

The Many Faces Of BVD

Arlen Mills
Capital Region

Extension Veterinarian

LEBANON (Lebanon County) — Bovine Virus Diarrhea is a serious cattle disease, causing estimated losses of up to \$150 million annually nationwide.

As the name tells us, the agent causing this disease is a virus which has the ability to change as often as the weather. The disease syndromes that we see today with BVD are much more varied than the diarrhea, now called "mucosal disease," that was first recognized years ago. In addition, the virus can affect many body systems in the infected cow or calf.

Most primary infections of cattle with the BVD virus are mild, with perhaps a mild diarrhea, fever, and inflammation of the eyes and nose. These animals usually recover in four or five days and the symptoms may not even be observed.

However, the BVD virus can cause a suppression of the immune system, which may increase the severity of diseases caused by other infections.

This immune suppression is a very significant aspect of BVD infection, allowing other infections to flourish.

Probably the most significant losses from BVD infections are due to infection of susceptible pregnant fe-

males. The virus readily crosses the placenta into the calf. While the cow's immune system may rapidly clear the infection from her own tissues, the fetus remains infected.

One of several sequelae may then develop. The fetus may die resulting in resorption or abortion. Some of these may remain in the uterus as a "mummy."

A fetus which is infected before 125-150 days of gestation which does survive will be born infected if the infection is with a type of BVD virus called "noncytopathic."

This is the "persistently infected" or PI animal that remains infected for life and continually sheds virus.

These animals are a real source of loss and frustration to producers and veterinarians as they are constantly exposing the herd to the BVD virus—these animals maintain the virus in our cattle population.

Some of these are poor-doing animals but just as many will appear normal. Until recently with the advent of some new testing methods, it was difficult to identify these PI animals. We will discuss testing in more detail later in this article.

A fetus infected 125-150 days after conception is capable of mounting an immune response to the virus infection. However, BVD virus infection of developing

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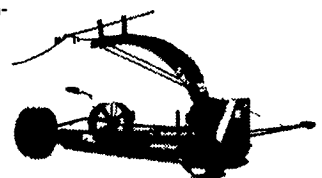
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