



Bovine Tuberculosis Frequently Asked Questions

1. What is bovine tuberculosis (bTB)?

Bovine TB is a contagious disease caused by the bacterium *Mycobacterium bovis*.

2. What species of animals can be affected?

Bovine TB primarily affects cattle, but it can be transmitted to nearly any mammal. In Michigan, the disease is endemic in some white-tailed deer herds. In some circumstances, bTB can infect humans.

3. Where does bTB occur?

Bovine TB is found throughout the world, but is more prevalent in most of Africa, parts of Asia, and parts of the Americas. The disease was once common in cattle within the United States but has nearly been eliminated from the country's livestock population. The goal of complete eradication remains elusive in the U.S. as animal health officials continue to detect TB sporadically in livestock herds and in some places, the disease has spilled over into wildlife which can serve as a reservoir of infection to livestock.

Bovine TB is considered endemic in wildlife in parts of Hawaii, Michigan, Alberta, and Manitoba. Sporadic cases of the disease have been reported in free-ranging wildlife in Montana, New York, Minnesota, Indiana, and Ontario. Wildlife data is lacking for Mexico, but unconfirmed cases have been reported in white-tailed deer.

UPDATE: Bovine TB was found in September 2021 in a cattle herd in Blaine County, Montana.

4. Does bTB occur in Montana?

Beyond the September 2021 detection, disease has been detected historically in some Montana game farms and a few free-ranging wild animals. Bovine TB was detected in at least six game farms in Montana in the early 1990s. Positive farmed fallow deer were detected in Sheridan and Richland counties. Positive farmed elk were detected in Granite, Park, Bighorn, and Carter counties. In 1993, after bTB was confirmed in captive elk on the Bighorn County game farm, an effort was put in place to survey free-ranging wildlife for the disease. Forty-one mule deer and three white-tailed deer were collected from an adjacent cattle ranch and two mule deer had lesions consistent with bTB

infection. *M. bovis* was isolated from lymph nodes of one of those deer. *M. bovis* was also detected in a few coyotes in that area. In August 1994, additional wildlife surveillance efforts were carried out: 130 mule deer, 15 white-tailed deer, 15 coyotes, one pronghorn antelope, one elk, three porcupines, and one rabbit were collected. Bovine TB was detected in one of the 15 coyotes sampled during this effort. In 1995, seven coyotes were collected for testing and bTB was detected in one of the seven. Little wildlife surveillance was conducted around the other positive game farms, in part due to low wildlife densities in those areas.

Since that time, FWP has tested animals with lesions similar to those caused by bTB and has opportunistically collected lymph nodes from hunter harvested deer in some areas to look for evidence of bTB. The disease has not been detected during this sampling.

5. What are the impacts of bTB in wildlife?

There are no documented cases of bTB causing cervid population declines. The impacts of aggressive management in endemic areas often has a much greater impact on deer survival than mortality resulting from this chronic disease.

6. What are the impacts of bTB in cattle?

States with bTB cases in cattle and/or wildlife experience significant negative economic impacts on the livestock industry and may be subject to increased regulation and requirements for interstate movement of livestock.

7. How is the disease transmitted between or among cattle and wildlife?

The disease is primarily spread from animal to animal via respiratory secretions but can also be transmitted by the fecal-oral route or by ingestion of contaminated food. Shared feeding is believed to be the primary transmission pathway between wildlife and cattle, as feed becomes contaminated with infectious saliva, urine, and feces.

8. What are the impacts of bTB in humans?

Bovine TB (*M. bovis*) is not the major cause of human tuberculosis, which is caused by *Mycobacterium tuberculosis*, but humans are susceptible to bTB. Humans can be infected by drinking raw milk from infected cattle, inhaling infective droplets from an infected animal, or by contact with infective body fluids via open wounds. Bovine TB accounts for <2% of tuberculosis cases in the United States. There has been at least one confirmed case of transmission of bTB to a human from an infected white-tailed deer. In that case, the hunter was believed to have an open wound that contacted the deer's bodily fluids during the field dressing process.

Not all *M. bovis* infections progress to TB disease, so there might be no symptoms at all. In people, symptoms of TB disease caused by *M. bovis* are similar to the symptoms of TB caused by *M. tuberculosis*; this can include fever, night sweats, and weight loss. Other symptoms might occur depending on the part of the body affected by the disease. For example, disease in the lungs can be associated with a cough, and gastrointestinal disease can cause abdominal pain and diarrhea. If untreated, a person can die of the

disease. Not everyone infected with *M. bovis* becomes sick. People who are infected but not sick have what is called latent TB infection (LTBI). People who have LTBI do not feel sick, do not have any symptoms, and cannot spread TB to others. However, some people with LTBI do eventually develop disease from the bacteria.

9. How can a hunter protect him/herself from bTB?

Hunters should always wear rubber gloves when field dressing a harvested animal. Hands and instruments should be washed thoroughly after field dressing is completed. Hunters should not harvest animals that look sick. Hunters should report to FWP any animal that appears sick during field dressing. .

10. What is FWP doing about bTB?

FWP performs examinations and testing of animal carcasses that are suspected of being diseased. In some areas, FWP collects lymph nodes from hunter-harvested cervids for examination and testing for bTB. FWP will be increasing staff in the Havre area to help collect lymph nodes for bTB screening as part of regular CWD monitoring effort. FWP will be working with the Department of Livestock, USDA, and Wildlife Services to carry out wildlife surveillance around the positive cattle herd detected in September 2021.

11. What can you do to help?

Report any sick looking animal to FWP. If you harvest an animal with evidence of disease, photos can be helpful in identifying the problem. In some cases, tissue samples may be required to diagnose the problem.

12. Will FWP ever actively search for bTB independent of a livestock positive?

FWP may actively search for bTB in areas deemed to be of high priority due to proximity to historic cases prior to detection in wildlife or livestock within or near Montana's borders. Active surveillance prior to detection of the disease will primarily be conducted with samples from cervids (mule deer, white-tailed deer, elk, moose) harvested during established hunting seasons in these areas. In this circumstance, sampling will most often be limited to lymph nodes of the head (retropharyngeal, mandibular, parotid lymph nodes), and in some cases, tonsils may also be collected. In most cases, bTB surveillance efforts may rely on existing staff and resources and will often take advantage of other established sampling opportunities, such as those presented by hunter-harvested cervid heads brought to CWD sampling check stations.

13. Would FWP use hunters to collect cervids for bTB testing?

Whenever possible, samples will be collected from hunter-harvested animals during general hunting seasons.