



National Bovine Brucellosis and Tuberculosis Updates



Q1 (October-December 2021) Report Fiscal Year 2022

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*)



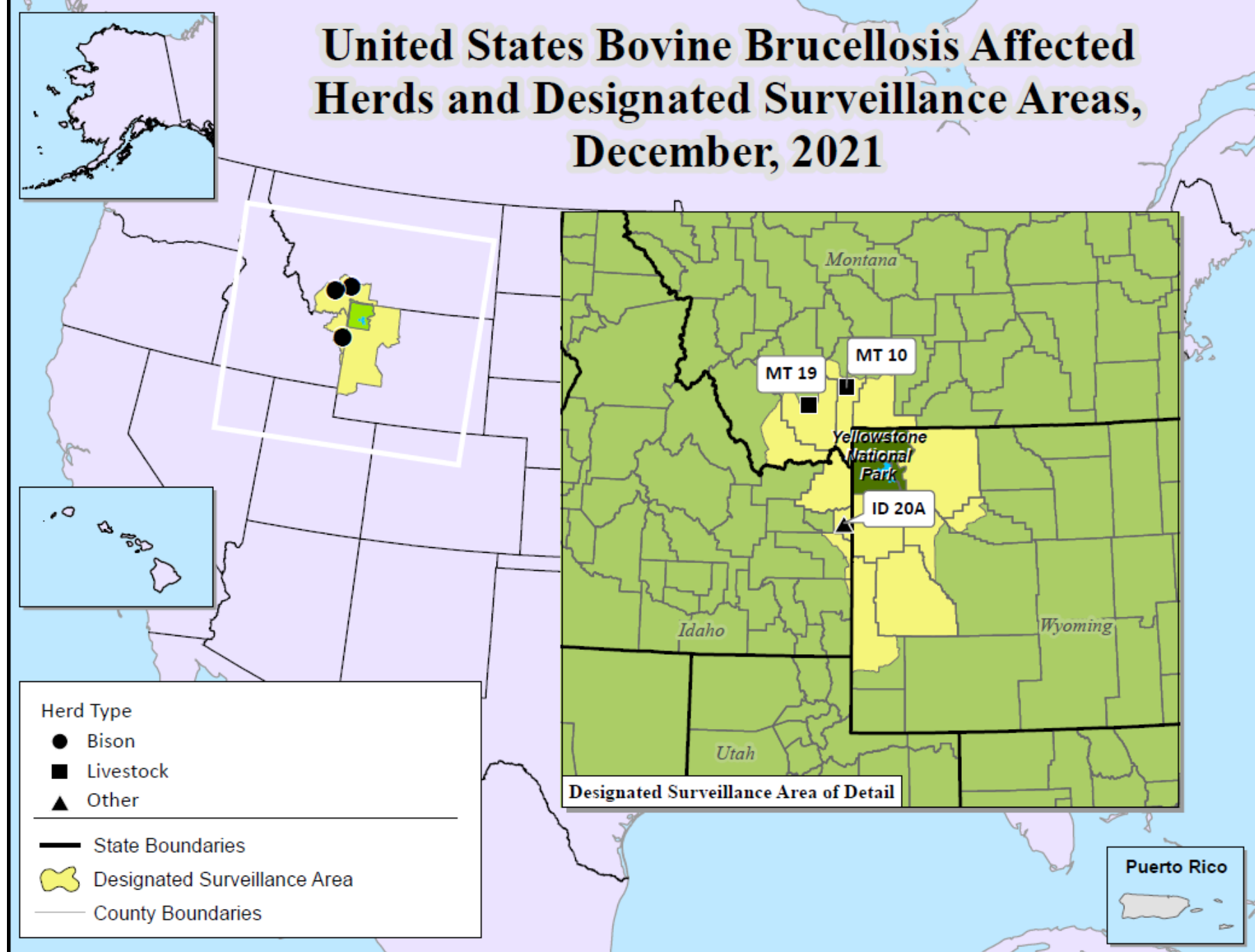
FY22 Q1 (Oct-Dec 2021) updates

Brucellosis Affected Herds Under Quarantine in Q1 (Oct.-Dec. 2021)

