

# **National Bovine Brucellosis and Tuberculosis Updates**

## **Q4 (July-September 2021) Report Fiscal Year 2021**

U.S. Department of Agriculture  
Animal and Plant Health Inspection Service  
Veterinary Services  
Strategy and Policy, Ruminant Health Center  
Cattle Health Center

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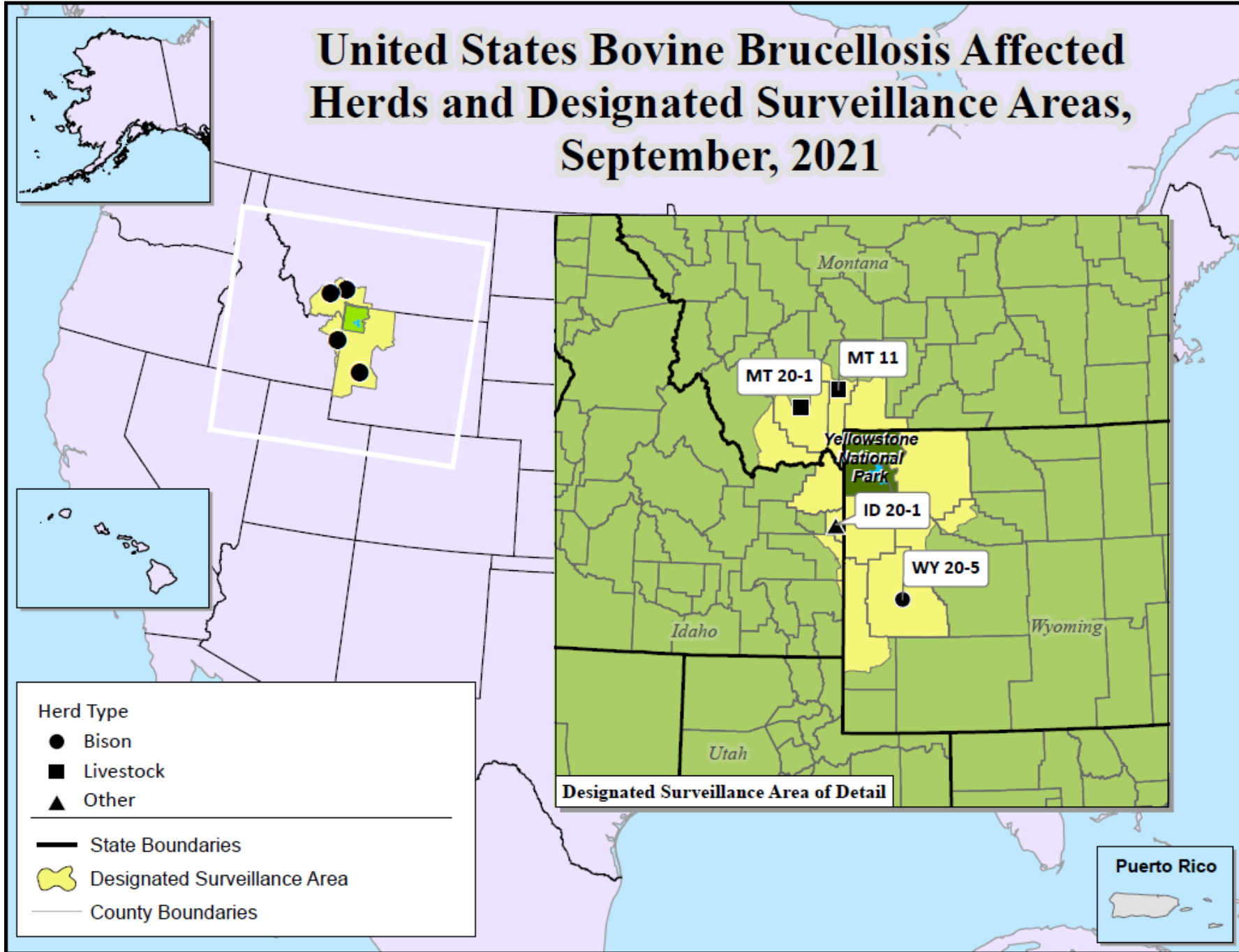
Brucellosis (*B abortus*)  
Q4 (July-Sept 2021) updates

