A few months ago I wrote an article about reviewing your clinical mastitis treatment protocol. The article reported on the findings of a field study which evaluated the practice of withholding antibiotic treatment for clinical mastitis cases for 24-hours, so milk culture information could be obtained and used as the basis for what treatment procedure to use. By delaying the automatic intramammary infusion of an antibiotic when a clinical mastitis case was observed, the large herd in the study reduced the use of intramammary antibiotics by about 80%. The reduction occurred because most of the clinical mastitis cases were caused by environmental organisms which are usually non-responsive to antibiotics.

Another study that evaluated different clinical mastitis treatment methods has recently been published in the Journal of Dairy Science. In this study the researchers looked at four procedures for treating mild to moderate clinical mastitis infections. The methods studied were intramammary infusion of amoxicillin, frequent milk-out, a combination of intramammary infusion of amoxicillin and frequent milk-out, and no treatment (control). Clinical cases were considered cured if there were no clots or flakes in the milk for three consecutive days or two consecutive weeks without a relapse.

While the authors emphasized that the results should be considered preliminary and serve as the basis for further larger studies, the results reported are nevertheless interesting. The overall finding was that there was no significant difference in cure rate between the four groups. The small number of samples in each treatment group may have contributed to the non-significant finding. The researchers noted that the coliform intramammary infections, especially E. coli, appeared to be more likely to cure than environmental streptococci caused infections. Clinical cases caused by environmental streptococci were treated most effectively with intramammary amoxicillin. Frequent milk-out was not as effective as no treatment or amoxicillin infusion, and probably of no or limited value.

Another interesting finding was the effect of the treatments on milk production following the clinical mastitis cases. Cows in the no treatment (control) group had similar daily milk levels before and after the mastitis event, while cows in the other three treatment groups had decreases in daily milk of from four to nearly seven pounds. The researchers offered no possible reasons for this finding, but noted that other studies have reported similar as well as contrasting results.

The researchers noted what most producers already know, that intramammary amoxicillin may be beneficial in treating Gram-positive organisms such as environmental streptococci and coagulase-negative staphylococci, but of little value in treating Gram-negative (coliform) and fungal pathogens. Additionally, the best approach
to use in treating clinical mastitis cases should be based upon culture results that are obtained within a timely manner (within 24 hours of sampling). This suggestion is the same approach to use in treating clinical cases that I reported on in the previous article I wrote.

I again encourage producers to establish a milk culture program (either with their veterinarian, a private or state lab, or set-up a culture lab on their farm) that will allow them to treat according to culture information. Rather than just routinely infusing all clinical mastitis cows, limit infusions to only the cases when the antibiotic may be effective. Greater profit and reduction in the use of antibiotics are likely benefits. Producers should discuss this mastitis treatment approach with their veterinarian, milk handler fieldman, extension agent, or other knowledgeable consultant.