

# Arkansas BVDv PI Survey

Presented by



## **Why is this survey important?**

Economically speaking beef producers should be concerned about BVDV. BVDV adversely affects both health and productivity. The losses due to transient infection are diarrhea, respiratory disease, reproductive disorders, increased occurrence of other diseases, and death. The losses from fetal infection include abortions; congenital defects; weak and abnormally small calves; unthrifty, persistently infected (PI) animals; and death among PI animals. During outbreaks of acute BVD, the losses were estimated to be \$50 to \$100 per cow in the herd.

The clinical signs of BVDV infection are highly variable, including fever, lethargy, loss of appetite, ocular discharge, nasal discharge, oral lesions, diarrhea, and decreasing milk production. The most common consequences of BVDV infection are respiratory and reproductive problems. Transmission of BVDV to the fetus at 30 to 45 days of gestation decreases conception rates and the viability of the embryo. Fetuses that become infected from 30 to 125 days of gestation and survive the infection will be born as BVDV-infected calves. The BVDV infection will persist for the life of the calf, hence the term “persistent infection,” or PI. BVDV may be shed in excretions and secretions, including nasal discharge, tears, saliva, urine, feces, milk and semen. These routes apply to both acute infections and to PI animals. BVDV may be transmitted during embryo transfer, rectal examination, and artificial insemination as well.

It is important to establish a BVD PI free herd in order to achieve reproductive efficiency as well as provide the best opportunity for growing calves to thrive and prevent further respiratory disease outbreaks that are often initiated by BVDV circulating amongst the herd.

This survey is volunteer based and is non-regulatory. This survey is to gather BVDv PI disease information that represents Arkansas and work with producers and their veterinarians to assist them in achieving the best herd health program possible through disease detection and prevention.

## **How the survey works**

To participate in the survey, you simply sample your cattle that you would like tested by collecting a 3 ml blood sample or large ear notch and sending in for analysis to Delta Livestock Diagnostics in Cherry Valley Arkansas.

Any cattle that test positive should be retested (at no cost to producer) by collecting 2 ear notch samples and sent in for PI confirmation testing to Delta Livestock Diagnostics. If the animal tests positive again they are a BVDv PI cow.

The second ear notch will be preserved and sent on to be sub-typed (at no cost to the producer) which will tell us the specific strain of BVDv they possess. This information will be compiled and can be utilized to determine your operational risks and help you along with your veterinarian make an informed decision about your disease prevention protocols here in the state of Arkansas.

### **Benefits for participating**

IDEXX is supplying all collection tubes and needles for free to customers participating in this survey. Delta Livestock Diagnostics is offering their lowest price BVDv testing price (\$3.25 per head) regardless of number of head submitted. They are offering their lowest prices on all additional testing services (pregnancy, Johne's, and BLV) to participants. If submitting blood samples these tests can be run from the same sample blood tube at the same time. Delta Livestock Diagnostics is also offering discount shipping prices through FedEx and prepaid discounted labels can be received directly from the lab.

### **How to collect samples**

Whole blood samples and large ear notch samples will be accepted for testing. Whole blood samples should be at least 3 ml and collected in a "red top" vacutainer collection tube. Blood samples should be refrigerated after collection and shipped with ice packs within a week of collection. Pregnancy, Johne's and BLV testing can also be ran from the same blood tube.

Large ear notches can be collected and placed in ear notch tubes provided. Formalin or other substances should not be put in the tube with ear notch. The ear notch samples should also be refrigerated and shipped with ice packs to Delta Livestock Diagnostics within a week of collection.

Please see sample collection instruction sheets for more information. All submissions must be sent with the 2020 Arkansas BVDv Survey Submission form.

### **More information**

For more information about the survey, BVDv resources and view results from Arkansas and other states please visit [www.bvdvtracker.com](http://www.bvdvtracker.com) . For any questions about the 2020 Arkansas BVDV PI Survey please contact Meg or Brittany.

