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Many microorganisms call the gastrointestinal tract of a cow home. With the growing use of antibiotics in the field of agriculture, it is very important to understand the effects of antibiotics on the microorganisms in the rumen. In this study we examined the effect of the antibiotic Spectramast LC on the indicator bacteria species *E. coli*. Fresh fecal samples were obtained from Holstein cattle on and off Spectramast LC. Samples were then diluted and placed on Mueller Hinton plates. Blank antibiotic disks were in Spectramast LC and placed in quadrants on the plate, and after 24 and 48 hours the zones of inhibition were measured. Preliminary results indicate a significant effect of Spectramast LC on the growth of *E. coli*. Implications for cattle health will be discussed.