

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

New Information – Bovine Tuberculosis (TB)

- Three new suspect TB cases were detected in August:
 - A suspect TB case was detected in an adult Holstein cow slaughtered in Wisconsin. Tissue from this animal was compatible for mycobacteriosis and PCR was negative. Culture is pending.
 - A suspect TB case was detected in a steer slaughtered in Kansas. Tissues from this animal were compatible for mycobacteriosis, PCR was negative for *Mycobacterium tuberculosis* complex but positive for *M. avium*. Culture is pending.
 - The new TB case was detected in a steer slaughtered in Texas. Tissues from this animal were compatible for mycobacteriosis and PCR was positive for *M. tuberculosis* complex. Culture is pending. This animal had ear tags indicating it originated from Durango. This is the sixth TB case detected in an animal from Durango in FY 2013.

Update of Previously Reported Information

- Herd testing has been completed for the affected beef herd detected in June in North Dakota, where TB has been found in a cow that has been sourced from an affected Texas beef herd. Thirty-three caudal-fold-positive animals (of approximately 1300) were necropsied. None of these 33 animals had gross lesions consistent with TB. Tissues have been submitted for histology and culture.
- The investigation is ongoing for an adult cow that was slaughtered in California in April. Histology was compatible for mycobacteriosis, PCR was positive for *M. tuberculosis* complex, and culture was positive for *M. bovis*. The most likely source of the tuberculosis cow, based on identification and records as well as the breed genetic profile of the infected tissue, was a dispersed Jersey dairy from Southern California. Most of dispersed cattle went to slaughter; those that have been found in other California herds are being tested with the caudal fold tuberculin skin test and examined postmortem if positive. There is currently no evidence that any cattle from the dispersed herd moved interstate. The genomic profile of the *M. bovis* strain is unique and has not been previously isolated in a U.S. herd.
- During FY 2013, TB was confirmed in three culled adult cattle detected through slaughter surveillance. These 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 the herd), and a dairy cow slaughtered in California (described above).
- A total of 17 TB cases have been detected in fed cattle in FY 2013. Of these, 14 are of Mexican origin. The States of origin are Chihuahua (1), Coahuila (2), Durango (6), Tamaulipas (2), Veracruz (1), and Nuevo Leon (1). The State of origin could not be determined for one case, which has been determined to be from Mexico through the case investigation. The origin is under investigation for three cases. Culture is positive for *M. bovis* for 12 cases and is pending for five.

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

Laboratory Status	New TB Cases August 1-31, 2013		Cumulative TB Cases October 1, 2012 to August 31, 2013		
	Fed cattle	Adult cattle	Fed cattle	Adult cattle	Total
<i>M. bovis</i> cases, confirmed ^a	1	0	17	3	20
PCR pending	0	0	0	0	0
PCR negative, culture pending	0	1	0	1	1

^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 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	New spoligo-type; 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	Pending	Same as FY 2012 TX herd	Pending	Pending	SD, TX

^a Five 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, Test and Remove Procedures or Awaiting Assurance Test Results

FY 2013

No new brucellosis-affected herds have been found thus far in FY 2013.

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 designated surveillance area (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. A whole-herd test was conducted July 26, 2013; all animals classified negative. Heifer calves born in 2013 will be spayed in fall 2013.

Updates: Next tests are planned for October 2013 and spring 2014 (post calving).

- 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: None

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	Herd Management Plan	Genotyping Descriptive Results	Wildlife Surveillance Planned?	Animals Being Traced	States Receiving Traced Cattle/ Bison
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 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.