Location ₁	Date Detected	Method of Detection	Herd Type	Herd Management Status	Next Test Tentative Start Date
ID 20A	January 2020	DSA Surveillance Testing	Elk/Beef	Test-and-Remove	Fall 2021
MT 19A	December 2019	DSA Surveillance Testing	Livestock	Test-and-Remove	Fall 2021
MT 10	November 2010	DSA Surveillance Testing	Livestock	Test-and-Remove	October 2021

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

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



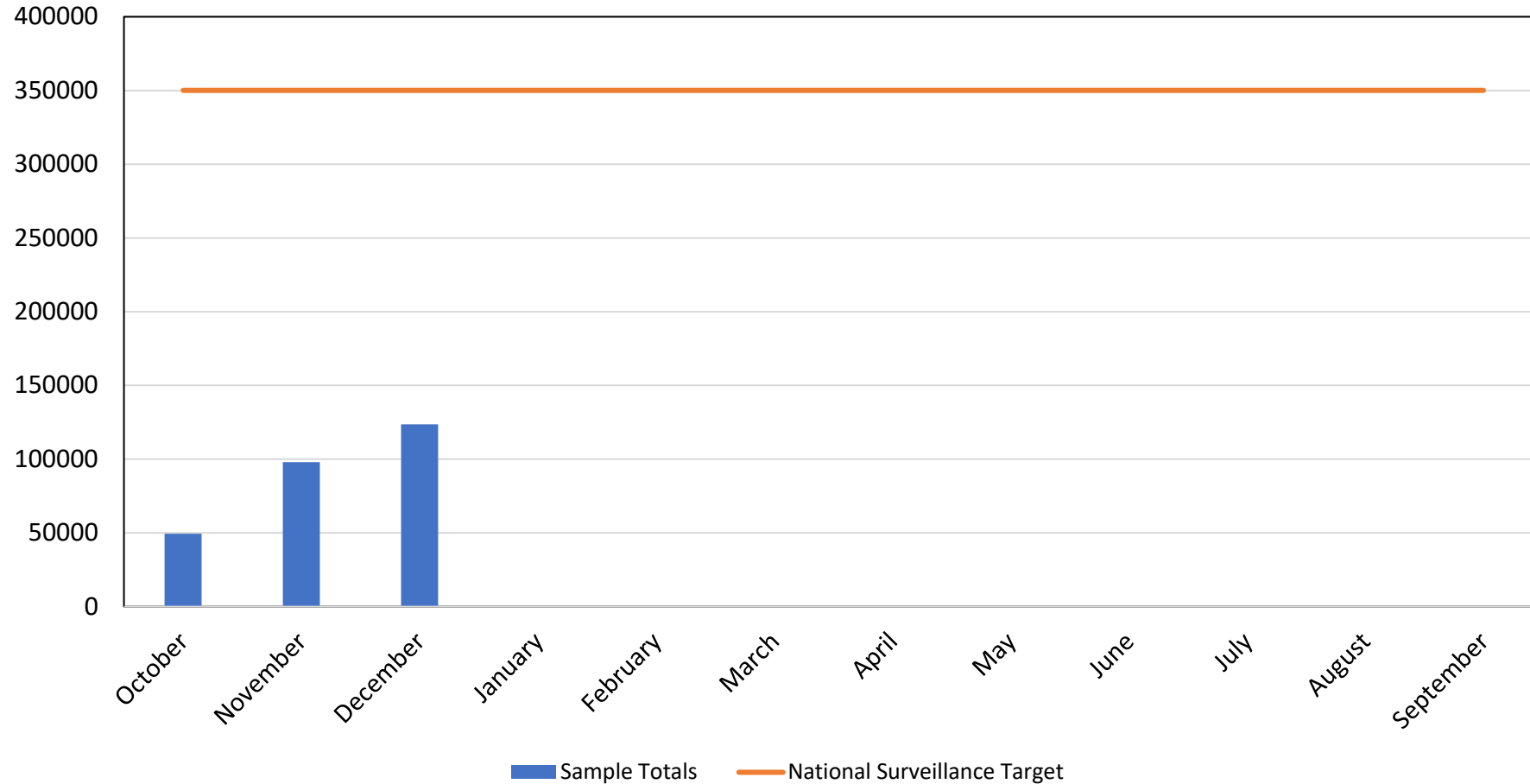
Affected herds are mapped to the center of their county.



