

Bovine Tuberculosis and Brucellosis Surveillance Results
Monthly Reports, Federal Fiscal Year (FY) 2016
October 1–31, 2015

New Information – Bovine Tuberculosis (TB)

- One suspect TB case occurred in a Holstein steer slaughtered in Michigan in October. The histology was compatible for mycobacteriosis and PCR tests were negative; culture is pending.

Update of Previously Reported Information

- The appraisal was accepted and depopulation will begin in November, for the TB infected Michigan dairy located in the MA zone. This herd was detected during an annual whole herd test (WHT). This is the 61st TB infected herd found in Michigan since 1998.
- The first Texas dairy quarantined in October 2014 is being appraised and planning is underway to depopulate this large dairy. The initial estimated within herd prevalence was 5.9%.
- The second Texas dairy, quarantined in October 2014, is scheduled for a quarantine release test in December 2015. A total of three TB infected cattle were associated with this herd, and no new infected cattle were detected during the fourth WHT.
- Sixty-six animals from the second removal test were necropsied in October, from the two Texas organic dairies and the associated Texas feedlot and heifer raiser. These premises were quarantined on April 8, 2015. A total of 39 lesioned cattle have been removed from the herd.

Table 1. Bovine TB cases found through routine slaughter inspection, FY 2016.^a

Laboratory Status	New TB Cases October 1-31, 2015		Cumulative TB Cases October 1 - 31, 2015		
	Fed cattle	Adult cattle	Fed cattle	Adult cattle	Total
<i>M. bovis</i> cases, confirmed ^b	0	0	0	0	0
PCR pending	0	0	0	0	0
PCR negative, culture pending	1	0	0	1	0

^a Animals detected through routine slaughter inspection. Animals sent to slaughter with a 1-27 permit, “Permit for Movement of Restricted Animals” are not included.

^b Confirmed by PCR testing and/or culture.

Table 2. Livestock herds confirmed infected with bovine TB, FY 2016, including test-and-remove managed herds under quarantine and carried forward from previous fiscal years.

State	Federal Fiscal Year Detected	Method of Detection	Herd Type	Herd Management Plan	Closest Isolates by WGS (Number of SNP Differences) ^a	Wildlife Surveillance Planned?	Approximate Number of Animal Traces	States With Traced Cattle
MI ^b	2008	Surveillance	Cervid	Test and removal	MI	Ongoing	None	None
MI ^b	2008	Surveillance	Cervid	Test and removal	MI	Ongoing	None	None
TX	2015	Slaughter	Dairy	Depopulation	2004 TX (16), 2007 NM dairies (15), 2011 AZ roping steer from CHI (25)	Not indicated	None	None
TX	2015	Epidemiology	Dairy	Test and remove	Same as above	Not indicated	68	MI
MI	2015	Area Testing	Dairy	Depopulation	MI	Ongoing	368	Pending
TX	2015	Slaughter	Dairy ^c	Test and remove	1997 MX (8)	Not indicated	4,150	AZ, CA, CO, MO, MN, NM, TX
MI	2015	Area Testing	Mixed	Depopulation	MI	Ongoing	None	Pending

^aWGS = whole genome sequencing, SNP = single nucleotide polymorphisms; () = number of SNP differences to the most recent common ancestor compared to other isolates in the National Veterinary Services Laboratories database.

^bTwo herds detected in previous fiscal years are included.

^cThis herd consists of two sister dairies and their associated common heifer raising/feedlot facility.

Brucellosis - Herds Remaining under Quarantine and Test-and-Remove Procedures or Awaiting Assurance Test Results

FY 2015

Montana

- Affected beef herd: On November 8, 2014, one reactor (an 8-year-old cow) was detected during testing of a group of 171 head in a Madison County commercial cow-calf beef herd. The herd had a Designated Surveillance Area (DSA) herd plan in place as a portion of the herd grazes within the DSA. Whole herd testing of 2,338 head was completed December 10, 2015 and no additional seropositive animals were found. An Affected Herd Plan was put in place December 11th. All the DSA adjacent herds have been identified and have tested negative. Whole-herd test post-removal of the reactor was completed in January 2015 and all animals were negative. Post-calving whole herd test completed and all animals were brucellosis test negative. Quarantine has been released. Traces are pending. All non-DSA adjacent herds (27) have been identified and all tested negative.

Updates: Assurance testing has begun and will continue through November. All animals tested so far are negative.

- Affected beef herd: On October 23, 2014, one reactor (a 3-year-old cow) was detected during testing of a group of 262 head in a Park/Carbon County commercial cow-calf beef herd. The reactor animal was part of a cohort that grazes seasonally in the DSA and was tested when leaving the DSA per state law. The herd was placed under verbal quarantine October 25th. An Affected Herd Plan is in place. On October 31, 2014 the reactor's seropositive status was confirmed, and the milk samples submitted to NVSL for culture on November 12th were found negative for *Brucella* spp. On December 4th, tissues from the reactor animal were collected and submitted to NVSL; on December 12, 2014 NVSL reported isolation of *B. abortus* biovar 1. Whole-herd testing was completed December 18, 2014 and no additional seropositive animals were found. All the Park County adjacent herds have been tested and are negative. Whole-herd test post-removal of the reactor was completed in January 2015 and all animals were negative. Whole-herd test was completed March 11th and all animals were negative. Quarantine was lifted on March 16, 2015.. Traces are pending. All Carbon County adjacent herds (4) have tested negative.

