

Bovine Tuberculosis and Brucellosis Surveillance Results
Monthly Reports, Federal Fiscal Year (FY) 2014
December 1–31, 2013

New Information – Bovine Tuberculosis (TB)

- One new TB case has been detected in a culled adult dairy cow that was slaughtered in California in November. Tissues were compatible for mycobacteriosis, and PCR and culture are positive.
- One new TB case has been detected in a Mexican-origin fed steer slaughtered in Texas. Tissues were compatible for mycobacteriosis and PCR was positive; culture is pending. This animal had official Mexican eartags indicating origin from Veracruz.
- A suspect TB case has been reported in a Jersey steer slaughtered in Wisconsin. Tissues were compatible for mycobacteriosis and PCR was negative; culture is pending.

Update of Previously Reported Information

- TB was confirmed in an adult beef cow slaughtered in South Dakota in October. Genotyping results indicate that the *Mycobacterium bovis* isolate from this case matches isolates from the 2009 Nebraska affected captive cervid herd. The herd of origin in Nebraska, in the immediate vicinity to the 2009 captive herd, has been tested negative. As a precaution, herds in the immediate area are being evaluated for testing, and additional wildlife surveillance in the area is being strongly considered.
- A second animal has been confirmed infected with *M. bovis* from a North Dakota dairy. The *M. bovis* isolate from this herd is not closely related to any known historical isolate in the National Veterinary Services database. The herd was tested after an employee tested positive for *M. tuberculosis* complex. An investigation is underway.
- Bovine TB was confirmed in a culled beef cow from San Diego County, California, in September 2013. Tissue from this animal was compatible for mycobacteriosis and PCR was positive; *M. bovis* was cultured. The herd of origin was tested without finding evidence of tuberculosis. Retesting of the herd is planned. This herd is a neighboring herd to a dispersed Jersey dairy implicated through a slaughter surveillance trace and described in the TB August 2013 report. Genotyping results for the isolates from the two slaughter cases (beef and dairy) were identical.
- An adult beef cow slaughtered in Texas in October was traced to a small Texas beef herd that dispersed. Other herds that purchased animals from the dispersed herd are being tested and the investigation is continuing.
- A total of three TB cases have been detected in fed cattle in FY 2014. All are of Mexican origin: from Coahuila (1), Sinaloa (1), and Veracruz (1). Culture is positive for *M. bovis* for two cases and is pending for one case.

Table 1. Bovine tuberculosis slaughter surveillance results, FY 2014.

Laboratory Status	New TB Cases December 1-31, 2013		Cumulative TB Cases October 1 –December 31, 2013		
	Fed cattle	Adult cattle	Fed cattle	Adult cattle	Total
<i>M. bovis</i> cases, confirmed ^a	1	1	3	3	6
PCR pending	0	0	0	0	0
PCR negative, culture pending	1	0	1	0	1

^a Confirmed by PCR testing and/or culture.

Table 2. Livestock herds confirmed infected with bovine tuberculosis, FY 2014, including test-and-remove managed herds under quarantine and carried forward from previous fiscal years.

State (MI herd No.)	Federal Fiscal Year Detected	Method of Detection	Herd Type	Herd Management Plan	Origin and Number of Genotype Matches	Wildlife Surveillance Planned?	Approximate Number of Animal Traces	States With Traced Cattle
MI ^a (33)	2004	Area Test	Dairy	Test and removal	MI	Ongoing	Not applicable	Not applicable
MI ^a	2008	Surveillance	Cervid	Test and removal	MI	Ongoing	None	None
MI ^a	2008	Surveillance	Cervid	Test and removal	MI	Ongoing	None	None
MI ^a (53)	2012	Area Test	Beef	Partial depop ^b Balance of herd test and remove	MI	Ongoing	73 traces of 166 animals None pending	MI
MI ^a (54)	2012	Area Test	Dairy	Test and removal	MI	Ongoing	58 traces of 163 animals	IN, MI
MI ^a (55)	2013	Area Test	Dairy	Test and removal	MI	Ongoing	109 traces of 200 animals	MI, IN
CA ^a	2013	Slaughter	Dairy	Test and removal	Same as FY 2002 CA case	Pending	625 EMRS traces of 2500 cattle, 78% complete	AZ (2), CA (130), FL (2), IA, ID, MN (2), NE, NM (1)
ND ^a	2013	Trace	Beef	Test and removal	Same as FY 2012 TX herd	Pending	Pending	SD, TX
ND	2014	Herd test triggered by dairy worker diagnosed with TB	Dairy	Pending	No close matches	Pending	Pending	Pending

^a Eight herds detected in previous fiscal years that remain under quarantine are included.

^b State funded partial depopulation.