Brucellosis Affected Herd Updates

- Wyoming 20-5 → Released from quarantine in November 2021.

FY2022 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.

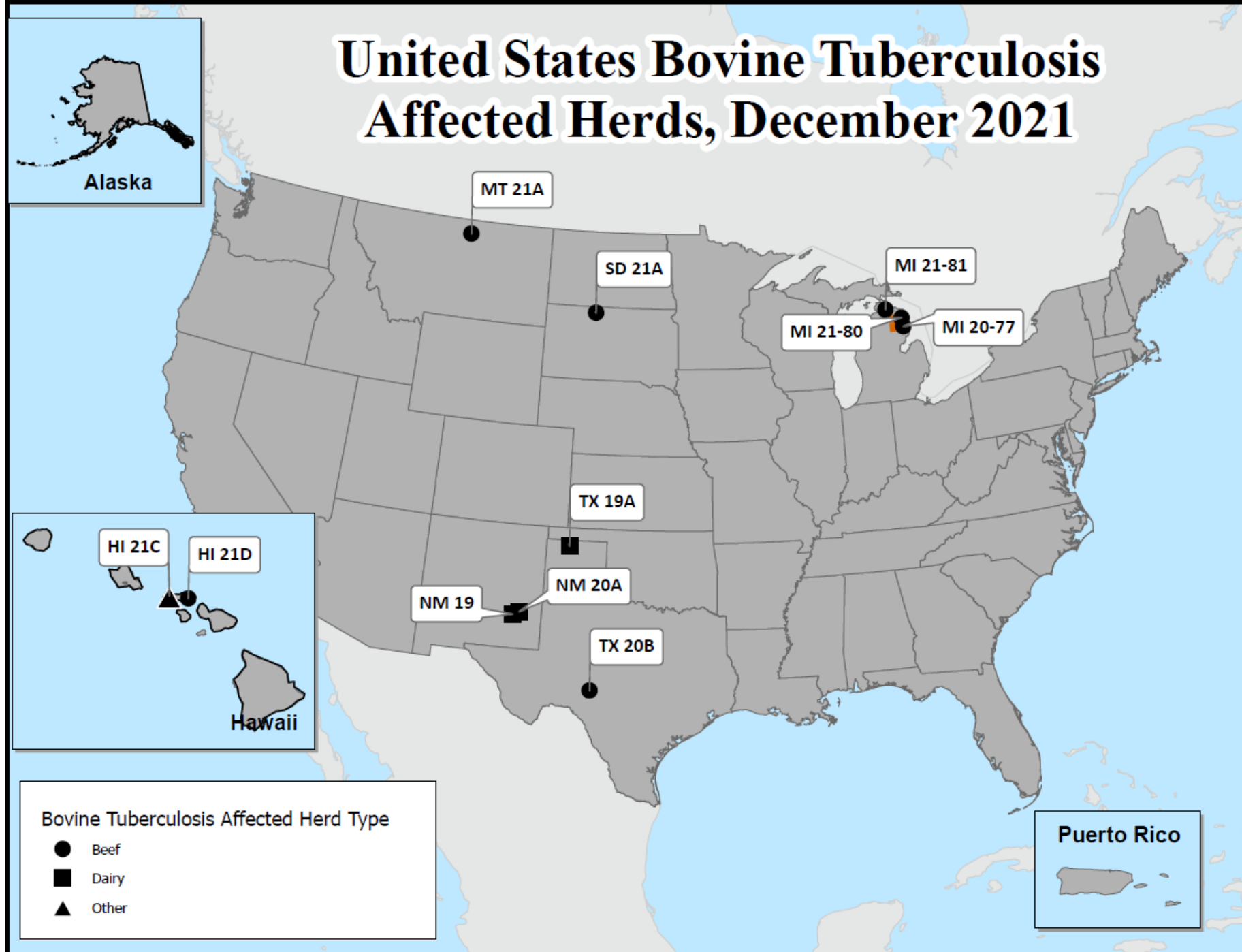


