



Bovine Tuberculosis

Testing Information for Cattle Producers

Bovine tuberculosis (TB) testing is a time-consuming, multi-step process requiring planning and coordination. First, California accredited veterinarians, California Department of Food and Agriculture (CDFA), or the United States Department of Agriculture (USDA) veterinarians perform a TB screening test, the caudal fold test (CFT). Cattle responding to this test require secondary tests performed by CDFA or USDA personnel. Secondary tests include the gamma interferon blood test or the comparative cervical test (CCT). Animals positive to either of the secondary tests are examined for lesions postmortem. All cattle on the premises are quarantined until all testing is complete.

Caudal Fold Tuberculin (CFT) Test

The CFT test is the primary screening test used to identify cattle infected with bovine TB. This test measures the immune response to *Mycobacterium bovis* using an intradermal injection of a Purified Protein Derivative (PPD) of tuberculin into the skin of the caudal fold (the fold of skin at the base of the tail). If the animal has been exposed to mycobacteria, the immune system responds with inflammatory cells at the injection site, causing swelling and/or discoloration of the skin. The veterinarian evaluates the response to the CFT injection by inspecting and palpating the injection site 72 hours later. Any abnormality at the injection site classifies the animal as a responder. Veterinarians must report any responders immediately to the CDFA Animal Health Branch, and **submit all test records within 48 hours of reading the test.**

Not all CFT responders have bovine TB. Animals exposed to or infected with other related bacteria such as avian TB, Johne's Disease, human TB, and soil mycobacteria may also respond to the CFT test. These "false-positive" responses may occur in 1-5% of tested cattle. A positive CFT test is a *preliminary* result and the animal requires additional diagnostic testing; regulatory veterinarians will follow up with secondary tests on CFT responders.

Gamma Interferon Test

The gamma interferon test is a secondary test used on CFT responder cattle. CDFA, USDA, or approved private veterinarians draw blood from the responder within 30 days of the CFT injection (optimal time to collect the blood is 3-7 days following CFT injection). Blood collected must be tested within 24 hours, as the test quantifies the amount of cytokine gamma interferon produced by live cells. Test results, typically completed within 48 hours, are used to classify cattle as negative, suspect, or reactor. Gamma suspects either remain under quarantine for retest (must be within 20 days of CFT injection) or are examined for lesions postmortem. Reactor animals are examined for lesions postmortem.

Comparative Cervical Tuberculin (CCT) Test

The CCT test is a secondary skin test used on CFT responder animals. Certified CDFA or USDA veterinarians perform the test within 10 days after the CFT injection. The hair is clipped on two areas of the neck, the skin thickness measured, and bovine PPD injected intradermally at one site and avian PPD at the other site. Responses are evaluated and measured 72 hours after the injections. The difference in the skin thickness before and after the test determine if the response is more likely due to *M. bovis* or *M. avium*. The results are used to classify cattle as negative, suspect, or reactor. CCT suspects either remain under quarantine for a retest in 60 days or are examined for lesions at postmortem. CCT reactors are examined for lesions at postmortem.



TB Testing Summary

1. CFT Screening Test:
 - Bovine PPD injected in the caudal fold; read 72 hours later (+/-6 hours),
 - If negative, no further action, and
 - If positive, the animal is classified as a responder and requires further testing.
2. Gamma Interferon and CCT Secondary Tests:
 - Gamma Interferon is a blood test; CCT test requires bovine PPD and avian PPD injections in the skin of the neck read 72 hours later,
 - If negative, no further action,
 - If reactor, euthanize and necropsy, and
 - If suspect, either euthanize and necropsy or remain under quarantine for repeat secondary testing.

Animal Health and Food Safety Services Animal Health Branch

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For more information, please click the following:

[Animal Health Branch](#)
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