

Incidence of Agents in Feedlot Fatalities*

Key Points

Results of a Survey of Infectious Viral and Bacterial Agents in the Lungs of Feedlot Deads May 2002 through May 2003

- Morbidity for respiratory disease May 2002 - May 2003 was 14.7%.
- Mortality rate for respiratory disease was 0.7% of a total of 1.3% for all causes.
- *Mycoplasma* species was present in 70%; **72% of those were *Mycoplasma bovis***.
- *Mannheimia haemolytica* was isolated from 28.2%.
- *Pasteurella multocida* was present in 28.6%.
- *Haemophilus somnus* was found in 10.5%.
- *Arcanobacterium pyogenes* was found in 32%.
- *Salmonella* species was present in 0.4%.
- Many of the lungs had mixed infections due to various combinations of the bacteria listed above.
- BVD virus was identified in 9.8%; IBR virus was identified in 1.95%.
- Of 115 cases submitted, 5.2% were persistently infected with BVD.*

Study Design

Date	May 2002 – May 2003
Location	Large commercial feedlot in Oklahoma panhandle
Study animals	Approximately 270 animals that died following a history/diagnosis of respiratory disease.
Procedure	Lung tissue from dead cattle sent to Oklahoma State University laboratory for analysis by Dr Robert Fulton, Dr Roger Panciera, and laboratory personnel. Dr Julia Ridpath, NADC, did BVD sequencing and subtyping. <i>Mycoplasma</i> species were identified by University of Nebraska Department of Veterinary Science.
Study results	Dr Robert Fulton presented information at December 2003 Academy of Veterinary Consultants meeting.

Complete results of this study are published in ACA proceedings, Volume XXXI, No 3.

* Not all cases were submitted to BVD PI testing.

Other Interesting Findings

Histopathology was used to categorize lung lesions in categories of acute, subacute, or chronic.

Over 50% of the *Mannheimia haemolytica* isolates were from acute lung lesions.

Just less than 20% of *Pasteurella multocida* isolates were from acute lung lesions.

Haemophilus somnus was found in some acute lesions, but most often in the chronic lesions.

Mycoplasma species were found most in subacute and chronic cases.

Calves with *Mannheimia hemolytica* got sick sooner.

Pasteurella multocida isolates were from animals that had been treated 3.4 times;

Mannheimia haemolytica isolates were from animals treated 2.8 times.

Haemophilus somnus was found more in calves treated early; however, the calves took longer to die.

Mycoplasma was found in calves that had received more than average number of treatments.

Calves that were PI BVD were treated an average of 4.3 times; whole group was treated an average of 2.8 times.

PI BVD calves died between day 28 to day 81. Some were sick as early as four days after arrival. BVD PI calves were often infected with all of the bacteria isolated.

The Bottom Line

- BVD persistently infected calves increase respiratory treatment costs.
- Mycoplasma bacteria was isolated from 70% of respiratory mortalities.
- BVD virus was the predominant virus found in post-mortem samples from cattle that died due to respiratory disease.