

Bovine Tuberculosis and Brucellosis Surveillance Results
Monthly Reports, Federal Fiscal Year (FY) 2013
September 1–30, 2013

New Information – Bovine Tuberculosis (TB)

- Two new TB cases were detected in September.
- A new TB case was detected in an adult beef cow slaughtered in California. Tissue from this animal was compatible for mycobacteriosis, and PCR was positive; culture is pending. The investigation is underway in California.
- The other new TB case was detected in a steer slaughtered in Texas. Tissues from this animal were compatible for mycobacteriosis, and PCR was positive for *Mycobacterium tuberculosis* complex; culture is pending. This animal had eartags indicating origin from Nuevo Leon.

Update of Previously Reported Information

- During FY 2013, TB was confirmed in 4 culled adult cattle and 18 fed cattle detected through slaughter surveillance.
- The four adult cattle cases include a dairy cow that led to confirmation of TB in a Michigan dairy, a dairy cow slaughtered in Washington (investigation completed, infection not confirmed in source herd), and a dairy (traced to a dispersed herd) and a beef cow (investigation underway) slaughtered in California.
- Seven TB-affected cattle herds, four beef and three dairy, were detected during FY 2013. These herds were located in California (one dairy), Michigan (three beef and two dairy), and North Dakota (one beef). Five of these TB-affected herds (two dairy and three beef herds) were detected as a result of slaughter surveillance and the subsequent epidemiologic investigations. In addition, one infected feedlot was detected in Michigan subsequent to investigation of an affected Michigan dairy. Feedlots are not classified as affected herds.
- Four cattle herds (one dairy and three beef herds, Michigan) were depopulated with Federal indemnity. The remaining herds (one dairy, California; one beef, North Dakota; one dairy, Michigan) are under test-and-remove management plans.
- A total of 18 TB cases were detected in fed cattle in FY 2013. Of these, 15 are of Mexican origin. The States of origin are Chihuahua (1), Coahuila (2), Durango (6), Tamaulipas (2), Veracruz (1), and Nuevo Leon (2). The Mexican State of origin could not be determined for one case, which has been determined to be of Mexican origin through the case investigation. The animal's origin is under investigation for the remaining three cases.

Table 1. Bovine tuberculosis slaughter surveillance results, FY 2013.

Laboratory Status	New TB Cases September 1–30, 2013		Cumulative TB Cases October 1, 2012 to September 30, 2013		
	Fed cattle	Adult cattle	Fed cattle	Adult cattle	Total
<i>M. bovis</i> cases, confirmed ^a	1	1	18	4	22
PCR pending	0	0	0	0	0
PCR negative, culture pending	0	0	0	0	0

^a Confirmed by PCR testing and/or culture.

Table 2. Livestock herds confirmed infected with bovine tuberculosis, FY 2013, 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 Manage- ment 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	New spoligotype; VNTR ^c matches MI strains	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 (55)	2013	Area Test	Dairy	Test and Remove	MI	Ongoing	109 traces of 200 animals	MI, IN
CA	2013	Slaughter	Dairy	Test and remove	Same as FY 2002 CA case	Pending	624 EMRS traces of 2500 cattle, 77% complete	AZ (2), CA (130), FL (2), IA (1), ID (7), MN (2), NE, NM (1)
MI (56)	2013	Slaughter	Dairy	Depopulation	MI	Ongoing	128 traces of 774 animals	MI, IA, IN, KS, OH, MN
MI (57)	2013	Annual Test	Beef	Depopulation	MI	Ongoing	67 traces	PA (2), TX (16), WI (1)
MI (58)	2013	Trace	Beef	Depopulation	MI	Ongoing	30 trace-outs of 338 animals	MI, IN, IA, MN, NE
MI (59)	2013	Trace	Beef	Depopulation	MI	Ongoing	1 trace, complete	MI
ND	2013	Trace	Beef	Test and removal	Same as FY 2012 TX herd	Pending	Pending	SD, TX

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

^bState funded partial depopulation.

^cVariable number tandem repeat

Brucellosis – Herds Remaining under Quarantine, 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 whole-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) herd plan in place and an affected herd plan is pending. The adjacent herds have been identified and herd plans are pending. Trace-in and trace-out herd identification is pending.

FY 2013

Montana

- Affected beef herd: On September 5, 2013, a single reactor (2-year-old female) was detected on a DSA change-of-ownership test of 42 head in Madison County. *B. abortus* biovar 1 was confirmed September 25, 2013. A whole-herd test (1116 head) detected two additional reactors and one suspect. The tissues from the suspect and additional reactors have been submitted for bacterial culture. The herd is under quarantine. It has a DSA herd plan in place and an affected herd plan is pending. Nine adjacent herds have been identified. Four of the adjacent herds have confirmed herd plans and testing of these herds has begun. Herd plans and testing of five adjacent herds is pending. Trace-in and trace-out herd identification is pending.

FY 2012

Idaho:

- Affected beef herd: A cattle herd (65 head) was traced from a slaughter sample from 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. Heifer calves born in 2013 will be spayed in fall 2013.

Updates: The whole herd was tested on October 11, 2013 and all animals were brucellosis test negative. A post-calving whole-herd test is planned for Spring 2014.

- Affected privately owned bison herd: A privately owned bison herd (268 head), assembled and located in the DSA in 2010, was 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. Next herd test planned for Fall 2013.

Updates: The herd test tentatively scheduled for the week of November 11 – 15, 2013.

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.

Updates: Fall testing of approximately 590 head should begin late October.

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 testing of approximately 4,200 head is planned to begin November 4 and to continue into early December.

Wyoming:

- Affected bison herd: A brucellosis-affected privately owned bison herd inside the 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 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: None

Table 3: Livestock herds confirmed infected with brucellosis FY 2013, 2012 and 2011

State	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	Pending	Clusters with other isolates recovered from both wild animals & domestic livestock from the area	Yes	?	Identification & testing of trace-in & trace-out herds is pending
MT 2013	DSA Required change-of-ownership test	Beef	Pending	Common ancestor with wild elk from the same area - suggests a wildlife source	Yes	?	Identification & testing of trace-in & trace-out herds is pending
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.

State	Method of Detection	Herd Type	Affected Herd Management Plan	Genotyping Descriptive Results	Wildlife Surveillance Planned	Animals Being Traced	States Receiving Traced Cattle/ Bison
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 quarantine.	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.