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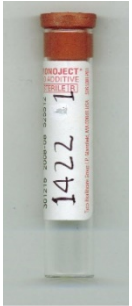
DELTA LIVESTOCK DIAGNOSTICS

**Shipping Address:**  
175A CR 324  
Cherry Valley, AR 72324

**Phone:** 870-588-4295  
**Email:** lab@deltalivestockdiagnostics.com  
**Website:** www.deltalivestockdiagnostics.com

**Deer Breed** \_\_\_\_\_ **Bison Breed** \_\_\_\_\_  
**Beef Breed** \_\_\_\_\_ **Dairy Breed** \_\_\_\_\_

Label Tubes as Illustrated



◀ **Tube number**

◀ **Animal ID**  
**2cc or more of blood**

**Office Use Only**  
Amount Enclosed \$ \_\_\_\_\_  
Log # \_\_\_\_\_

## 2020 Arkansas BVDv PI Survey

**Name:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
**Phone:** \_\_\_\_\_  
**Email:** \_\_\_\_\_  
**Report by:** Phone \_\_\_\_\_ Email \_\_\_\_\_ Mail \_\_\_\_\_  
**Date Collected :** \_\_\_\_\_

<u>PREGNANCY TEST</u> (reported same day)	<u>Price</u>	<u>Arrive By Day /Test &amp; Report Day</u>
Cattle (25 DPB or 70 DPC)	\$2.60	Fri by 12 pm
<u>DISEASE TEST</u>		
Johne's	\$3.50	Wed/Thur
<b>BVD</b>	<b>\$3.25</b>	<b>Tue/Wed</b>
BLV	\$4.00	Tue/Wed

To receive free collection supplies and discounted pricing on all test clients must participate in Part 1 and Part 2 (retesting any positives from Part 1 in 4 weeks free of charge). Those only participating in Part 1 will be billed for supplies and full price testing. Discounted shipping through FEDEX is also available. Contact Delta Livestock Diagnostics for shipping labels and more information.

**All test can be ran from 1 tube (3ml) of whole blood. Do not add formalin to ear notches.**  
**Refrigerate all samples and send with ice packs.**

Tube #	Animal ID	Days Bred	Added Test	Tube #	Animal ID	Days Bred	Added Test
1				17			
2				18			
3				19			
4				20			
5				21			
6				22			
7				23			
8				24			
9				25			
10				26			
11				27			
12				28			
13				29			
14				30			
15				31			
16				32			

**\*\*DISEASE SAMPLES MUST ARRIVE DAY PRIOR TO TESTING DATE TO BE PROCESSED THAT WEEK\*\***

**\*\*USPS and Fedex arrive daily @ 12 pm. UPS arrives daily at 3 pm.\*\***

**\*\*Orders without submission form or not properly labeled tubes will be charge \$10 and may delay results\*\***

Tube #	Animal ID	Days Bred	Added Test	Tube #	Animal ID	Days Bred	Added Test
33				68			
34				69			
35				70			
36				71			
37				72			
38				73			
39				74			
40				75			
41				76			
42				77			
43				78			
44				79			
45				80			
46				81			
47				82			
48				83			
49				84			
50				85			
51				86			
52				87			
53				88			
54				89			
55				90			
56				91			
57				92			
58				93			
59				94			
60				95			
61				96			
62				97			
63				98			
64				99			
65				100			
66				101			
67				102			

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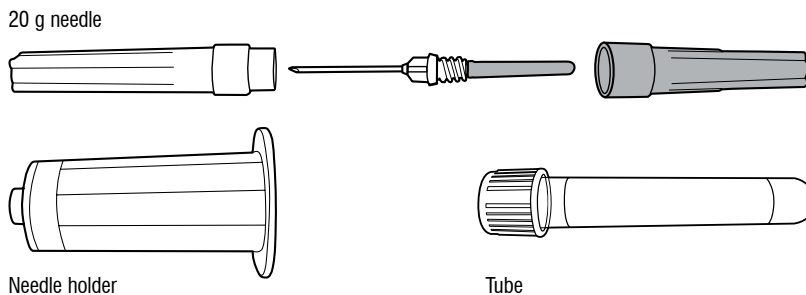
**\*\*Orders without submission form or not properly labeled tubes will be charge \$10 and may delay results\*\***

