business owners in northern lower Michigan have felt the direct impact of bovine TB on their success. Some have asked if the cost of the disease and benefits of control and eradication are worth the effort.

In 1999, Michigan State University (MSU) research predicted that if nothing was done to control the disease in cattle over a 10-year-period, bovine TB would have a negative impact of \$156 million dollars on the agriculture industry in Michigan. In the past nine years, the Michigan Department of Agriculture (MDA) has spent \$50.5 million to help the cattle industry regain TB free status in the U.P., to regain accredited advanced status for the lower portion of Michigan, and to prevent the spread of disease from the modified accredited zone.

*Another MSU study calculates bovine TB has an **annual** negative impact of \$25 million to the travel and tourism industry of northeastern lower Michigan. The Department of Natural Resources (DNR) has spent close to \$18 million over a 12-year-period to successfully stop the spread of bovine TB to other areas of Michigan, thus keeping the impact of bovine TB to a smaller region.*

All of us: civil servants, farmers, hunters, business owners, and wildlife enthusiasts have the desire to aggressively eradicate bovine TB. We also want to keep Michigan businesses flourishing. Although the challenge has been difficult, the alternative - to do nothing and watch the disease spread, businesses fold and trade with other states and countries dry up - was not realistic.

When hunters, farmers, and business owners in northern Michigan finally eradicate bovine TB, we all will celebrate.

- bkp

TB Positive Dairy Herd

Dr. Michael VanderKlok

Bovine TB Coordinator

Michigan Department of Agriculture

A medium-sized dairy herd in Montmorency County was confirmed positive for bovine TB in January. This is the first new positive cattle herd since May 2006, and brings the total herd count to 41 (since 1998). Initially, one cow from the herd tested positive which demonstrates the current testing program is effective in providing early detection of the disease and preventing the risk of transmission to other herds. The herd has subsequently been depopulated.

MDA and USDA veterinarians are currently conducting an investigation to identify potential sources of the infection, and to ensure that animals which may have been removed from the herd do not pose a risk to other cattle herds. Although the investigation is not complete, cattle to cattle transmission is not suspected.

TB + Cattle Herds (since 1998)	
Alcona	11
Alpena	18
Antrim	3
Emmet	2
Montmorency	3
Oscoda	2
Presque Isle	2

The Bovine TB Eradication Project

The state's Bovine TB Eradication Project is a multi-agency team of experts from the Michigan Departments of Agriculture (MDA), Community Health (MDCH), and Natural Resources (DNR), Michigan State University (MSU), and USDA. It continues to work with input from the agriculture, wildlife and tourism industries, as well as local communities, to eradicate the disease from Michigan.

TB Positive Deer Farm

Pete Butchko

State Director
USDA Wildlife Services

A Cervid Ranch in Montmorency County was confirmed TB positive this past November. The presence of bovine TB was suspected after the owner of the facility noticed chest lesions in a harvested deer. Tissue samples were relayed promptly to officials for clinical diagnosis. Following genetic confirmation at the National Veterinary Services Laboratory, plans to depopulate the facility were developed.

Depopulating a facility of more than 330 white-tailed deer, in an area of nearly 600 acres, required efficient coordination within and between several different agencies. USDA, Wildlife Services was responsible for shooting and transporting the deer to a collection station. DNR and MDA staff ran the collection station, where Rapid Tests were conducted and tissues were sampled for further analysis

Five deer from this facility (including original suspect) were confirmed positive for bovine TB. Existing fence design and maintenance, in addition to perimeter grounds inspections, strongly suggest that no deer entered or exited the ranch. Epidemiological investigation of the facility is ongoing (USDA VS and MDA).

MDA conducted on-site animal appraisal for use in seeking indemnity for the owner. The last deer was removed on January 16, and, after on-site verification by USDA WS, MDA and DNR personnel, the facility was declared depopulated on February 1, 2007.



Photo: Wildlife Disease Lab, DNR

2006 Deer Prevalence Estimates

Dr. Stephen M. Schmitt

State Veterinarian
Michigan Department of Natural Resources

County	TB+ Deer	Total Deer Tested
Alcona	14	1041
Alpena	8	1063
Montmorency	6	734
Oscoda	13	478

The 2006 apparent prevalence rate of bovine TB in wild white-tailed deer in DMU 452 was announced at the Joint Commission Meeting (Agriculture and Natural Resources) on April 12. The total deer tested for the year in Michigan was 7,924 with 41 confirmed positive by bacterial culture. All 41 positive deer, and one infected elk, came from the four counties that surround DMU 452. The 2006 apparent prevalence rate for Deer Management Unit (DMU) 452 is 2.3 percent, up from 1.2 percent in 2005. However, analysis of multi-year data indicates that the prevalence rate is still following a significant downward trend. This year's increase in prevalence is a sobering reminder that the TB outbreak is far from over, and will necessitate sustained, long-term public support in order for eradication efforts to succeed.

