Boehringer Ingelheim

Technical Bulletin

Boehringer Ingelheim Vetmedica, Inc.

BVDV Persistent Infection Increase Costs

Key Points

Cattle Persistently Infected with Bovine Viral Diarrhea Increase Mortality, Morbidity, and Treatment Expenses in Feedlots

- Cattle making some contact with a calf persistently infected (PI) with bovine viral diarrhea virus (BVDV), either in the same pen or in an adjacent pen, were 25 to 33% more likely to be treated for respiratory disease than a calf with no immediate contact with a calf PI with BVDV.

- Although calves PI with BVDV represent a small percent of the total cattle population, they can adversely impact treatment costs in a feedlot.

Study One Design

Investigators	Guy H. Loneragan, West Texas A&M University Daniel U. Thomson, Cactus Feeders Donald L. Montgomery, Texas A&M Veterinary Diagnostic Laboratory Gary L. Mason, Colorado State University
Study animals	4000 feedlot cattle in two groups of 2000
Procedures on arrival	Immunohistochemistry performed to identify calves PI with BVDV.
Procedures on treatment or death	Additional skin samples. Immunohistochemistry tests determined if an animal was PI with BVDV.

Study Two Design

Investigators	Guy H. Loneragan, West Texas A&M University Daniel U. Thomson, Cactus Feeders Donald L. Montgomery, Texas A&M Veterinary Diagnostic Laboratory Gary L. Mason, Colorado State University
Study animals	1300 chronically ill feedlot cattle that did not respond to antibiotic treatment in a feedlot hospital. These calves came from seven feedlots and were housed in a convalescent feedlot.
Procedures on arrival	Skin biopsies

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The Bottom Line

- Calves PI with BVDV represent a small percent of the total cattle population. In study one, skin biopsies showed 0.25% of yearling calves PI with BVDV in the first group of calves delivered to a feedlot and 0.16% PI with BVDV in the second tested group.

- Just one calf PI with BVDV, continually shedding virus, appears to increase morbidity and treatment costs of those calves coming in contact with the persistently infected individual. Cattle coming into contact with a calf PI with BVDV, either in the same pen or in an adjacent pen, were 25 to 33% more likely to be treated for respiratory disease than calves without immediate contact with a calf PI with BVDV. Of 1300 calves, animals with treatment refractive disease, i.e. chronics, 2.6% were diagnosed as being persistently infected with BVDV.

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- **These studies suggest the need for an intensive effort to prevent fetal infection that results in calves persistently infected with BVDV**.