# Brucellosis affected herds under quarantine in Q4 (July-Sept 2021)

Herd <sub>1</sub>	Date Detected	Method of Detection	Herd Type <sub>2</sub>	Herd Management Status	Next Test Tentative Start Date
WY 20-5	September 2020	Diagnostic Testing	Bison	Test-and-Remove	October 2021
ID 20-1	January 2020	DSA Surveillance Testing	Elk/Beef	Test-and-Remove	Fall 2021
MT 20-1	December 2019	DSA Surveillance Testing	Livestock	Test-and-Remove	Fall 2021
MT 11	November 2010	DSA Surveillance Testing	Livestock	Test-and-Remove	October 2021

1. Herds are named with the last 2 digits of the fiscal year and in order of occurrence within a state.
2. Current Montana state statute prevents public disclosure of herd type.

# United States Bovine Brucellosis Affected Herds and Designated Surveillance Areas, September, 2021

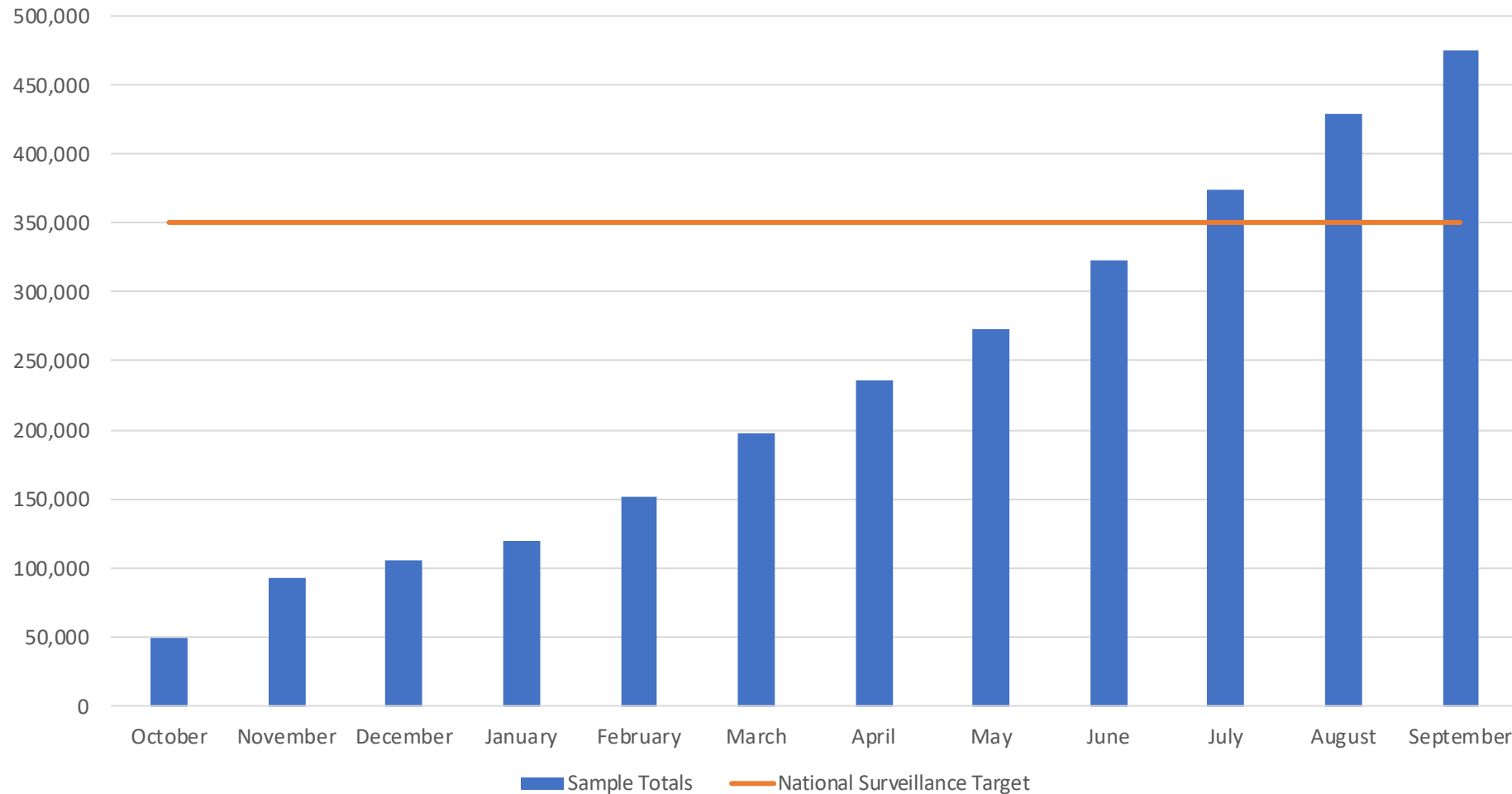


Affected herds are mapped to the center of their county.