^c Variable number tandem repeat

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

FY 2014

Montana:

- Affected beef herd: On September 2, 2013, one reactor (7-month-old bull) was detected on a herd (560 head) Certified Brucellosis-Free herd recertification test in a beef herd in Park County. *Brucella abortus* biovar 1 was confirmed on October 11, 2013. This herd had been a Certified Brucellosis-Free herd since 2009. The herd is under quarantine. It has a designated surveillance area (DSA) and an affected herd plan in place. First post-reactor removal herd brucellosis test was conducted November 5, 2013, and all animals (556) were brucellosis negative. Four adjacent herds have been identified and all cattle on these properties have tested brucellosis negative.

Updates: Trace-in and trace-out herd identification is almost finalized pending some record legibility issues. There are approximately 22 trace-outs, covering 58 cattle in approximately 8 states. There is one Montana cow identified as a trace-in.

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. *Brucella abortus* biovar 1 was confirmed September 25, 2013. A herd brucellosis test (1116 head) detected one reactor and one suspect. The tissues from the reactor and suspect animals were submitted and no *B. abortus* isolation was made from either animal. The herd is under quarantine. It has a designated surveillance area (DSA) herd plan and an affected herd plan in place. Epidemiological work has determined the exposure to the reactors occurred sometime in the spring of 2013. Nine adjacent herds have been identified and all have tested brucellosis negative.

Updates: Trace-in and trace-out herd identification is almost finalized pending some record legibility issues. There are approximately 11 trace-outs, covering 362 cattle in 4 States. There were no trace-in animals identified.

FY 2012

Idaho:

- Affected beef herd: A cattle herd (65 head) was traced from a slaughter blood sample collected in California. This herd was outside of the Idaho's DSA; the DSA has been expanded since detection of this herd. 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 herd was tested on October 11, 2013, and all animals were brucellosis test negative. A post-calving herd brucellosis test is planned for spring 2014.

Updates: Heifer calves born in 2013 will be brucellosis vaccinated, retained as replacement heifers and included in further herd testing.

- 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.
Updates: Whole-herd brucellosis test conducted on December 4-5 and all animals were brucellosis test negative.

Montana:

- Affected privately owned bison herd: A brucellosis-affected privately owned bison herd located in Madison County within Montana's DSA was detected on November 14, 2011. 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. Fall 2013 herd (~590 head) brucellosis test concluded on November 6, 2013, and all tested animals tested brucellosis negative.
Updates: Three mature animals remain to be tested to complete the herd brucellosis test.

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.
Updates: Fall 2013 test identified 13 seropositive animals out of 4050 head of bison 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 Main herd remains under quarantine with movement controls and an affected herd management plan in place. The Preferred herd has undergone four negative brucellosis tests and was released from quarantine in late January 2012. All trace-out and trace-in epidemiological investigations associated with this herd have been completed and closed.
Updates: Fall 2013 herd brucellosis testing of Main herd– all 462 cows and calves tested negative. Next herd test scheduled for January 2014.

Table 3: Livestock herds confirmed brucellosis affected in FY 2014, 2013, 2012 and 2011

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 2014	Certified Brucellosis- Free Herd Recertification Test	Beef	Quarantine with test & remove	Clusters with other isolates recovered from area wildlife & domestic livestock	Yes	59	One trace-in State: MT, 1 herd ~8 trace-out States: Identification of States & animals to be finalized
MT 2013	DSA Required pre-slaughter testing	Beef	Quarantine with test & remove	Common ancestor with wild elk from the same area	Yes	362	~4 trace-out States: Identification of States & animals to be finalized
ID 2012	MCI trace	Beef	Quarantine with test & remove	Similar to 2006 & 2010 ID cattle isolates	Yes	48 animals	One trace-in State: ID, 3 herds - all negative All trace-ins closed. 4 trace-out States: TX, UT, ID, & NM. All trace-outs closed.
ID 2012	DSA required test	Bison	Quarantine with test & remove	Similar to ID elk isolates	No	349 animals	5 trace-in States: ND, SD, MT, OK, ID. All trace-ins closed. One trace-out State: ID closed.
MT 2012	Epi link to 2011 bison herd	Bison	Quarantine with test and remove	Unique profile but the profile clusters with other isolates associated with GYA elk & bison	Yes	3169 animals	One trace-in State: NE closed. 6 trace-out States: MT, CO, OR, SD, NE & ID 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 animals	3 trace-in States: NM, NE & MT All trace-ins closed. 5 trace-out States: MT, NE, WY, KS & ID All trace-outs closed.
WY 2011	Pre-sale test on farm	Bison	Main herd remains under quarantine with test & remove. Preferred herd released from	Similar to 2007 & 2010 WY elk & 2010-2011 cattle isolates.	Yes	870 animals	1 trace-in State: SD - closed. 4 trace-out States: MT, WY, CO & NV All trace-outs closed.