

Bovine TB Surveillance

in Alberta 2019

Background

In October 2016 bovine tuberculosis (bTB) was detected in a beef cow from southeastern Alberta. The Canadian Food Inspection Agency (CFIA) initiated an immediate investigation and also requested that the province consider looking for bTB in wildlife. Alberta Environment and Parks, Fish and Wildlife Branch, expanded our ongoing passive bTB surveillance of hunter-harvested deer, elk, and moose but found no evidence of the disease in 2016.

During summer 2017, the province worked with CFIA to develop a program of active surveillance for bTB in wildlife that met international standards. The program is designed to build on ongoing disease monitoring efforts and focus on hunter-harvested elk at Canadian Forces Base (CFB) Suffield.

The goal is to test enough samples to demonstrate 95 per cent confidence in disease freedom at the 1 per cent level. With guidance from CFIA, we determined this requires testing 369 elk heads over three years (2017-2019). The target each year is ~120 elk from Wildlife Management Unit 732 (=CFB Suffield). Tissue samples collected by the province are provided to CFIA for testing.

Previous annual surveillance summaries are provided on the Wildlife Disease pages of AEP.

Methods: Passive Surveillance

Public Education

- deliver as in 2016, 2017, and 2018
- online general bTB information and the situation in southeast AB
- bTB information in all daily hunter briefings at CFB Suffield

Lymph Node Assessment

- ongoing examination of lymph nodes for visible evidence of bTB in all heads sampled for CWD
- enlarged (2x normal) or abscessed nodes forwarded to Alberta Agriculture & Forestry (AF) and, if appropriate, further bTB evaluation undertaken. (Standardized protocol developed in conjunction with AF).

General Diagnostic Response to Individual Hunter Concerns

- the Wildlife Disease Unit responds to a wide range of hunter concerns associated with harvested animals. Any such situation suggestive of possible bTB infection is addressed with the hunter and, if appropriate, samples provided for lab evaluation.
- all appropriate diagnostic cases examined by the Wildlife Disease Unit consider bTB.



Methods: Active Surveillance

- standard sample collection protocol established in conjunction with CFIA and as used in 2017 and 2018.

RESULTS from 2019/20

Passive Surveillance

Education

The annual summary of previous bTB surveillance from 2016-2018 was provided on our wildlife disease web pages.

Daily briefings were provided at all CFB Suffield hunts. In 2019/20, total harvest by recreational and First Nation hunters in WMU 732 was 195 elk. All individuals who hunted at CFB Suffield were briefed about bTB prior to their hunt.

Lymph nodes

In 2019/20, 5,632 mule deer, 4,295 white-tailed deer, 231 elk, and 232 moose from across Alberta were tested for CWD. Two mule deer and one white-tailed deer had visible lesions consistent with possible abscess in one lymph node. However no acid-fast bacteria were present in any of these lymph nodes.

Specific to CFB Suffield: 123 of the elk harvested in 2019/20 were tested for CWD. No visible lesions suggestive of bTB were reported by hunters or seen by CWD staff.

Diagnostics

One diagnostic case involved a moose with lesions in the thoracic cavity and lungs that met the criteria for being suggestive of bTB infection. No other diagnostic cases met the criteria.

Bovine TB was ruled out as a cause of the pneumonia in the moose because there were no acid-fast bacteria present.



Active Surveillance

Appropriate samples from 123 elk harvested in WMU 732 in 2019/20 were provided to CFIA for bTB testing. Lab testing was delayed as a result of modified work activities due to COVID-19.

On January 27, 2021 CFIA reported that all testing of active surveillance samples collected in 2019/20 was complete. The 123 elk were NEGATIVE for bTB

Summary

All testing is finished. No evidence of bTB during the 2019/20 hunting seasons in Alberta.

Additional Information

Bovine Tuberculosis surveillance in southeastern Alberta 2016-2018: alberta.ca/publications/bovine-tb-surveillance-in-alberta-wildlife-information-bulletin

Government of Alberta, Bovine Tuberculosis in Wildlife alberta.ca/publications/0778535509