# Q4 (July-Sept 2021) Brucellosis Updates

- No updates this quarter

# FY2021 Cumulative National Brucellosis Slaughter Surveillance Samples

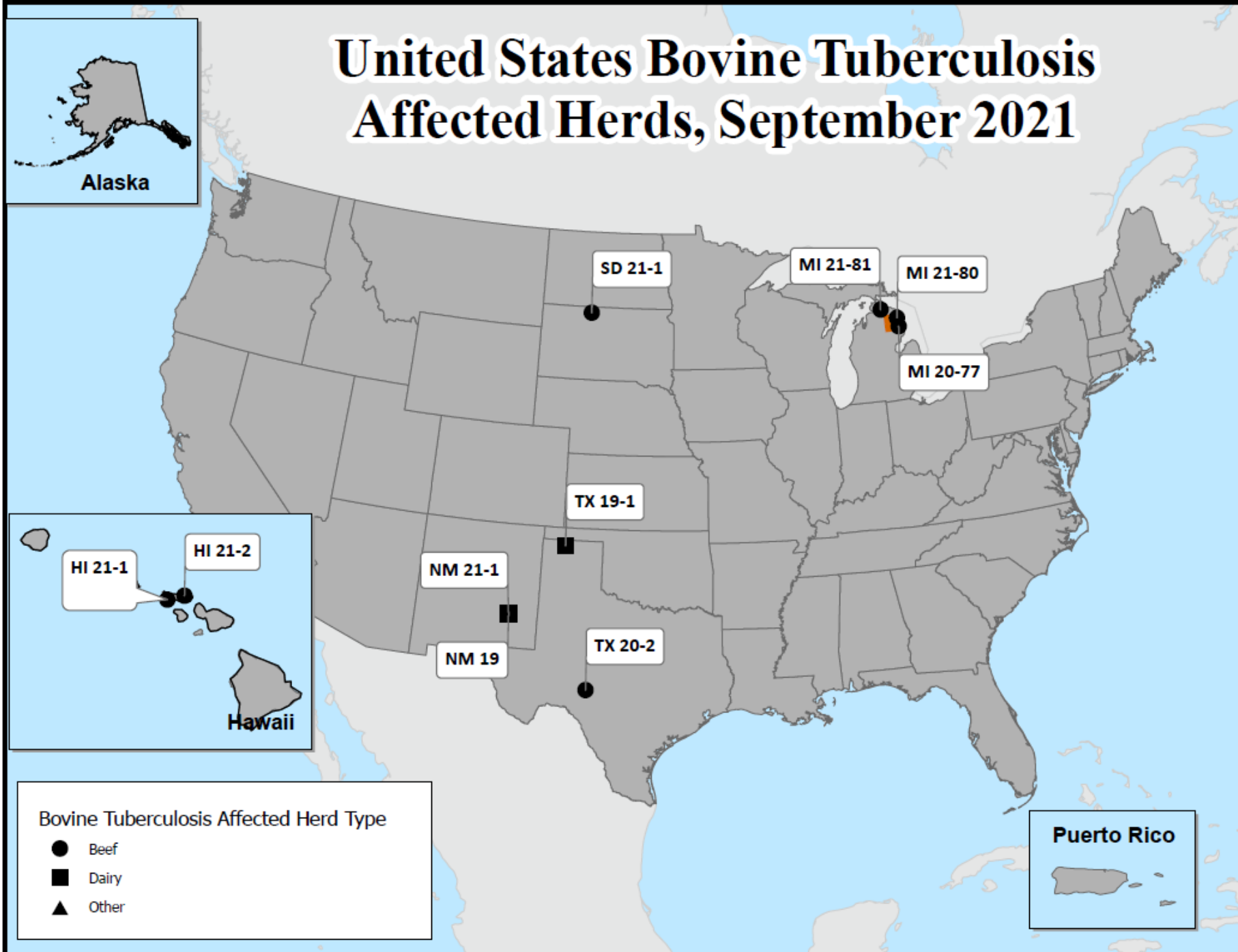


- The orange line represents our annual 350,000 surveillance sample target to detect disease with 95% confidence at a 0.001 percent or higher prevalence.
- One plant stopped sampling due to COVID restrictions in December and resumed sampling in February.

