

LD
5655
A762
no. 225



Dairy Guidelines

COOPERATIVE EXTENSION SERVICE, V.P.I., BLACKSBURG, VIRGINIA

Series 225 - January 1969

I.B.R. and B.V.D.

VIRGINIA POLYTECHNIC INSTITUTE
AND STATE UNIVERSITY LIBRARIES

S. L. Kalison, D.V.M., Extension Specialist, Veterinary Science
T. L. Bibb, D.V.M., Assistant Professor, Department of Veterinary Science
D. F. Watson, D.V.M., Head, Department of Veterinary Science

The Diseases

Infectious bovine rhinotracheitis (I.B.R., also known as red nose) and bovine virus diarrhea (B.V.D.) are considered together because they resemble each other and frequently can be differentiated only by blood serum tests particularly if complications develop.

They are both viral diseases and the causative agents are found in the nasal and eye discharges, saliva, and feces of infected animals that may or may not be showing symptoms. The viruses enter the animal's body through the ingestion of contaminated feed and water.

The major means of spread are through the movement of infected cattle, the addition of purchased infected animals to a herd, people going from an infected to a non-infected herd without using, washing, and disinfecting rubber footwear, and vehicles proceeding from farm to farm.

Symptoms

Cattle of all ages may be affected and the symptoms will vary in number and intensity, depending upon the severity of the attack. Both diseases may be accompanied by temperatures of up to 106°, loss of appetite, decreased milk production, and rapid weight loss. Respiratory symptoms such as discharges from the eyes and nose, difficult and rapid breathing, coughing and a red inflamed nose are frequently seen. Severe diarrhea and dehydration may occur. The genital system may be involved with pustules developing in the vulva and vagina accompanied by severe pain. Bulls used in natural service may also develop pustules in the penis. Pregnant animals may abort, particularly, during the latter stages of pregnancy. Inflammation of the eye sometimes occurs and often is mistaken for pinkeye.

While I.B.R. tends to involve the upper respiratory tract and B.V.D. is considered to be more an infection of the digestive tract, symptoms are very similar. Death losses are usually low but the number of cattle infected in an outbreak may approach 100%.

Prevention and Control

Keep the chances of introducing the disease to your herd at a minimum. Isolate all cattle for at least 30 days prior to adding them to the herd. Keep visitors to a minimum. Anyone entering the premises should wear rubber footwear and be required to wash and disinfect it before and after entrance. General cleanliness and sanitation are essential.

Vaccines that offer protection against both of these diseases are available. Some products are designed to be used against either I.B.R. or B.V.D., some against both, and some against other diseases in addition to I.B.R. and B.V.D. The majority of these vaccines are attenuated or modified live virus products. This requires that they be handled carefully and properly or their effectiveness is destroyed. It takes 14-21 days after vaccination for cattle to develop sufficient immunity to withstand exposure to I.B.R. or B.V.D. The administration of these vaccines to pregnant animals can cause abortion, so do not vaccinate cows in calf.

When and how often to vaccinate, what product to use, and the method of administration will depend upon the existing situation and varies from farm to farm. If either of these diseases has been diagnosed in the herd it may be necessary to use immune serum on baby calves to give immediate protection. These calves would be vaccinated at 3 to 6 months of age and revaccinated 3 weeks prior to breeding. All open cows would be vaccinated during the time between 30 to 35 days after calving and 3 weeks before breeding. This program would most likely have to be continued for a number of years.

If these diseases have not been a problem in your herd, vaccination may be debatable unless they are prevalent in the area, cattle are being moved in and out of the herd frequently, or for some other reason. Vaccine administered to animals after exposure but prior to the appearance of symptoms may increase the severity of the infection.

The veterinarian knows the existing situation in his locality best. He can best advise you as to whether to vaccinate and what program of prevention and control to follow.

The parainfluenza 3 virus (PI 3) is frequently associated with I.B.R. and B.V.D. as well as shipping fever. It is well to vaccinate against this virus when vaccinating against the other 2 diseases.