IBR -- Infectious Bovine Rhinotracheitis (Red Nose)

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IBR—
Infectious Bovine Rhinotracheitis
(Red Nose)
Infectious bovine rhinotracheitis (IBR) was first recognized as an acute respiratory disease of beef cattle in Colorado feedlots, but is now seen in cattle in nearly every state. Although most often diagnosed in feedlot cattle, this virus disease is not limited to beef or feeder cattle. There is no apparent difference in susceptibility between breeds, sexes, or ages. IBR may occur during any season of the year but is more frequent in the fall and early winter when there is greater movement of cattle.

Forms of IBR. First identified as a disease of the respiratory tract, IBR virus is now known to cause other diseases. Infectious pustular vulvovaginitis (IPV) is a genital form of the infection. IBR is the most commonly diagnosed cause of abortion in cattle in South Dakota.

The virus also infects the eyes of cattle causing a conjunctivitis which may be mistaken for pink eye (see FS 506). Occasionally the brain and its coverings are invaded by the virus, causing encephalitis (inflammation of the brain). Calves to 3 months of age sometimes contract a generalized infection with IBR virus which frequently results in death. The respiratory form may or may not accompany any of these other forms of the infection.

Transmission. The disease is readily transmitted by infected cattle. Cattle that recover from infection may harbor the virus in the respiratory tract, serving as carriers and as sources of infection for over 3 months. IPV can also be transmitted by breeding.

Symptoms. With the respiratory type of IBR, cattle have a temperature of 104 to 108 degrees and a nasal discharge. This discharge may contain pus and flecks of blood. Inflammation involving the nostrils and muzzle gave rise to the name “red nose.” Sick animals go off feed. Coughing, labored breathing, conjunctivitis, salivation, and diarrhea are other symptoms which may be seen. A few to nearly 100% of animals in a herd may become infected. The acute phase of respiratory IBR lasts only a few days, but a persistent respiratory problem may continue for several weeks. The death rate in these outbreaks is usually 5 to 10% and is generally caused by the secondary bacterial infection which occurs in tissue weakened by the virus.

Infectious pustular vulvovaginitis can affect heifers, cows, and bulls. The degree of reaction varies in infected herds. Usually IPV begins with fever, frequent urination, swelling of the vulva, and a vaginal discharge. Bulls may have lesions on the penis and prepuce. The infection generally persists in a herd for about 2 weeks.

Conjunctivitis (eye form of IBR) may occur with or without respiratory symptoms. In eye infections affecting several animals particularly in late fall and winter months, IBR should be suspected.

Abortions due to IBR may result from natural infections or from misuse of IBR vaccine in pregnant animals. If a large percentage of the brood cows in a herd are immune to IBR the abortion loss may be small, however where a large number of the cows are susceptible to IBR, abortion losses may exceed 50%.

Brain infections and general infections in young calves due to IBR have been less frequently diagnosed than other forms.

Diagnosis. The diagnosis of IBR presents some difficulties in differentiation from other diseases. Consult a veterinarian immediately if IBR is suspected. For a definite diagnosis, exacting laboratory procedures involving isolation and identification of the virus or serum neutralization tests are required. In cases of abortion the aborted fetus and the placenta should be collected for submission to a diagnostic laboratory. Your veterinarian is familiar with collection, preservation, and shipment of appropriate specimens to the laboratory for diagnostic tests.

Prevention. Modified virus vaccines are produced for use in prevention of IBR. Special care should be taken in their use, since they are “live” vaccines. They should not be used on pregnant animals or those in
contact with pregnant animals. Protective immunity requires 10-14 days after vaccination and lasts several years. Protection of all animals by vaccination should not be expected. The routine vaccination of all cattle going into feedlots has become a common procedure. In South Dakota, vaccination of all heifers between 1 year of age and breeding is recommended. There is no specific treatment for the disease.