

Bovine Respiratory Pathology

University of Illinois Veterinary Diagnostic Laboratory - Bovine Respiratory Disease Workup

- Cost of workup - \$95
- 1-4 animals
- Necropsy and histopathology
- Bacteriologic culture – lung, LN, etc
 - *Haemophilus somnus* with special media
- Mycoplasma – lungs – PCR and RFLP
- Virus isolation – lung, LN, trachea, spleen
 - IBR, BRSV, BVD, PI-3 and others as needed

Bovine Respiratory Disease Workup (cont)

- FA
 - Trachea for IBR
 - Lungs – BRSV and PI-3
- PCR – BVD
- IHC – lungs for BRSV
- Serologic examination – not included in standard package

Ruminant Respiratory Pathology

■ Upper Respiratory Diseases

- Noninfectious Disease
- Infectious Diseases

■ Lower Respiratory Tract (Lung)

- Infectious Disease
- Noninfectious Diseases

Bovine Respiratory Pathology

■ Upper Respiratory Diseases

■ Noninfectious Disease

- Atopic rhinitis
- Laryngeal/tracheal edema
- Laryngeal contact ulcers

■ Infectious Diseases

- Viral
- Bacterial
- Mycotic

Nasal Granuloma (atopic rhinitis)

- Bovids in Australia (southeast), UK and S. Africa
- Polypoid nodules with eosinophils and mast cells
- Type I, III and IV hypersensitivity involved
- Infectious differentials
 - Mycetomas
 - Rhinosporidiosis
 - Schistosomiasis

Laryngeal/Tracheal Edema

- Laryngeal edema
 - Acute interstitial pneumonia
 - Obstructs lumen leading to asphyxiation
- Tracheal edema
 - “honker syndrome”/tracheal edema of feedlot cattle”
 - Unknown cause, usually summer
 - Edema and hemorrhages mid-cervical region and caudally to bifurcation
- Pharynx – drenching gun injury – capsule deposition

Laryngeal Contact Ulcers

- Common in feedlot cattle
- Cause – combination of stress (vocalization), environmental factors and viruses?
- Pathology
 - Circular uni- or bilateral ulcers
- Complications
 - Necrobacillosis
 - Papillomas
 - Chondritis

Bovine Respiratory Pathology

■ Upper Respiratory Diseases

■ Infectious Diseases

- Bacterial
- Viral
- Mycotic

Calf Diphtheria (Necrobacillosis)

- Feedlot cattle, sheep
- Secondary to viral infection or trauma
- Etiologic agent
 - *Fusobacterium necrophorum*
- Pathology
 - Tongue, larynx, pharynx, trachea
 - Elevated necrotic plaques, ulceration