

ARF and BVDV Research

Recently, isolated clinical cases of infection with bovine viral diarrhea virus (BVDV) in alpacas have been confirmed in North America. In addition to the case reported in the summer '05 issue of alpacas magazine, others have been recognized by veterinary diagnosticians. Previously, BVDV was thought to pose minimal risk to camelids, In light of the accumulating new information, however, we believe the role of BVDV as a cause of disease in alpacas should be re-evaluated.

To this end, ARF will post the regional distribution of confirmed cases of BVDV on it's website as soon as that information is available. In addition, the ARF Board has issued a request for proposals from qualified virologists to determine the prevalence of BVDV in the North American alpaca population. Testing will be done anonymously and sources of samples will not be identified by owner, farm or animal in any report. Results of the study should be the first step in determining how widespread BVDV exposure currently is in North American alpacas and, if warranted, could lead to more extensive investigations.

Questions to be answered by future research might include, but would not be limited to, the following:

What does the prevalence survey mean? Does infection of alpacas with BVDV cause disease in all situations? What quantity of virus and other conditions are needed to produce clinical disease in an alpaca? Have certain BVDV strains adapted to the alpaca enabling them to produce more harmful infections? How prevalent are they?

How prevalent is persistent infection (PI) in alpacas? What conditions lead to PI in alpacas?
How much virus is shed by alpacas with acute or persistent BVDV infection?

What risk do cattle pose to alpacas? What risk do infected alpacas pose to other alpacas? Will currently available vaccines be safe and effective to use in alpacas? What biosecurity measures will prevent BVDV infection in alpacas?

The list of questions could go on and on. The answers will often require careful, costly and time consuming research.

The ARF Board appreciates not only the monetary contributions received from our industry but also the confidence alpaca owners have shown in ARF's efforts. We continually strive to earn that support for there is much more work to be done! To contact members of the ARF board or to learn how you can contribute to this or other ARF-sponsored research projects, please visit our website (www.alpacaresearchfoundation.org).

HOW CONCERNED SHOULD I BE ABOUT BVDV?

The bovine viral diarrhea virus (BVD virus) has caused varied disease in cattle. We are continuing to learn about the disease process as well as diagnostic testing. There have been presumptive reports in the past of BVDV infection in camelids, which eventually were proven to be false positive test results. The recent report supports the diagnosis of a confirmed infection in an alpaca with BVDV. The question is: What is the significance of this infection?

At this point in time there are more questions than answers to BVDV infection in camelids. We need to determine the significance of test results in alpacas in order to have an idea of the relevance and prevalence of this disease. Although we do not want to blame every symptom on BVDV infection, we do want to delineate the possible role this virus could have in illness in alpacas.

Alpacas are unique compared to cattle or sheep or many of the other domestic species. Some diseases cross species lines. Others do not. Some viruses, such as rabies, can affect most species. Others, such as feline

leukemia virus, limit the species affected. Many animals, including humans, are infected with different viruses and bacteria with no untoward effects. Sometimes the infection is only a problem if the patient is stressed or debilitated.

One of the challenges in dealing with a new species is finding accurate diagnostic tests. Some tests are species specific. What works well in one species may be invalid in another species. With a cooperative effort among virologists, researchers, practitioners, clinicians, and owners much progress can be made to answer these questions. It will take time, and money, to get some solid answers. It will take patience to make sure the results are valid.

As with any disease, the spread of BVDV can be reduced by using precautions. Biosecurity can encompass many things. Quarantine of animals arriving to the farm for two to three weeks can reduce contamination of resident animals and allow time for any testing recommended by your veterinarian. This should ideally include animals in for breeding, ones coming back from shows, events or other farms.

Any sick animal should be handled, fed, watered, cleaned and treated after the healthy ones have been taken care of. Any animal to die should be necropsied, to find the cause of death, including testing for BVDV. Cleaning hands and feet between sick animals or groups can slow the spread of disease. Appropriate foot baths strategically placed can be useful. Visitors can be required to wear protective clothing if they have been in contact with livestock recently. Your veterinarian can help you develop a plan appropriate for your farm or ranch.