Tuberculosis (*M. bovis*)  
Q4 (July-Sept 2021) updates



# United States Bovine Tuberculosis Affected Herds, September 2021



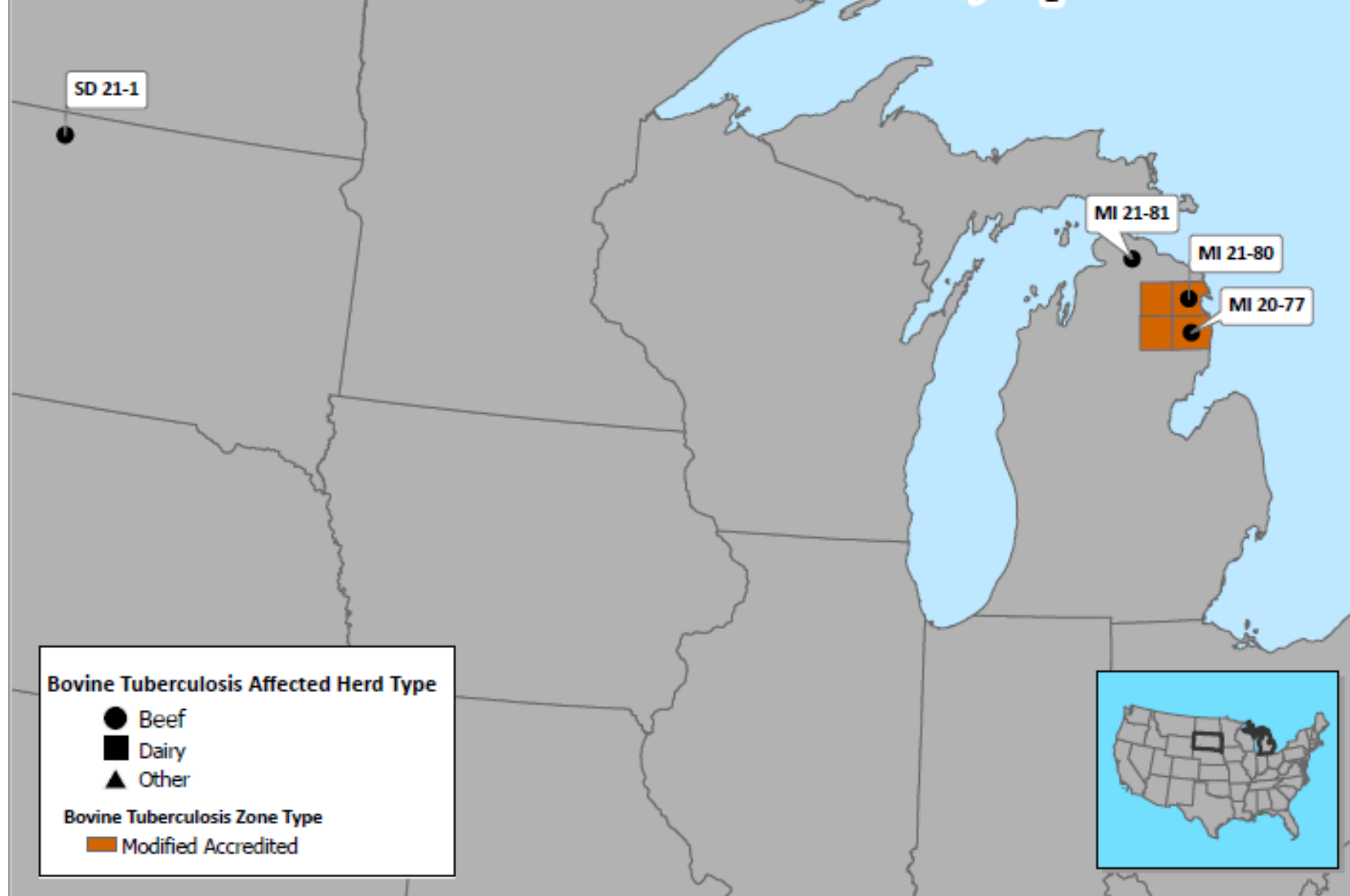
Affected herds are mapped to the center of their county.

# TB affected herds under quarantine in Q4 (July-Sept 2021), MI, WI, SD

Location <sub>1</sub>	Date Detected	Method of Detection	Herd Type	Herd Management Status	Next Test Tentative Start Date
SD 21-1	March 2021	Slaughter Trace	Beef	Test-and-Remove Phase	TBD
MI 21-81	March 2021	Area Surveillance	Beef	Test-and-Remove Phase	TBD
MI 21-80	November 2020	Movement Test	Beef	Test-and-Remove Phase	December 2021
MI 20-79	July 2020	Area Surveillance	Dairy	Quarantine released in July	NA
MI 20-77	January 2020	Area Surveillance	Beef	Test-and-Remove Phase	October 2021
WI 18	October 2018	Slaughter Trace	Dairy	Quarantine released in August	NA

1. Herds are named with the last 2 digits of the fiscal year and in order of occurrence within a state during that fiscal year, with Michigan's numbers being cumulative across years.

# Michigan, and South Dakota Bovine Tuberculosis Affected Herds and Zone Status, September 2021



Affected herds are mapped to the center of their county.

# Q4 (July-Sept 2021) TB Updates (MI, WI, SD)

- MI 20-79

- Verification testing was completed without additional findings and this herd was released from quarantine.

- MI 20-77

- Culture from the 6<sup>th</sup> removal test was negative and verification testing is planned for October 2021.

