The Best Part of Waking up?

DIGITAL COW
BRITTANY MCHALE, DVM, MPH
ANATOMIC PATHOLOGY RESIDENT
HISTORY

• 111 adult mixed-breed cattle
• Southern Brazil
• 110 acres of new pasture
HISTORY CONTINUED

- Anorexia
- Staggering gait
- Incoordination
- Sternal recumbency
- Death (11 cows)
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NECROPSY FINDINGS

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ANCILLARY TESTING

• Inspection of the pasture revealed heavy infestation by *Senna occidentalis*

• The referring veterinarian reported that cows had been feeding on these plants
SENASA OCCIDENTALIS CONT’D

• Annual shrub
• Spring and summer
• Main toxic component: Seed
SENNA OCCIDENTALIS

- *Senna occidentalis* (coffee senna) is the most common cause of skeletal myonecrosis in cattle in southern Brazil
- Leads to outbreaks of high mortality rates
- Occurs naturally in cattle, pigs, wild boar, and horses

http://holidaymapq.com/map-of-brazil.html
Senna in the USA

http://www.cabi.org/isc/datasheet/11450
Polyphasic Changes

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COMPARATIVE PATHOLOGY

MONOPHASIC SKELETAL MUSCLE CHANGES

- **Coffee senna** (*Senna occidentalis*): Adult cattle and goats
- **Coyotilla** (*Karwinskia humboldtiana*): Adult cattle and goats, pigs, horses
- **Ionophore**: Horses are very susceptible
- **Malignant hyperthermia**: Pigs

POLYPHASIC SKELETAL MUSCLE CHANGES

- **Nutritional myopathy**: Cattle, sheep and pig
- **Canine X-linked muscular dystrophy**: Golden retrievers, Due to absence of sarcolemmal dystrophin
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REFERENCES

