

Brucellosis in Cervids

Brucellosis is a contagious disease that affects both livestock and wildlife, and can have significant consequences for animal and public health, as well as international trade. The disease is caused by bacteria of the genus *Brucella*. Brucellosis occurs predominantly in cattle, bison, and swine, but can also cause infection in cervids, goats, sheep, horses, dogs, and humans. In cervids, the specific disease organism of concern is *Brucella abortus*.

Brucellosis is a zoonotic infection, meaning it can be transmitted from animals to humans. In humans, the infection is known as undulant fever or Bang's disease. Common symptoms observed in humans may include recurrent fever, malaise, anorexia, headache, joint and muscle pain, and fatigue.

The bacteria localizes in the reproductive tract and/or the udder causing the organisms to be shed in reproductive secretions and fluids, in the milk and in the urine. The highest concentration of infectious bacteria is typically seen in aborted fetuses, afterbirth, and reproductive tract discharges. The most common clinical signs in animals include abortion, infertility, birth of weak fawns, or reduced milk production. Other clinical signs of infection may include decreased fertility, poor conception rates, retained placenta, uterine infections, swollen or shrunken testicles, and occasionally enlarged, arthritic joints. While infected animals may appear to recover clinically, they often continue to harbor and shed infectious organisms for several years following infection and should be regarded as a dangerous source of the disease for other animals and people.

Brucellosis is commonly transmitted to susceptible animals through direct exposure to reproductive tissues, reproductive fluids, or

urine. Indirect exposure may occur when an animal has exposure to an environment that has been contaminated with fluid, discharge, or urine from infected animals. Aborted fetuses, placental membranes and fluids, and other vaginal discharges present after an infected animal has aborted or fawned have high concentrations of the organisms making them highly contagious.

Cervid Brucellosis Certification Program

The Indiana State Board of Animal Health (BOAH) has requirements for establishing a brucellosis-free certified cervid herd. To establish a brucellosis-free certified herd, a producer must perform two whole-herd tests, completed 9 months to 15 months apart, with negative results. All sexually intact cervids in the herd that are 12 months of age and older must be tested as part of a whole-herd test.

Brucellosis Recertification

Certified brucellosis-free status for the herd lasts for a period of 3 years. To maintain continuous certification, brucellosis-certified herds must have a negative whole-herd test within a period of 33 months to 39 months of the anniversary date. All sexually intact cervids in the herd that are 12 months of age and older must be tested as part of a whole-herd test. If suspects or reactors are found on recertification testing, certification status will be suspended, and a herd investigation will be initiated.

Additions to a Certified Brucellosis-Free Herd

Additions to a certified brucellosis-free herd must originate from one of the following sources:

- A certified brucellosis-free herd
- From other herds: Animals purchased from herds that are not certified brucellosis-free cannot be moved from the destination

premises with brucellosis-free status until the following three blood tests have been completed and found to be negative for brucellosis:

1. Test within 30 days prior to the movement from the herd of origin.
2. Test between 60 days to 180 days after being moved to the premises where the certified brucellosis-free herd is located. Animals should not be co-mingled with the certified brucellosis-free herd until negative results from this test are received.
3. Test as part of the whole-herd recertification test following the completion of the second test.

Cervid Brucellosis In-State Movement Requirements

No brucellosis testing is required for movement of cervids within Indiana.

Cervid Brucellosis Import Requirements

No brucellosis testing is required for movement of cervids into Indiana.