# Blood Sample Collection Kit

How to collect a blood sample from a cow's tail for diagnostic testing\*

## Supplies needed

- Blood Sample Collection Kit, including:
  - 1-inch, 20 g, double-ended needle (yellow and gray caps)
  - Needle holder
  - Sample tube (red-top or lavender-top), 2 mL
- Paper towel
- Sharps container



## Assemble kit

1. Remove the gray plastic cap from the needle. The needle is covered by a rubber sleeve; leave this sleeve in place.
2. Holding the yellow cap, insert the sleeved needle through the outside of the small end of the needle holder, and screw the needle in. When finished, the needle will be inside the holder, pointing toward the large end (figure 1).

3. Insert the tube into the large end of the needle holder, stopper first, until the stopper just touches the end of the sleeved needle.

**IMPORTANT:** Do not let the needle puncture the stopper. Puncturing the stopper will release the tube's vacuum and prevent the tube from drawing blood.

4. Pull off the yellow needle cap (figure 2), and place the needle assembly within easy reach.

Figure 1.

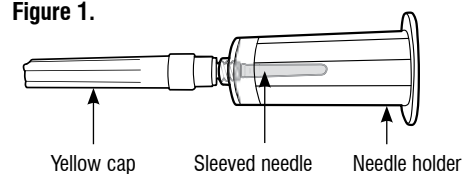
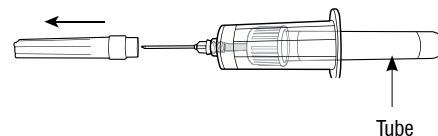


Figure 2.



## Collect the sample

1. Restrain the cow; clean the underside of the cow's tail with a paper towel.
2. Lift the cow's tail straight up, and measure up about **2 inches (7.5 cm)** from the base of the tail, staying within the groove between the two bony ridges. This is the collection site.
3. Insert the external needle into the underside of the tail, at the collection site, about 1/2 inch deep, keeping the needle **perpendicular** to the tail (figure 3).

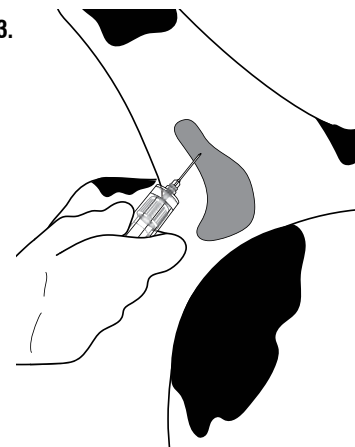
**IMPORTANT:** The external needle **must be perpendicular to the tail**. Do not angle the needle up, down, or to the side.

4. Push the tube in gently until the internal needle punctures the tube stopper. The vacuum will draw the blood into the tube.

**Note:** If no blood appears, pull the external needle back slightly (without withdrawing it from the skin), and reinsert it in a different direction until you puncture the vein.

5. When the tube is at least half full, withdraw the needle from the vein and remove the tube from the needle holder.
6. Discard the needle and yellow/grey caps into a sharps container. The needle holder can be reused, if undamaged.
7. Make sure the tube label is clean and dry; label the tube with the sample number and the cow ID.

Figure 3.



\*Contact your local regulatory authority to confirm there are no restrictions on drawing blood from an animal. Follow all test and laboratory instructions for storing and submitting the sample for testing.

# Collecting a bovine ear-notch sample

Ear-notch samples are routinely used in bovine diagnostic testing, particularly for bovine viral diarrhea virus (BVDV) tests. To help ensure accurate test results, follow the guidelines below to collect a good-quality ear-notch sample of the appropriate size.

