

Dynamics and Significance of Mastitis in Beef Cows

Leo L. Timms, DVM

*4 Kildee Hall, Iowa State University
Ames, IA 50011*

The greatest single factor affecting calf preweaning weight gains is milk production by the dam. Mastitis is the most costly disease in dairy cattle, and has been shown to significantly decrease milk quantity and quality. Mastitis data in beef cattle is limited and dated and may not reflect mastitis effects under modern selection and management strategies. A review of literature showed prevalence of mastitis averaging 35% of cows (range 11.9 - 41%) and 17% of quarters (range 8 - 27.5%) infected with major and minor pathogens. Predominant organisms isolated (in order of highest prevalence) include coagulase negative staphylococci, *Corynebacterium bovis* (1 study) and *Staphylococcus aureus*. Most studies show no significant decrease in ADG or 205 day adjusted weaning weights between calves nursing uninfected or infected dams (all infections). However, calves nursing dams infected with *Staph aureus* showed a significant decrease in weaning weights (7.5 - 12.5%).

Losses are accentuated in faster growing calves (males or large frame size breeds) with a recent study showing a 17% decrease in ADG and a 38 kg decrease in 205 day weaning weights. Greatest decrease in ADG are seen from 50-100 days, and may reflect the calves dependence on total volume supplied by the udder in her transition to a ruminant where increased forage utilization will become the primary factor on ADG.

Traditional mastitis control practices used in dairy herds are impractical for most beef herds. The infrequent manner of handling limits teat dipping. Research on intramammary antibiotic administration at weaning showed significant lower infection levels at subsequent calvings but was not practical nor economical. Integration of mastitis awareness into management practices could assist producers and veterinarians in deciding whether to cull or culture animals with significant decreases in calf weaning weights.

Larkspur Poisoning: As We Now Know It and a Glimpse of the Future

John D. Olsen, DVM, PhD

*USDA-ARS Poisonous Plant Research Laboratory
1150 East 1400 North
Logan, Utah 84321*

Larkspur poisoning results from grazing Delphinium plants. Acute death is generally the presenting feature. Apparent muscular weakness is a primary clinical sign of larkspur poisoning in cattle. During poisoning, cattle have episodes of weakness which may progress to a generalized paralysis. A sequence of standing, tremors, and lying down occurs repetitively during mild intoxication. Duration of standing time, between tremors and collapse, becomes shorter as severity of poisoning increases. With increased severity, cattle are eventually unable to arise, at first from sternal

and finally from lateral recumbency depending upon toxic dose and time after dosage. Prognosis can be based upon the rate of progression and severity of muscular weakness. Presentation will focus on four basic questions: 1. What is the poison (how toxic are the plant species causing poisoning of cattle)? 2. What is the effect of the poison? 3. What factors influence the prevalence of poisoning (how does susceptibility to poisoning vary)? 4. What can we do about it? Discussion will be supplemented with a video presentation.