Tuberculosis (*M. bovis*)



FY22 Q1 (Oct-Dec 2021) updates

United States Bovine Tuberculosis Affected Herds, December 2021



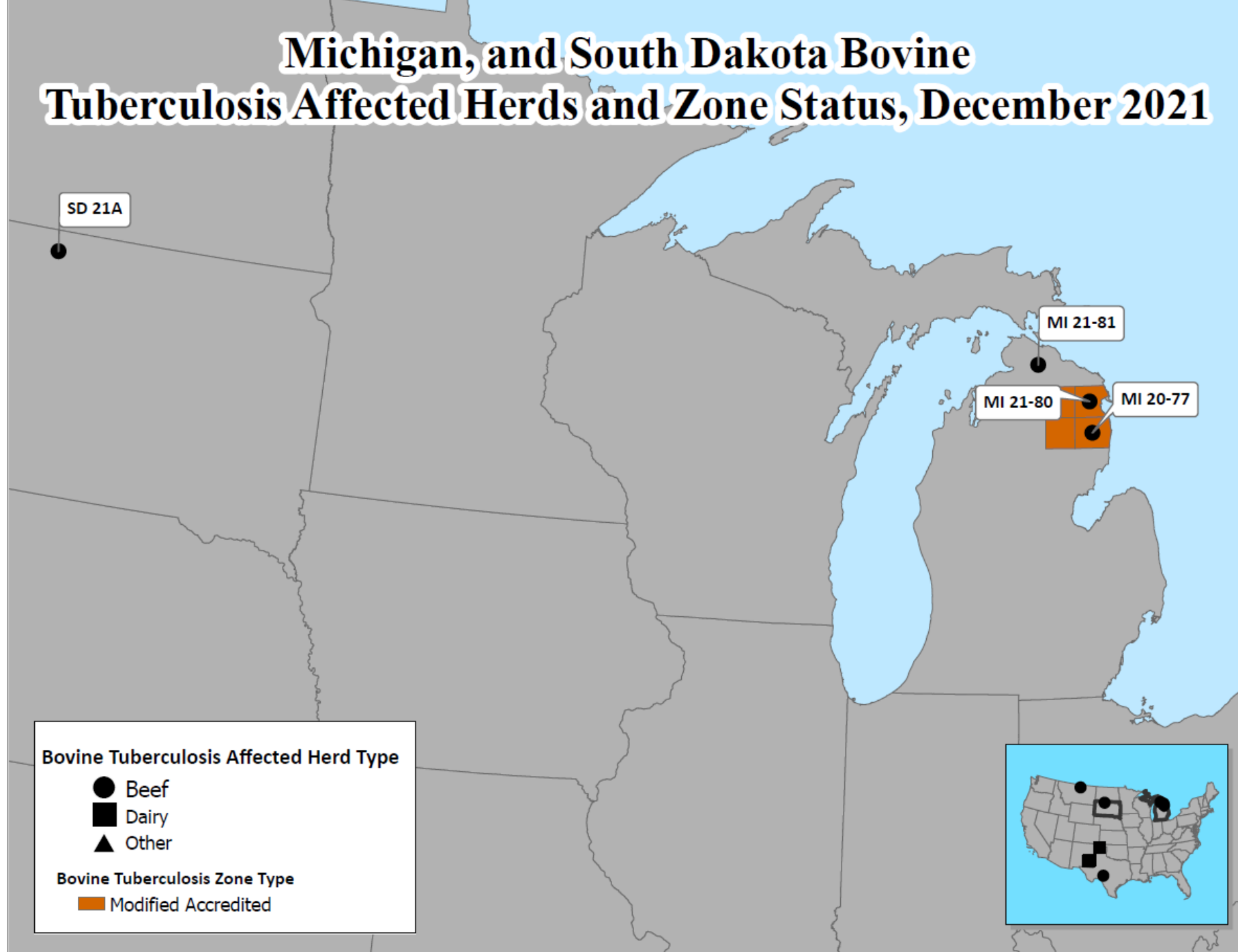
Affected herds are mapped to the center of their county.

