

Pre-test Requirement: Testing Cattle for Persistent BVD Infection

Background

Bovine viral diarrhea virus (BVDV) persists and spreads between herds in the U.S. cattle population primarily via persistently infected (PI) cattle that were exposed to virus before they were born. Many PI cattle are more susceptible to disease and unthrifty. If they survive to weaning they are unlikely to be selected for replacement stock. Unfortunately a few survive, appear healthy, and may be retained as breeding animals. PI's shed BVD virus continuously and provide constant exposure to any other cattle with which they come in contact.

The likelihood of finding a PI is low but the potential damage to herd productivity is very high. Newly purchased bulls have been incriminated as a source of new BVD infections in cattle herds. Some major feedlots are now screening incoming cattle for BVD PI's. Many dairy farms screen replacement heifers to identify PI's. Finding persistently infected animals and eliminating them from breeding herds is an essential part of controlling this disease.

PI cattle have BVD virus present throughout their body. The standard test requires a small skin sample, and using specific staining techniques to identify BVD virus in the tissue. Cost of the test is typically less than \$5 and results are often available in 1 week.

Testing Procedure

1. Any full-thickness piece of skin will work, but ear notches are easy to collect. With the animal properly restrained, remove a small sample of skin from the edge of the ear. A pig ear-notcher works well for this. Bleeding is usually minimal and can be controlled, if necessary, by digital pressure for a few seconds. Make sure the sample includes skin. A piece of ear tissue (not hair) ½ inch long and ½ inch wide is adequate.
2. Place the sample in a leak-proof plastic bag. Write the date collected, animal identification, and owner's name on the bag with a waterproof marker.
3. Chill the sample(s) on ice or in a refrigerator to minimize tissue destruction. Samples should be submitted, with the appropriate paperwork, within 48 hours to a diagnostic laboratory that performs BVD testing. Avoid shipping samples on Thursdays or Fridays so that they do not arrive at the lab over the weekend.



- The shipping address for the MSU diagnostic laboratory is:
Diagnostic Center for Population and Animal Health
Michigan State University
4125 Beaumont Road, Room 122
East Lansing, Michigan 48910-8104

If you have web access and Adobe Acrobat Reader you can download the appropriate form from the DCPAH website www.animalhealth.msu.edu. Click "Submittal Forms" in the menu at the left of the screen. Click the "General Submissions" form. On this form, the skin test for BVD PI's is in the middle column under the heading "Ruminant" and has a check-box labeled "BVD PCR (ear notch)".

4. If you have questions you may contact: Dr. Dan Grooms 517-432-1494