Commission of Agriculture

James E. Byrum - Onondaga
Donald M. Coe - Traverse City
Ann Jousma-Miller - Gladstone
Dale N. Norton - Bronson
Todd Regis - Jackson

Natural Resources Commission

Mary C. Brown - Kalamazoo
Keith J. Charters - Traverse City
Hurley J. Coleman, Jr. - Saginaw
Darnell Early - Lansing
John Madigan - Munising
James R. Richardson - Ontonagon
Frank C. Wheatlake - Reed City

Bovine TB Project Welcomes Assistant Coordinator

The Michigan Department of Community Health recently announced Matthew Ankney as the Assistant Bovine TB Eradication Project Coordinator. Matt will help to facilitate the cooperative effort between multiple agencies and stakeholder groups aligned to eliminate this disease in Michigan. He is a graduate of Michigan State University, and received his degree in Fisheries and Wildlife from the College of Agriculture and Natural Resources. As an undergraduate at MSU he received a Research Fellowship from the Department of Biochemistry for his research in the Fraker Immunology Lab. Later at MSU, he helped monitor and contain disease for the state fish hatcheries while working at the Aquatic Animal Health Lab. Prior to attending college, Ankney served as an infantryman in the Marine Corps where he received multiple citations for his leadership and technical skill. His enthusiasm and optimism for this project make him a very welcome addition.

MDA Zoning Order Changes for Cattle

Dr. Steven L. Halstead

State Veterinarian and
Animal Industry Division Director
Michigan Department of Agriculture

Citing recent changes to the national bovine tuberculosis eradication program, several modifications to the zoning order have been implemented. These changes are, in part, intended to support Michigan's pending application to USDA for reinstatement of the TB Free Status for the current Modified Accredited Advanced Zone in lower Michigan. This status upgrade would reduce costs to producers and ease movement restrictions in that area while allowing more state resources to be focused on the Modified Accredited Zone.

Effective March 1, 2007

Statewide

1. Electronic identification is mandatory for movement of cattle from farms.

Bovine Tuberculosis Free Zone (U.P.)

1. Random Surveillance program to continue for one year; program to include testing of 25 herds per year.
2. Certificate for Movement required prior to movement to other zones within Michigan.

Modified Accredited Advanced Zone

1. TB testing of sexually intact animals six months of age or older is required prior to their movement into another zone within Michigan. This test is not required if the animal is moved through feeder channels or to slaughter.
2. Random Surveillance program to continue for one year; program to include testing of 750 herds per year.
3. Certificate for Movement required prior to movement to other zones within Michigan.

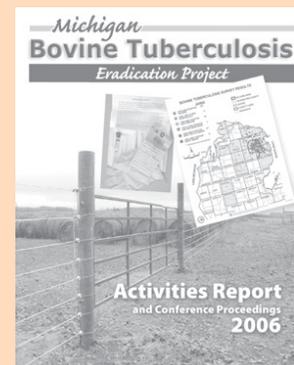
Modified Accredited Zone

No changes

To order tags or for movement certification please call MDA
Animal Industry Division at (866) 870-5136.

2006 Bovine TB Activities Report

Now available online



www.michigan.gov/emergingdiseases
(under the "Spotlight" heading)

TB Program Seeks New Milestone

Dr. Michael VanderKlok

Bovine TB Coordinator
Michigan Department of Agriculture

The Michigan Department of Agriculture recently submitted an application to USDA to have the current Modified Accredited Advanced area of Lower Michigan reclassified as TB Free in the national program. Cattle producers, private veterinarians, and MDA and USDA veterinarians and technicians have completed TB testing of over 935,000 cattle on over 14,000 herds in this area since 2000, with no evidence of the disease found in any herds. The application evaluation may take as long as two years, but MDA staff will be working regularly with USDA on a national level to hasten this process by implementing any program modifications deemed necessary. When this application is approved, it will be a regaining of TB free status for the area since it was downgraded in 2000.

Strategic Planning

Bridget Patrick

Bovine TB Eradication Project Coordinator
Michigan Department of Community Health

During the past century, many countries have been able to declare official 'freedom' from bovine TB. However, countries where TB has spread to wildlife have faced resurgence of the disease in their livestock. There are great risks in reducing management efforts prematurely in TB-infected areas.

When it comes to bovine TB, experience in New Zealand shows that **success can turn to failure if momentum is lost**, said Dr. Graham Hickling, Director of the Center for Wildlife Health at the University of Tennessee. In New Zealand in the 1970s, there was modest expenditure of \$2 million-per-year on the TB wildlife vector (possum) control and they achieved good reductions in the number of TB-infected cattle herds. By 1978, there was a growing assumption that 'the battle was nearly won.' Control expenditure dropped to near zero from 1978 to 1983.

During this period of reduced control efforts in New Zealand, the number of infected cattle herds began to rise. Whenever control effort was halted in an area, TB resurged in the local cattle herds. Despite increasing control efforts, it was not until 1995 that the trend for increasing herd infection was reversed. In 1980, there were less than 600 infected herds and it was **21 years** before numbers would be this low again. By then, annual expenditure on control had risen from ~\$2 million to ~ **\$30** million.

For the last 10 years, Michigan has not only been concentrating its efforts on obtaining TB free status for areas that are free of disease, but has worked aggressively to prevent spread and reduce the disease prevalence rate. The process has been greatly supported by the hunting community, livestock producers and program staff.

We now need to focus on disease *eradication*. We need new and creative tools to achieve this goal. Therefore, we will be gathering key players in the affected areas of northern lower Michigan to develop new strategies later this year - please contact Matt Ankney if you are interested in participating.

Questions or comments about this newsletter or Michigan's Bovine Tuberculosis Eradication Project ? Please Contact:

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