TB affected herds under quarantine in FY22 Q1 (Oct-Dec 2021), MI, MT, SD

Location ₁	Date Detected	Method of Detection	Herd Type	Herd Management Status	Next Test Tentative Start Date
MT 21A	October 2021	Slaughter Trace	Beef	Depopulation	NA
SD 21A	March 2021	Slaughter Trace	Beef	Test-and-Remove Phase	TBD
MI 21-81	March 2021	Area Surveillance	Beef	Test-and-Remove Phase	February 2022
MI 21-80	November 2020	Movement Test	Beef	Test-and-Remove Phase	December 2021
MI 20-77	January 2020	Area Surveillance	Beef	Test-and-Remove Phase	October 2021

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

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



Affected herds are mapped to the center of their county.



Tuberculosis Affected Herd Updates (MI, MT, SD)

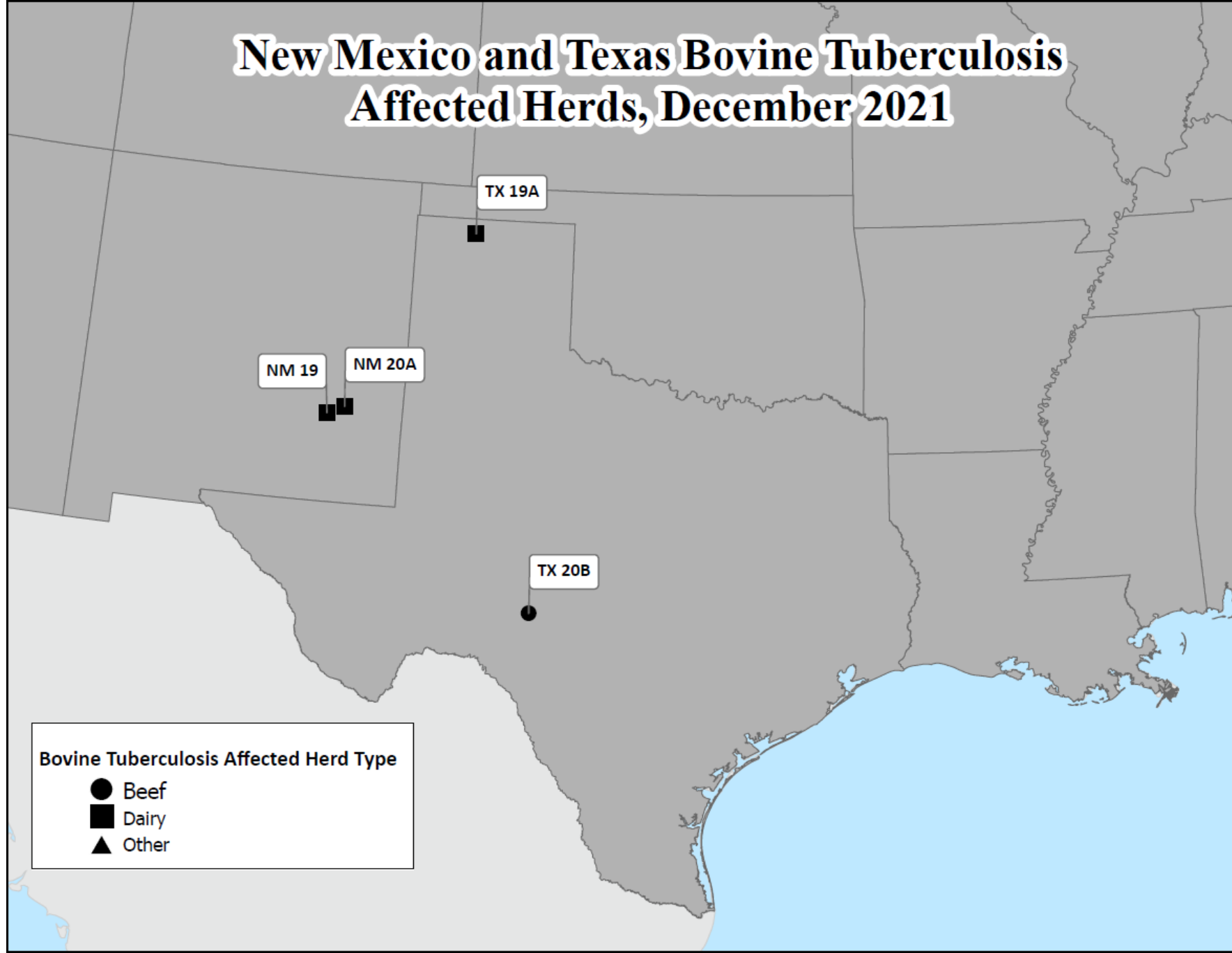
- MT 21A → Slaughter trace from September 2021 led to an affected beef herd in Montana. Depopulation approved.

