

**UCD VET VIEWS  
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***BVD: ELIMINATING PERSISTENTLY INFECTED BVD CATTLE FROM YOUR HERD***

Last month we discussed the problems that come with having cattle in your herd that are persistently infected (PI) with the BVD virus. These PI cattle spread the virus throughout your herd on a daily basis. If you or your veterinarian suspects you have any PI cattle there are now reliable, inexpensive tests to identify these cattle. The PI cattle can then be eliminated. This article will deal with some of the nuts and bolts of testing.

***What samples are needed for these tests?***

The two most common tests require either a skin sample or a serum sample. The skin sample is usually taken from the ear. The serum sample is derived from a blood sample that is allowed to clot, spun in a centrifuge and the clear serum is collected with a disposable pipette.

***How are the samples taken from the animal and processed?***

The skin samples are best taken from the edge of the ear (where there is an abundance of small blood vessels) with an ear-notching tool. These are the common ear notch instruments used for pigs. These ear-notching tools take a triangular notch. The triangular notch should be    to    inches per side. Depending on the laboratory you plan on using, the ear notch sample is either put into a vial containing formalin or into an individual plastic bag. Both types of sample containers must be clearly labeled with the animal's identification number with indelible ink. The serum samples are derived from a blood sample that is allowed to clot and then spun down at high speed in a centrifuge. The clear, straw-colored fluid (serum) at the top of the clot is carefully collected and placed into a separate vial. Again, this vial must be labeled with the animal's ID number. In most cases, your veterinarian will take the blood for serum samples and process those in the laboratory. For the ear notch samples your veterinarian can easily show you how to take the samples and handle them. If you put the ear notches in formalin it is very important that you handle this material safely as it can be very dangerous if inhaled or if it comes into contact with your eyes or skin. Also, the ear-notching instrument should be cleaned and disinfected between animals.

***Are there other important things to remember when handling these samples?***

All sample containers must be clearly labeled with an individual animal ID number. The sample ID's must match the paper work and the samples and paperwork must be written with ink that does not run. For refrigerated samples, ship on gel-type, frozen bags not on ice cubes.

***Where do these samples go and what is the cost?***

The samples can go to any one of the three laboratories listed below. Some general costs and considerations are listed for each laboratory. Each lab wants a certain

type of sample submitted for their specific test method. If you submit the wrong type of sample to the lab, all your work in collecting the sample may be wasted.

### **1. Tulare branch of the California Animal Health & Food Safety Laboratory (CAHFS)**

**CAHFS-Tulare**                      **Phone (559) 688-7543**  
**18830 Road 112**                      **Fax (559) 686-4231**  
**Tulare, CA 93274**

*Sample description:* Ear notch (triangle notch \_ to \_ inch per side) in zip lock bag (or whirl pack bag). Refrigerated—not frozen. Ship overnight (not for Saturday arrival).

*Technique:* Immunohistochemistry.

*Cost:* \$16.50 per 1-5 samples, i.e. \$33.00 for ten (10) samples and \$33.00 for 6 samples. Additional one time accession fee is also charged.

### **2. University of Nebraska, Lincoln, NE**

**Veterinary Diagnostic Center**                      **Phone (402) 472-1434**  
**University of Nebraska**                      **Fax (402) 472-3094**  
**Fair Street and East Campus Loop**  
**P. O. Box 82646**  
**Lincoln, NE 68501-2646**

*Sample description:* Ear notch (triangle notch \_ to \_ inch per side) in neutral-buffered formalin. Leak proof tubes are mandatory for containers. Do not hold skin samples in formalin for more than 7 days prior to submission.

*Technique:* Immunohistochemistry.

*Cost:* Accession fee: \$7.00 per each shipment (submission). First sample: \$12.00. Two (2) to 6 samples: \$20.00, multiples of 6: \$20.00/six samples.

### **3. Davis branch of CAHFS.**

**CAHFS-Davis**                      **Phone (530) 752-7578**  
**University of California, Davis**                      **Fax (530) 752-6253**  
**West Health Sciences Drive**  
**Davis, CA**

*Sample description:* serum, freshly centrifuged and refrigerated (not frozen). Ship in leak proof containers on ice bags (gel bags).

*Technique:* PCR.

*Cost:* \$22.70 for the first sample, \$5.65 per each sample after the first. Additional one time accession fee is also charged.

***What do I do with the results from the lab?***

Talk the results over with your veterinarian. There can be false positive test results and a small number of animals may need to be re-tested. Also, before making herd additions (bulls, cows, or heifers) it is a good idea to have your veterinarian review the source herd's BVD prevention plan. It would also be good to have herd replacements tested for PI status, prior to shipment. These new diagnostic tests are cost effective and quite reliable and if used properly can save your herd from many future losses.

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