Biosecurity of Anaplasmosis

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Biosecurity of Anaplasmosis

• Prevent entrance of disease into herd
• Control disease within herd
• Prevent spread of disease to other herds
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• What are your goals?
• How much risk are you willing to assume?
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• There is not just one right answer!
• Must find what works best in your situation
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- Herd plan depends on in-herd prevalence
  - Testing
  - Determines aggressiveness of plan
  - Helps document valid VCPR
  - Helps document need for control as needed for VFD
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- Animals of particular concern
  - Breeding stock from non-endemic area added to herd
  - Breeding stock from endemic areas moved to non-endemic area
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• Seedstock herd considerations
  – Serologic status of animals sent to other states or bull studs
  – Active infection status of animals moved to non-endemic areas
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• Quarantine
  – 30-45 days

• Testing
  – Elisa
  – PCR
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• Chemosterilization
  – .5 mg/lb/day for 120 days
  – 2 mg/lb/day for 80 days
  – PCR negative at 50 days
  – ELISA negative at 140 days

• IF NOT DEALING WITH RESISTANT STRAIN

• Legalities of using CTC for chemosterilization
  – Labeled for “control of active infection of anaplasmosis”
  – Not labeled for “elimination of carrier state of anaplasmosis”
  – 2 mg level must be fed in mineral and must use Aureomycin
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• Can we have a negative herd in Kansas?
• Should we?
• Is it practical?
  – Commercial herd: No
  – Seedstock herd: It depends
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• Colostral immunity
  – 3% of calves infected before 1 year of age
    • Infected in-utero?
  – 82% of calves born to seropositive cows are seropositive in first 3 months of life
  – These calves become seronegative and found free of infection by blood inoculation

Maas, AJVR 1986
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• Tools available for use
  – Vector control
  – Vaccine
  – Antibiotic
  – Testing
  – Other
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• Vector control
  – Horse fly
  – Deer fly
  – Stable fly
  – Ticks
    • Burning
  – Needles
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• Vaccine
  – Provisional use vaccine, not federally licensed
  – Killed vaccine
  – One strain
  – Cross reaction with other strains
  – Does not prevent infection
  – Reduces clinical signs
  – Requires two doses the first year, one in subsequent years
  – Cost
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• Assumptions for example protocols
  – FDA will allow “control” to include “prevention”
  – Positive Elisa and PCR results will document infection
  – 25% prevalence
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• Herd protocol 1
  – Document prevalence
  – CTC .5 mg/lb in mineral during vector season
  – Vector control
  – Approximate cost of single-needle injection, diagnostics, medicated mineral for 120 d, insecticide treatment, and terrestrial vector control:
    • Year 1: $36 to $41/cow
    • Subsequent years: $29 to $34/cow
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- Herd protocol 2
  - Document prevalence
  - Vaccinate replacement heifers between weaning and breeding (2 doses)
  - Vaccinate purchased cows and bulls prior to vector season (2 doses)
  - CTC .5 mg/lb in mineral during vector season
  - Vector control
  - Approximate cost of single-needle injection, diagnostics, medicated mineral for 120 d, insecticide treatment, vaccination, and terrestrial vector control:
    - Year 1: $39 to $44/cow
    - Subsequent years: $31 to $36/cow
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• Herd protocol 3
  – Vaccinate replacement heifers between weaning and breeding (2 doses)
  – Vaccinate purchased cows and bulls prior to vector season (2 doses)
  – Vaccinate cows prior to vector season (2 doses)
  – Annual booster
  – Vector control
  – Approximate cost of single-needle injection, insecticide treatment, vaccination, and terrestrial vector control:
    • Year 1: $41 to $46/cow
    • Subsequent years: $34 to $39/cow
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• Questions?

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