Veterinary Medical Diagnostic Laboratory
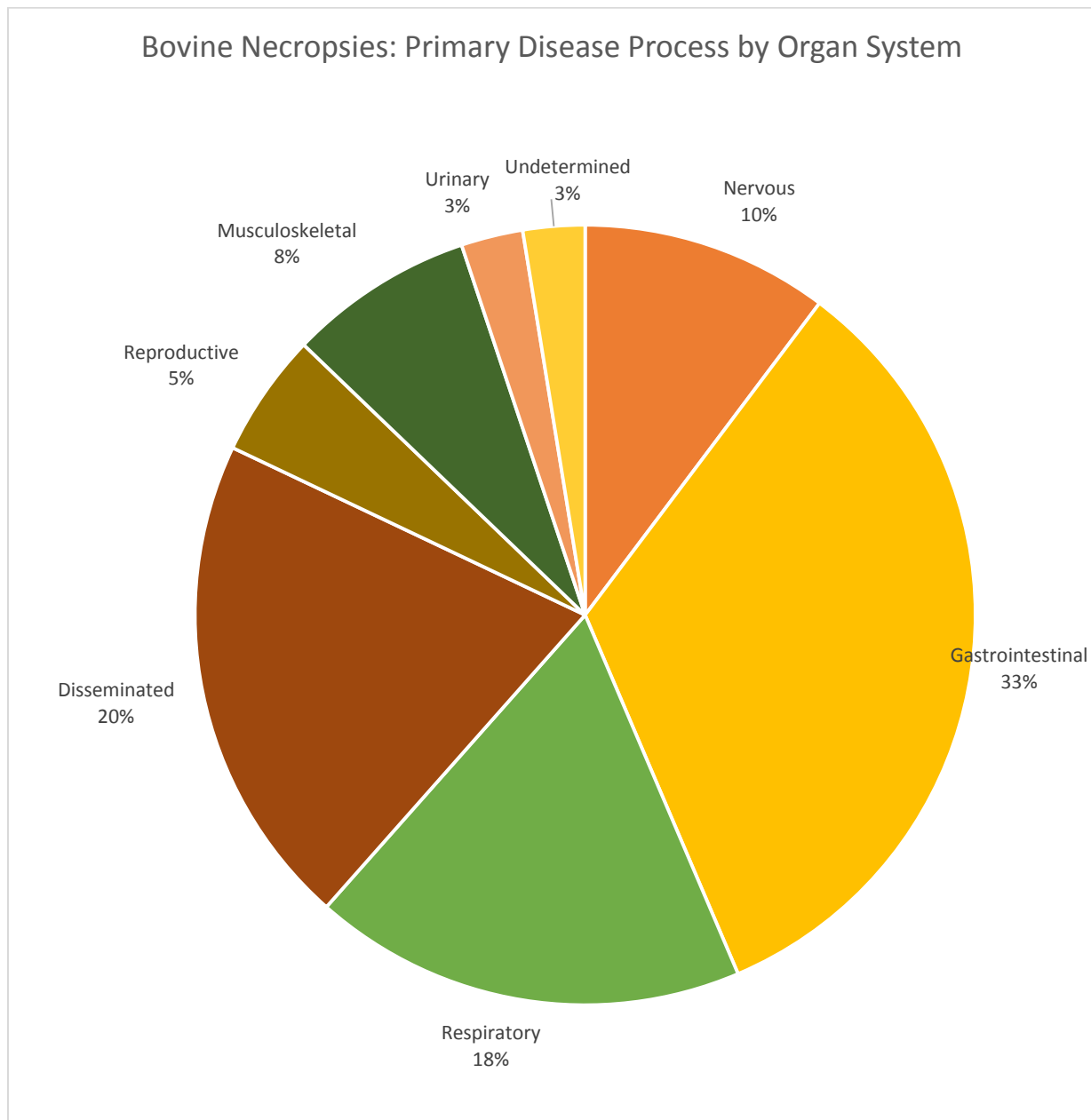University of Missouri

Q2 2019 Bovine Necropsy Summary

Thirty-nine bovine necropsies were performed at the MU VMDL between April 1st, 2019 and June 30th, 2019. A summary of the primary disease process, by organ system, is presented in the graph below. Details of the specific etiologies identified for major categories are described on the next page.

