The Wildlife Intersect

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Unified Incident Command
Surveillance Plan for Highly Pathogenic Avian Influenza in Wild Migratory Birds in the United States
Viral disease killing hundreds of deer in the region

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Emerged as a significant disease of dairy cattle in the US in the mid-1990s; other countries and sheep shortly thereafter
What Do We Know About Digital Dermatitis?

2007 NAHMS Survey:

– Present in 70% of dairies nationwide
– Responsible for 50% of lameness cases within dairies
Bovine DD lesions

- Papillomatous digital dermatitis, Hairy heel warts, strawberry warts, Mortellaro disease
- Circular to oval distinct region
- Foul smell
- Hairless, mature lesions can have keratin-like protrusions
- Moist, prone to bleeding when probed
- Extremely painful granular tissue
Identification of Spirochetes Associated with Contagious Ovine Digital Dermatitis

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ABSTRACT

Spirochetes of Dermatitis in T. pyogenes, remaining culture. Medium/TREP. Abstract

Bovine digital dermatitis and severe virulent ovine foot rot: a common spirochaetal pathogenesis.

A novel spirochaete was isolated from a case of severe virulent ovine foot rot (SVORF) by immunomagnetic separation with beads coated with polyclonal anti-treponemal antiserum and prolonged anaerobic broth culture. The as-yet-unnamed treponeme differs considerably from the only other spirochaete isolated from ovine foot rot as regards morphology, enzymic profile and 16S rDNA sequence. On the basis of 16S rDNA, it was most closely related to another unnamed spirochaete isolated from cases of bovine digital dermatitis in the UK, raising the possibility of crossspecies transmission. Further studies are essential to establish the exact role of the spirochaete in the bovine disease and its potential as a potential vector for the causation of the disease.
Codd vs. TAHD

Photo by Cliff Wheeler
CODD vs. TAHD
CO DD vs. TA HD

Chronic Wasting Disease of Deer, Elk, & Moose

• Transmissible spongiform encephalopathy (TSE), caused by prions

• Other TSE’s
  • Scrapie
  • Bovine spongiform encephalopathy (BSE) “Mad Cow Disease”
Chronic Wasting Disease of Deer, Elk, & Moose

• Long incubation (> 12 months)
• Shed in saliva, urine, feces
• No good live-animal test
• Prions from infected carcasses persist in the soil for years
• No treatment or vaccine
The Wildlife Intersect

• Very limited tools for managing disease in wildlife
  • Diagnostic challenges
  • Vaccines and treatments generally not available
  • Limited management interventions

• Prevention-Prevention-Prevention!