



## Testing methods used to confirm bovine TB (species and strain)

This information is a supplement to the bovine TB testing time line information available on the CFIA web site at <http://www.inspection.gc.ca/eng/1477438380160/1477438380659>

### Screening tests

Because of the challenge of detecting bovine TB in live animals, the CFIA is using two tests on each test-eligible animal (over one year of age) under quarantine. Each test checks for different immune system responses from the animal and increases the confidence that any infected animals will be identified.

The caudal fold skin test has greater sensitivity than the ELISA test. The ELISA test detects bovine TB antibodies. Used in tandem, the two tests reduce the risk of TB infected animals being missed at the screening stage.

Reactors to the on-farm testing are ordered destroyed and go through a detailed post-mortem exam to look for lesions compatible with bovine TB and then a histopathology (microscopic) examination of tissue samples.

### Presence of tuberculosis

A histopathology examination will determine if tuberculosis is present and allow the pathologist to determine if the lesions are consistent with bovine TB but the confirmation of the tuberculosis species requires additional testing.

### Tuberculosis species or type

There are several species of the bacterium that causes tuberculosis. These include:

- Mycobacterium avium which causes tuberculosis in birds
- Mycobacterium bovis which causes tuberculosis in cattle and some other species
- Mycobacterium tuberculosis which causes tuberculosis in humans

The species of tuberculosis can often be identified by a Polymerase Chain Reaction (PCR) test but may also require lab culturing.

### Tuberculosis strain

Once the tuberculosis species has been identified and successfully cultured in the lab, further testing is done to identify the strain or specific variation of bovine TB. Identifying the strain helps determine if different cases are linked and may provide insight into possible sources of the infection.

The strain does not affect the confirmation of the tuberculosis species.

To use trucks as an analogy, the tuberculosis species is the truck manufacturer and the strain is the model number. Whether a vehicle is an F-150, F-250 or F-350, it is still a Ford.