## What you will need

- An **ear-notching tool** yielding a small (2–3 mm) or a large ( $\geq 1$  cm) ear notch (size depends on test requirements)
- Snap-cap **ear-notch tubes** (milk tubes may be used)
- **Disinfectant** for rinsing the notching tool; any of the following may be used:
  - A 10% bleach solution:  
100 mL (3 oz.) bleach in 900 mL (27 oz.) water
  - Quarternary ammonia
- Three **fluid reservoirs** to be used in this order:
  - Clean rinse water
  - Disinfectant
  - Clean rinse water

The water reservoirs should be changed after every few ear notches.

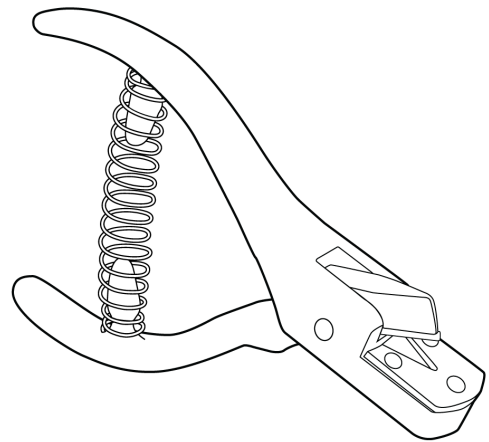
- **Paper towels** and **disposable gloves**

## Cleaning and disinfecting the ear-notching tool

1. Prepare the disinfectant and rinse water reservoirs (see above).
2. Put on disposable gloves.
3. Dip the notching tool into the first water reservoir and rinse thoroughly to remove any hair, blood, or debris.
4. Dip the notching tool into the disinfectant and then into the second water reservoir and rinse thoroughly.

**IMPORTANT:** Residual disinfectant on the notching tool can yield negative results, so thorough rinsing with clean water is always required.

5. Dry the tool with paper towels.

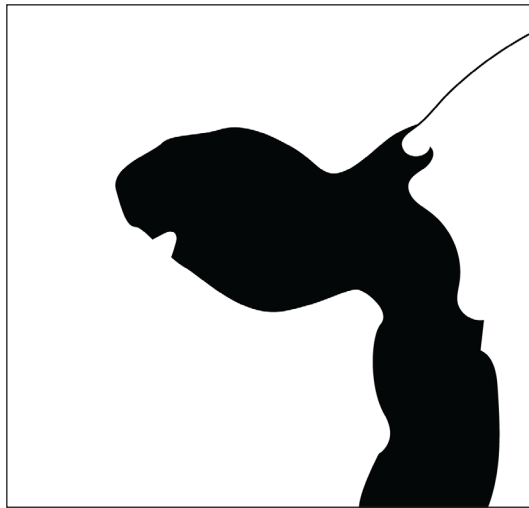
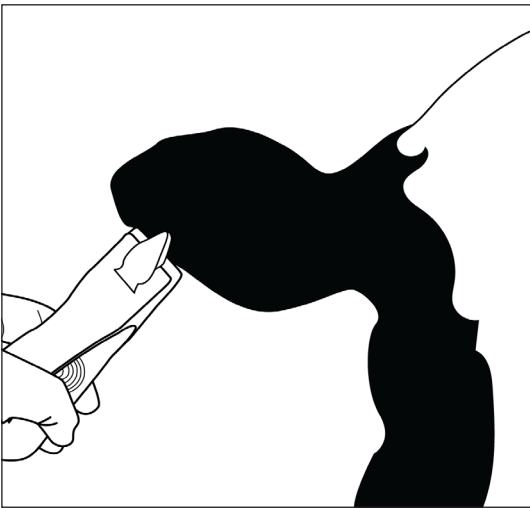


## Collecting the ear notch

1. Clean and disinfect the notching tool as described above.
2. Label the ear-notch tube with the animal ID.
3. Using the notching tool, take an appropriately sized ear notch from a clean portion of the ear.

**IMPORTANT:** The ear-notch sample must be free of dirt, feces, tattoo ink, or BVDV vaccine. You may clean dirty ear notches with clean water.

4. Place the ear notch into the labeled tube and close the cap securely.
5. Submit the ear notch for testing following your laboratory's requirements.



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