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Project Title: **Effectiveness of an Increased Dose of Bovamine Compared to a Lower Dose to Reduce *Salmonella* in Fed Cattle**

Presenter: **Terry Arthur**, Getahun Agga, and Dayna Harhay
Presenters email address: Terrance.Arthur@ars.usda.gov
Mailing address: US Meat Animal Research Center
State Spur 18d
Clay Center, NE 68933

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Objective: To examine the effect of increasing the probiotic dose from Bovamine® to Bovamine® Defend™ on the prevalence of *Salmonella* in pen environments, fecal samples and subiliac lymph nodes of fed cattle.

Experimental Design & Analysis:

Approximately 2,200 steers were placed in a feedlot in BIFSCo region 3 in March and early April of 2014. Prior to processing, treatments were randomly assigned to 20 pens. Cattle were fed for approximately five months until harvest. Ten pens were considered as "control" and their ration was supplemented with the probiotic Bovamine® at a dose of 10e6 CFU per head per day. The other ten pens were considered as "treated" and their ration was supplemented with the probiotic Bovamine® Defend™ at a dose of 10e9 CFU per head per day. Pen surface material and water troughs were sampled from all pens when cattle were placed and at reimplant. Hide and fecal swabs were collected from 24 head from each pen when cattle were placed and at reimplant. At harvest, fecal swabs and both subilliac lymph nodes were collected from 24 head from each pen at the processing plant. All samples were processed for *Salmonella* concentration and prevalence.

Key Results:

There were no weight differences observed at reimplant or for final weights. Carcass weight was not affected by treatment. There were no differences in *Salmonella* prevalence for hide, fecal or soil samples at reimplant. There was no difference in *Salmonella* prevalence for fecal or lymph node samples at harvest.

Industry Application:

This study provides information to beef producers regarding the efficacy of Bovamine® as compared to Bovamine® Defend™ in reducing *Salmonella* associated with feedlot cattle.

Figure 1. *Salmonella* prevalence in subiliac lymph nodes by treatment group