Updates: Assurance test was completed in October. All animals tested negative.

FY 2013

Montana

- Affected beef herd: On September 5, 2013, a single brucellosis reactor (2-year-old female) was detected on a DSA brucellosis pre-slaughter test of 42 head in Madison County. *B. abortus* biovar 1 was confirmed September 25, 2013. A herd brucellosis test (1116 head) detected one reactor and one suspect. The tissues were submitted but no *B. abortus* isolation was made from either animal. DSA herd and affected herd plans are in place. Epidemiological work has determined the exposure occurred sometime in the spring of 2013. Nine adjacent herds have tested brucellosis negative. A whole-herd test conducted on

January 8, 2014 was negative. No *Brucella* was isolated from tissues submitted from the suspect cow, detected on January test, or its fetus. There were no trace-in animals identified. Twenty of 22 trace-out epidemiological investigations, covering 467 cattle in 9 States, have been completed. The post-calving whole-herd test in late March 2014 was negative and the quarantine for the herd was lifted in late March 2014. The fall assurance testing was completed in October 2014; all cattle tested negative. Awaiting disposition of final two traces.

Updates: None

FY 2012

Idaho

- Affected privately owned bison herd: A privately owned bison herd (268 head), assembled and located in the DSA in 2010, was brucellosis tested to meet Idaho's DSA requirements. Quarantine and movement controls are in place. An updated affected herd management plan is pending owner's signature. All trace-out and trace-in epidemiological investigations associated with this herd have been completed and closed. A whole-herd brucellosis test was conducted on December 4-5, 2013 and all animals were negative. Herd test completed on November 2014 – all 278 animals were test negative. This was the second negative complete whole-herd test. On December 15-16, 2014, 214 bull and heifer calves (2014 calves) were tested with all having negative results.

Updates: Fall testing begins November 16th.

FY 2011

Montana

- Affected privately owned bison herd: A brucellosis-affected privately owned bison herd was detected in Gallatin County in November 2010. This herd was detected as part of Montana's DSA herd management plan testing. This herd is under quarantine with movement controls and an affected herd management plan in place. All trace-out and trace-in epidemiological investigations associated with this herd have been completed and closed. The fall 2013 test detected 13 seropositive (*B. abortus* biovar 1 isolated) animals out of 4050 head of bison tested. Annual fall testing began October 20, 2014 and was completed November 21, 2014. At the conclusion of the annual fall testing, 16 reactors and 3 suspects had been identified.

Updates: Fall testing concluded November 6th with a final count of two suspects and 6 reactors identified out of 3262 head tested.

Wyoming

- Affected bison herd: A brucellosis-affected privately-owned bison herd inside the Wyoming DSA (Park County) was disclosed in November 2010. This herd consists of two groups – the Main herd and the Preferred herd. The Preferred herd has undergone four negative brucellosis tests and was released from quarantine in late January 2012. The Main herd remains under quarantine with movement controls and an affected herd management plan in place. All trace-out and trace-in epidemiological investigations associated with this herd have been completed

and closed. In June 2015 Main herd whole herd test results were all negative. Next whole herd test of Main herd females is scheduled for fall 2015 and if negative would be the 3rd negative test for this portion of the herd. Testing of 20 herd bulls in July 2015 showed all negative results..

Updates: Whole herd testing is in progress. All animals tested to date are brucellosis test negative. Final bull testing scheduled for late November/ early December.

Table 3: Livestock herds confirmed as brucellosis affected, FY 2011-2015.

State/ FY	Method of Detection	Herd Type	Affected Herd Management Plan	Genotyping Descriptive Results	Wildlife Surveillance Planned	Animals Being Traced	States Receiving Traced Cattle/Bison
MT 2015	DSA Herd Plan Test	Beef	Quarantine with test & remove	Most closely related to 2 elk isolates (2009 – 2010)	Yes	Pending	Traces are pending
MT 2015	DSA Herd Plan Test	Beef	Quarantine with test & remove	Closest common ancestor – wild bison (1985)	Yes	Pending	Traces are pending
MT 2013	DSA Required pre-slaughter testing	Beef	Quarantine with test & remove	Common ancestor with wild elk from the same area	Yes	424	0 trace-in States 9 trace-out States: 20 of 22 traces completed (CA-1, ND-1; open) (MN-1, CO-1, IA-1, KS-1, MN-1, MT-12, SD-1, NE-2; closed)
ID 2012	DSA required test	Bison	Quarantine with test & remove	Similar to ID elk isolates	No	349	All trace-ins closed. All trace-outs closed.
MT 2011	DSA herd management plan testing	Bison	Quarantine with test & remove	Exact match to a 2009 MT elk isolate	Yes	7510	All trace-ins closed. All trace-outs closed.
WY 2011	Pre-sale test on farm	Bison	Main herd remains under quarantine with test & remove.	Similar to 2007 & 2010 WY elk & 2010-2011 cattle isolates.	Yes	870	All trace-ins closed. All trace-outs closed.