



AHL LabNote Number 5

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Recommendations for testing for bovine viral diarrhea virus in alpacas and llamas

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Bovine viral diarrhea virus (BVDV) can cause abortions and persistent infection in alpacas. The following BVDV testing strategies for alpaca are based on comparative medicine and are derived from those currently used for cattle. These recommendations may need to be refined as more is learned about BVDV in alpaca.

1) PCR test for virus detection	EDTA blood	Primary test for both persistently and acutely infected animals – sensitive, rapid, cost-effective.
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Aborted and stillborn fetuses, cria that die, and any unexplained deaths should be autopsied by a veterinarian so that samples of tissue can be sent to a veterinary diagnostic lab to be tested for disease agents, including BVDV.

If BVDV is identified from any submission, then the herd should be strategically tested to see if there is a persistently infected (PI) animal still present in the herd as the source of the infection. For BVDV herd screening, every animal in the herd should be evaluated for the virus in some way.

Low birth weight cria, poor doing cria, very premature cria, and alpacas with unexplained illness and chronic illnesses should be tested for BVDV. To test live animals of any age for BVDV at the AHL, send 2 mL of EDTA blood for PCR. If the first test in a live animal is positive for BVDV, this may only represent an acute infection. A second blood sample must be collected 3 weeks later and tested to confirm that the animal is indeed persistently infected. This second test is essential before the animal will be euthanized on the basis of this testing.

Any pregnant females who may have been exposed to BVDV during their pregnancy should have their cria tested for BVDV soon after birth using a blood test.

2) Virus neutralization (VN) test for antibody detection	Serum	For alpacas BVDV Type 1b TGAC will be used.
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Other tests available:

TEST	SAMPLE TYPE	PURPOSE
3) Immunohistochemistry	Fixed tissue samples	When fresh tissues are not available, or as a part of postmortem procedures for individual diagnostics. Cannot be used for PI screening