TB affected herds under quarantine in FY22 Q1 (Oct-Dec 2021), TX, NM, HI

Location ₁	Date Detected	Method of Detection	Herd Type	Herd Management Status	Next Test Tentative Start Date
HI 21D	Dec. 2021	Movement Test	Beef	Depopulation	NA
HI 21C	Dec. 2021	Slaughter	Mixed	Depopulation	NA
NM 20A	October 2020	Assurance Test	Dairy	Test-and-Remove Phase	April 2022
TX 20B	Sept. 2020	Slaughter Trace	Beef	Test-and-Remove Phase	Fall 2021
NM 19	May 2019	Slaughter Trace	Dairy	Test-and-Remove Phase	October 2021
TX 19A	February 2019	Epi Investigation	Dairy	Test-and-Remove Phase	January 2022

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

New Mexico and Texas Bovine Tuberculosis Affected Herds, December 2021



Affected herds are mapped to the center of their county.

Tuberculosis Affected Herds Update (TX, NM, HI)

- HI 21C→ Identified from an infected pig on the premises.
 - Cattle classified as exposed and depopulated
 - Whole genome sequence related to the feral swine strain on the island.
- HI 21D→ Identified from Whole Herd Testing
 - Cattle herd adjacent to HI 21C; depopulation approved but not yet completed
- History of TB in Hawaii
 - Hawaii obtained "bovine tuberculosis free" status from the USDA in 1993, but it was suspended in 1997 when a 10-year-old cow on Molokai was infected with TB.
 - The 10-year-old cow and its herd were depopulated, and Hawaii regained "bovine tuberculosis free" status in 1998.

Bovine TB Cases Identified through Routine Slaughter FY2022 Q1 (Oct-Dec)

Slaughter Type	Month confirmed	Slaughter Plant State	Slaughter Origin State	Outcome/current status
Adult Cull	Oct. 2021	MN	MT	Traced to herd in MT, 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



Definitions and Acronyms

- **WHT:** Whole herd test



Questions?

- Please contact the Cattle Health Center at: vs.sp.chc.all@usda.gov