- WI 18

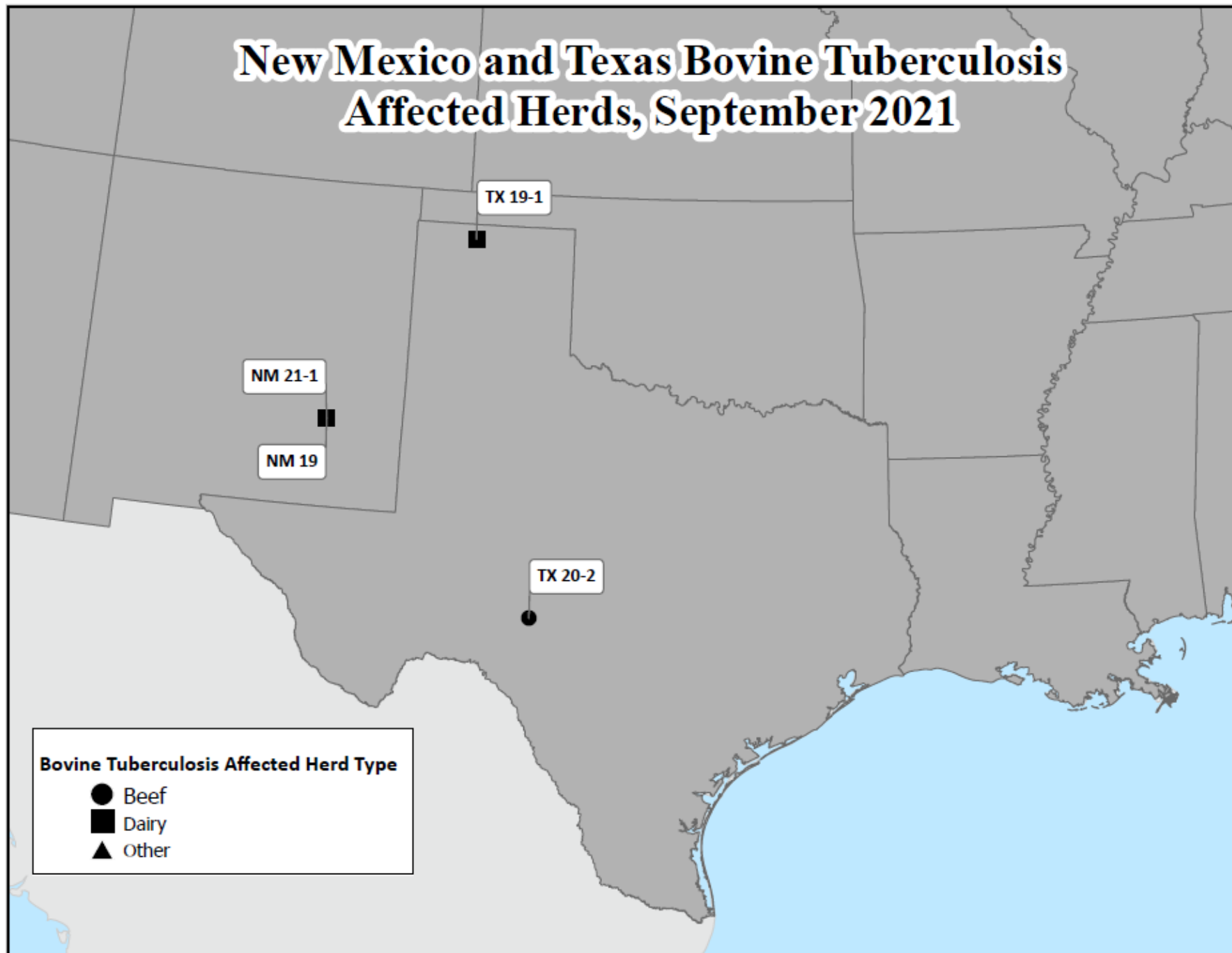
- Cultures from the 9<sup>th</sup> removal test were negative.
- Verification testing was completed without additional findings and this herd was released from quarantine.

