



“Evaluation of the prevalence and characteristics of *Clostridium difficile* in beef cattle”

PREVALENCE OF CLOSTRIDIUM DIFFICILE IN BEEF CATTLE

PROJECT NO.: 0008-014

RESEARCH INSTITUTION: University of Guelph
(Ontario Veterinary College)

LEAD RESEARCHER: Dr. Scott Weese

Objectives: To determine whether:

1. *C. difficile* is present in beef cattle arriving at feedlots,
2. *C. difficile* is present in beef cattle arriving at packing plants, and
3. *C. difficile* strains found in beef cattle are also found in retail meat samples or infected people.

Background: *Clostridium difficile* is a bacterium that can cause diarrhea in people. It is difficult to culture and isolate, and is resistant to many antibiotics. It has also been found in both healthy and scouring dairy calves, as well as retail meat. It is unknown how common *C. difficile* is in cattle, whether it causes cattle to become sick, or whether the same strains of *C. difficile* are present in cattle and humans.

These researchers plan to collect fecal samples from feeder cattle at the start and end of the feeding period. Samples will be cultured to determine if *C. difficile* is present, and whether it is transmitted among animals. Individual feedlot records will be compared among infected and uninfected cattle to determine whether *C. difficile* is more common in sick cattle, and whether management factors affect the risk of animal-to-animal spread. Strains found in cattle will be compared to strains isolated from retail

meat and infected people. This project is scheduled to be completed in 2011.

Implications of the Research: Determining whether cattle carry the strain(s) of *C. difficile* that pose a risk to humans, or whether *C. difficile* causes illness in cattle will help assess whether this is an emerging pathogen of concern, or whether it is just one of many bacteria normally found in the digestive tract of healthy cattle.



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