Shiga-toxigenic *Escherichia coli*, such as *E. coli* O157:H7, are food-borne zoonotic pathogens that can cause severe illness and death in humans. The gastrointestinal tract of ruminant animals has been identified as a primary habitat for *E. coli* O157:H7, and in cattle the terminal gastrointestinal tract appears to be a primary site for colonization. This pathogen has been found in cattle feces, on cattle hides, and in the production environment, and transmission to humans has occurred as a result of consumption of contaminated ground beef, water, and produce. Interventions to reduce the pathogen at beef harvest have significantly reduced the occurrence of the pathogen, but outbreaks and recalls due to the pathogen still occur for beef products. Interventions before harvest in the feedyard have had little success, but critical control points for implementing interventions are limited compared with the beef plant. The percentage of animals shedding *E. coli* O157:H7 in the feces can be highly variable from pen to pen, and the levels in the feces can vary from animal to animal. Animals colonized and shedding *E. coli* O157:H7 at high levels are a small fraction of animals in a pen, but are important source for transferring the pathogen among the penmates. Recent research has indicated that diet may greatly influence the shedding of *E. coli* O157:H7. In addition, diet can influence the microflora composition in the feces. However, little is known about the interaction between the indigenous microflora and fecal shedding of *E. coli* O157:H7. Understanding the influence of indigenous microflora on the colonization and shedding of *E. coli* O157:H7 will provide an avenue for intervention in the preharvest production environment not yet exploited.

**Key Words:** Shiga-toxigenic *E. coli*, pathogens, feces