# TB affected herds under quarantine in Q4 (July-Sept 2021), TX, NM, HI

Location <sub>1</sub>	Date Detected	Method of Detection	Herd Type	Herd Management Status	Next Test Tentative Start Date
HI 21-2	August 2021	Epi Investigation	Beef	Depopulation	NA
HI 21-1	July 2021	Area Testing	Beef	Depopulation	NA
NM 21-1	October 2020	Assurance Test	Dairy	Test-and-Remove Phase	April 2022
TX 21-1	October 2020	Slaughter Trace	Exhibition	Quarantine released in August	NA
TX 20-2	September 2020	Slaughter Trace	Beef	Test-and-Remove Phase	Fall 2021
NM 19	May 2019	Slaughter Trace	Dairy	Test-and-Remove Phase	October 2021
TX 19-1	February 2019	Epi Investigation	Dairy	Test-and-Remove Phase	January 2022

1. Herds are named with the last 2 digits of the fiscal year and in order of occurrence within a state during that fiscal year, with Michigan's numbers being cumulative across years.

# New Mexico and Texas Bovine Tuberculosis Affected Herds, September 2021



Affected herds are mapped to the center of their county.

# Q4 (July-Sept 2021) TB Updates (TX, NM, HI)

- HI 21-2
  - Identified through epidemiologic investigation and whole herd testing related to HI 21-1
- HI 21-1
  - Area surveillance herd test revealed one CCT suspect which was histocompatible and PCR positive. Whole genome sequence related to the feral swine strain on the island.
- TX 21-1
  - Verification testing was completed without additional findings and this herd was released from quarantine.

# Bovine TB cases found through routine slaughter FY2021 Q4 (July-Sept)

Slaughter Type	Month confirmed	Slaughter Plant State	Slaughter Origin State	Outcome/current status
Adult	February 2021	MN	SD	Traced to SD 21-1
Adult	April 2021	NM	NM	Cull cow from known affected herd
Adult	May 2021	NE	OK	Traced to herd in OK, testing in progress
2 Fed	June 2021	TX	TBD	Traced to feedlot and continuing tracing activities.
3 Fed	July 2021	TX	Mexican origin	
Adult	August 2021	MN	MT	Traced to herd in MT, initial WHT in progress
Adult	September 2021	TX	KS, CO	Traced to herd in CO with movement between CO and KS
Adult	September 2021	ID	MT	Traced to herd in MT, initial WHT in progress.



# Tuberculosis (*M. bovis*)

## Terms and Definitions

# Designation of Herds as “Quarantined”

- Affected herds are considered “quarantined” due to a formal quarantine order of the entire herd or informal hold order for subgroups of exposed animals.
- Herds under quarantine due to tracing investigations are generally excluded from this report due to the temporary nature of their restrictions.
- Quarantined herds are removed from this report once the quarantine or hold order is removed, typically after verification testing.

# Methods of Detection of TB-Affected Herds

- **Area surveillance:** Surveillance in a defined area such as counties in or bordering the modified accredited zone in Michigan.
- **Assurance test:** Herds identified during the assurance testing phase of a test and remove herd plan.
- **Epi investigation:** Herds identified as part of epidemiologic investigations associated with TB-affected animals or TB-affected herds.
- **Movement test:** Herds identified through testing of animals for routine movements, e.g., export and interstate commerce.
- **Slaughter trace:** Herds identified as the source of animals with suspicious lesions during routine slaughter surveillance. Also called “6-35 traces”

# Definitions and Acronyms

- **6-35 Trace:** Tracing of the source of a suspected or confirmed case of TB that was identified during slaughter surveillance and reported on a VS 6-35 form; known otherwise as a “slaughter trace.”
- ***M. bovis*:** *Mycobacterium bovis*, known as bovine or zoonotic tuberculosis
- **NGL:** No gross lesions on postmortem examination
- **NVSL:** National Veterinary Services Laboratories
- **PCR:** Polymerase Chain Reaction; A molecular biology method of assessing for presence of segments of generic material, i.e., DNA and RNA
- **WGS:** Whole Genome Sequencing of TB bacterial DNA; used to assess relatedness among TB bacterial strains