



## Dairy Herd BVD and PI Informational Overview

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Bovine viral diarrhea virus (BVD) has been with our dairy herds in the U.S. since first identified in 1946. A large range of clinical signs associated with BVD infection includes sub-clinical to severe acute disease. Noticeable signs include fever, reduced intake, respiratory and digestive symptoms, infertility, increased embryonic mortality and fetal death, mummification and abortion. Dollar loss is reflected in young stock as increased sickness, death loss, birth defects, small or weak calves, reduced performance and higher culling rates. In adult cattle suspicious clinical signs of BVD circulation include:

- Animals demonstrating non-specific fevers at time of stress
- Decreased fertility
- Increased abortions (> 3%/ year)
- DOA's

All of these adult conditions lead to reduced milk production and loss of revenue. BVD virus also lowers the cow's resistance and reduces her ability to fight off other problems including mastitis, lameness and pneumonia.

BVD control starts at the dairy operation. The virus is mainly spread from animal to animal by close contact through saliva, urine and feces. A positive bull can spread it in his semen. The main source of the virus is known to come from an animal commonly referred to as persistently infected or "PI". An animal becomes persistently infected when the calf is still in the uterus. If the cow is exposed to BVD virus during the first trimester (40-130 days) a calf can become "PI" and, once born, will shed the virus its entire life and infect other cattle. In a majority of cases, PI cattle look healthy and show no signs of illness. The only way to find PI animals is through diagnostic testing. BVD control also involves proper vaccination, biosecurity, handling and welfare management.

### Key points about PIs:

- PI animals do not all die. It is common for them to look completely normal.
- PIs that live to be breeding females can transfer the virus to other animals in the herd – they will always produce a PI calf.
- PI animals cannot be cured. They will continue to shed large amounts of virus while living. Vaccination has no effect on reducing shedding from a PI calf.
- The PI animal needs to be eliminated from the herd. Once a PI calf, always a PI calf. PI calves should be humanely euthanized.
- If a PI animal is salvageable for meat, it may be safely consumed once appropriate slaughter withdrawal from any products administered is past. BVD virus is not a human pathogen.
- **PI positive cattle should not be marketed.** We agree with the following statement.

### Statement on Disclosure of BVD PI Animals\*

The cattle industry has a moral, ethical and potentially legal obligation not to sell known diseased or damaged animals to other parties without full disclosure. Responsible disposition of animals persistently infected (PI) with bovine viral diarrhea virus (BVDV) is an important component of BVD control.

The dilemma of how to deal with known PI cattle becomes more critical as BVD testing becomes more widespread. Appropriate disposition of known PI cattle must take into account the adverse impact these cattle have on the health, welfare, and the economic return of other cattle and cattle operations they may expose to BVDV.

It is widely recognized that a PI animal is defective and once confirmed, the PI status should be thereafter disclosed – as exposure to these cattle has health ramifications for all cattle, especially those intended for reproductive purposes.

Marketing or movement of BVD PI animals in any manner that potentially exposes at-risk cattle is strongly opposed.

*\*Adapted from AVC Standards of Practice and AABP BVD PI disclosure position statement, 2006.*

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