Bovine Necropsies: Primary Disease Process by Organ System

- Urinary 3%
- Undetermined 3%
- Nervous 10%
- Musculoskeletal 8%
- Reproductive 5%
- Disseminated 20%
- Respiratory 18%
- Gastrointestinal 33%

Central Nervous System:

All four cases of central nervous system disease were morphologically described as encephalitis. In two of the cases (50%), *Listeria monocytogenes* was identified as the etiologic agent responsible by immunohistochemistry. No specific etiology was identified in the other two cases.
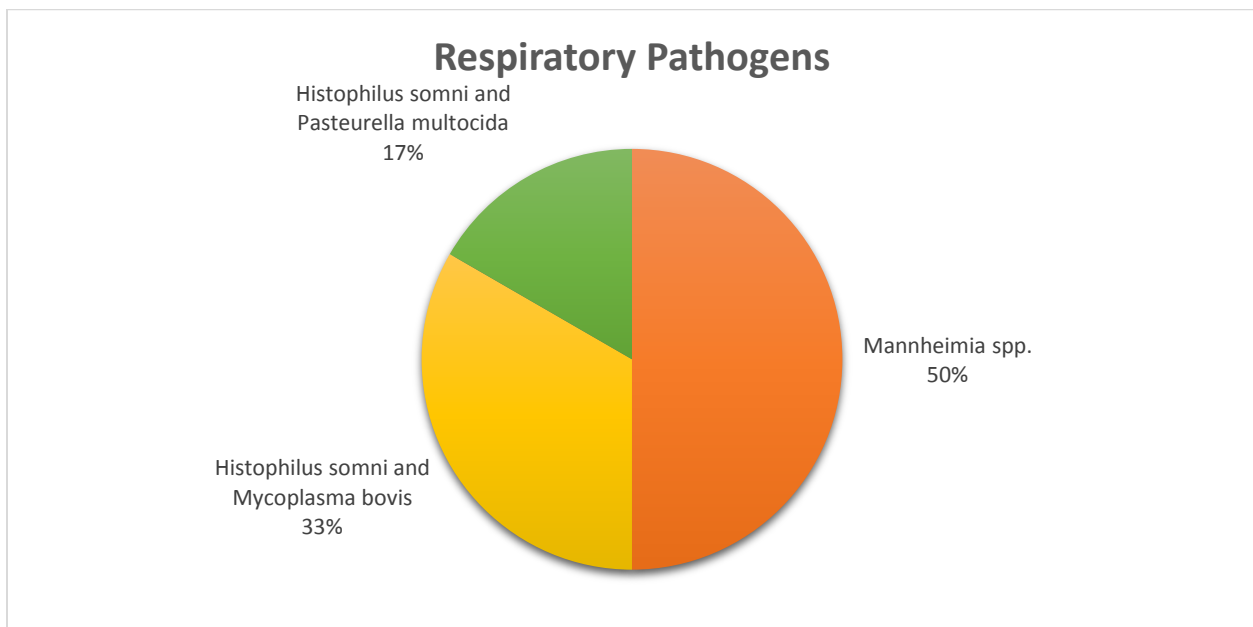
Gastrointestinal System:

Seven of the thirteen cases involving the gastrointestinal system were morphologically identified as enteritis and two cases were identified as ruminitis. Both cases of ruminitis were due to ruminal acidosis. Two of the cases were diagnosed as traumatic reticuloperitonitis/pericarditis (hardware disease) based on gross necropsy examination.

Etiologic agents responsible for enteritis were as follows: *Clostridium perfringens* (suspect), Bovine Coronavirus, Johne's Disease (*Mycobacterium avium* subsp. *paratuberculosis)*, Coccidia, *Cryptosporidium*, hemolytic *E. coli*, and trichostrongylus nematodes. No single pathogen had a high prevalence in this data set.

Respiratory System:

Bacterial etiologies were identified for six out of the seven respiratory disease cases. No viral respiratory pathogens were identified, however, one of the animals was concurrently persistently infected with Bovine Viral Diarrhea Virus. Specific bacterial etiologies are shown in the graph below.

Respiratory Pathogens

- Histophilus somni and Pasteurella multocida 17%
- Mannheimia spp. 50%
- Histophilus somni and Mycoplasma bovis 33%

Disseminated Infections:

Cases were categorized as disseminated when hematogenous spread was likely due to inflammatory lesions present in multiple organs. Specific etiologic agents were identified in two out of eight cases of disseminated infection. One was fungal and the other was bacterial (*Mannheimia* spp.).

Please feel free contact us if you have any questions about this data set.