



An Ounce of Prevention

Testing is a cost-effective solution to an industry-wide BVD problem.

by Joann Pipkin

Missouri Angus breeder Mark Haden already had a strict vaccination protocol in place, yet a couple of red flags in his herd couldn't be explained.

"We had one cow that had a calf the year before that had some really oddball problems," Haden explains.

After consulting with his veterinarian, Michael Spragg, Haden was encouraged to test his herd for persistently infected (PI) bovine viral diarrhea (BVD).

"It's a commitment, but it's a one-time commitment," Haden says. "[With the test] you know where you stand, and you can move forward and really don't have to worry about it."

Haden, who manages Buck Ridge Cattle Co., a small seedstock operation near Rogersville, Mo., says PI testing is another management tool to add to your toolbox. "Like vaccinations, breeding, everything else, if you are going to produce quality animals, it's just one more step in that process."

In a study on the financial impact of BVD, veterinarian Julia Ridpath estimated BVD costs between \$35 and

\$56 per calf, leaving a \$2.3-billion-per-year imprint on the cattle industry.

Veterinarian Shaun Sweiger says feedlot research shows the disease costs \$47 to \$67 per head in pens with exposure.

In breeding animals, Sweiger says estimated losses run \$10 to \$24 per head.

BVD: a 'problem child'

BVD affects cattle at any age, diminishes production and impacts multiple body systems. First characterized in the 1940s as a disease that caused profuse, watery diarrhea in cattle, research has since found BVD to mimic AIDS in its immunosuppressive abilities.

"It allows calves to get sick from other things, such as respiratory disease and other infections," explains Sweiger. "It just sets them up for a variety of different conditions."

Sweiger, a veterinarian and president of Oklahoma-based Cattle Stats Inc., calls BVD a problem child with a mode of transmission

similar to the flu in people. Because BVD can be passed from animal to animal, commingling through fenceline contact can become an issue.

"Think about where you put your pregnant cows," Sweiger says. "The virus is very susceptible to sunlight and doesn't survive well outside the body. It's pretty much nose-to-nose contact."

Biosecurity can still be a factor in spread of the disease, with boots and vehicles being primary sources.

PI animals are the primary source for BVD problems in the cattle industry, Sweiger says. A fetus becomes exposed to BVD between Day 40 and Day 125 of gestation. Once born, the calf sheds the BVD virus its entire life, making it a PI.

Why PI test?

Looks can be deceiving. That's why testing to help identify PI animals is so important.

"You cannot tell a PI-positive calf just by looking at it," Spragg says. "A lot of PI-positive calves look just as

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healthy as the next calf. Only through testing can you know that it's negative."

Sweiger encourages cattlemen to collect an ear notch from calves early for testing to help combat the spread of BVD PI. He suggests doing that prior to breeding, before putting bulls in.

"By testing the calf crop, you now know that your calf is negative and its dam is negative as well," Sweiger said.

Spragg agrees that testing young calves is the best way to help stop BVD.

"We don't run the risk of creating more PIs if we test the calves," he says. "Then, with confidence we know we can breed that group of cows and know we are not going to be creating more PIs out of that group."

Sweiger adds that waiting until weaning time to test for BVD-PI calves really puts you behind the eight ball. "You are too late, because if you do find a PI, now you've run the risk of exposing several females in that pasture management group that will possibly be carrying PIs."

Because no test is available to determine if a cow is carrying a PI calf, waiting until the calf is born is the only alternative.

"The critical time is from birth to breeding," Sweiger says. "That's when you need to notch the calf."

Additionally, testing the calf helps a producer identify two for the price of one. "If the calf is negative, the cow is automatically negative," Sweiger says.

While vaccinating might help producers protect their herds from some diseases, vaccines are not 100% at stopping the spread of BVD PI.

"Once you have a positive in your herd, you cannot vaccinate your way out of it," Spragg explains. "Vaccinating the cow for BVD virus will help provide protection, but if that cow encounters enough virus, it will override the vaccine and still cause positives within the herd."

He adds that an "FP" on vaccine denotes fetal protection. Those vaccines provide protection, but it is not 100% effective.

"The only way to 100% know (an animal is PI-positive) is through testing," Spragg says.

When to test

With the start of the spring breeding season upon us, Sweiger offers these suggestions before turning out the bulls:

- ▶ Test all calves.
- ▶ Test all nonpregnant females without calves.
- ▶ Isolate pregnant females until they calve and then test their calves.
- ▶ Test all bulls.
- ▶ Test replacement females.

"Meet with your veterinarian to determine if your herd is at risk for exposure and establish BVD goals for your operation," Sweiger says. "Then, only bring PI-negative animals into your herd."

He adds that pregnant animals coming into the herd should be kept separate from other animals until calving. Then, test the calf to determine its PI status.

"If you've tested a calf and it's negative, there's no need to retest," Sweiger says.

The dam of a PI-positive calf should be tested. He says the cow could test negative and might not need to be culled even though her calf is PI.

What's next?

After testing is complete and PI-positive animals are identified, Sweiger says, they should be isolated from the rest of the herd. Then, the animal can be properly euthanized or slaughtered. Culling at the sale barn is not the recommended answer, he says.

"Just don't expose them to other calves," Sweiger says.

Solving BVD is an industry-wide puzzle, Sweiger says, but it all starts with the cow-calf producer.

"Unfortunately, as it goes down the chain, we can't correct the problem but we are still exposed to it," he says. "So, we have increased death loss, increased treatment cost, increased morbidity and the silent killer is in performance."

Stocker operators should also be vigilant in keeping PIs out of their operations.

"PI cattle are a major source of BVD infection, and stocker animals can become temporarily infected," Sweiger says. BVD affects cattle performance, with losses on average daily gain as much as 0.75 pounds (lb.) per head per day.

From abortions to antibiotic use, the economic losses associated with BVD PI can weigh heavy on a cow herd. With the cost to test for PI at less than \$3.50 per head, identifying PIs is very cost-effective, Sweiger says.

His advice to seedstock producers: Don't sell PIs.

"The number one benefit to PI testing is the health of the herd," Spragg says. "You have one PI-positive calf or cow, and you will be constantly battling abortions and battling sickness, unexplained sickness."

While helping to improve the overall health of your herd is reason enough to PI test, Spragg adds a second benefit comes in buyer confidence.

"People can come to your place and buy your animals with confidence that you are selling them a PI-negative bull or heifer so they won't be bringing any disease into their own herd," he says.

4 myths about BVD

Myth #1: A persistently infected (PI) calf will be thin, have a rough haircoat and be a poor performer.

Fact: Reports indicate up to 50% of PI calves will appear normal and enter an operation in excellent condition. Some PI calves might be unthrifty, but remember, PI calves cannot be visually identified.

Myth #2: Calves are PI because their dam is PI.

Fact: Research has shown that 93% of calves have dams with a normal immune response to BVD virus and are not persistently infected; 7% of PI calves' dams were PI.

Myth #3: The greatest cost associated with a PI calf is the death of the calf.

Fact: The greatest economic cost of exposure to PI animals comes by way of reproductive losses, with lower pregnancy rates, more abortions and higher calf mortality.

Myth #4: BVD won't affect my cattle because I vaccinate.

Fact: Vaccination alone does not solve BVD problems. The overwhelming amount of virus secreted by a PI calf can bombard a level of immunity that is protective under less severe exposure.

— Source: Cattle Stats LLC

"Good recordkeeping is key," Sweiger adds.

Understand what PI is and how it relates to BVD, he encourages producers. "Don't be willing to live with PIs. Don't use PIs as replacements, and commit to getting them out of your herd."

For Angus breeders like Haden, PI testing has been a positive for his operation — even with the stringent vaccination program he already had in place.

Testing for BVD PI is a tool for managing the health and for protecting the overall quality of your herd, Haden says.

"When you get that carrier in there, it's like exposing your whole herd to BVD continually at a rate that is several times higher than what just having an infected animal would be for a short period of time."

"Vaccinations are a tool to manage BVD, but don't rely on them solely," Sweiger adds. "The quicker you can get the PIs out of the herd, the better off the group is."

Haden concludes, "Every vaccination has holes in it. I'm a believer in the old adage, an ounce of prevention is worth a pound of cure."



Editor's Note: Joann Pipkin is a freelance writer and cattlemaster from Republic, Mo.