In the proceedings of the 2008 NMC (National Mastitis Council) annual meetings, there are two interesting papers that discuss the results of studies concerning mastitis during the dry period. One report discusses the role of subclinical mastitis during the dry period and the subsequent development of clinical mastitis during the following early lactation period. The other report looked at the results of using selective dry cow therapy. Both reports may have application by producers as they review their dry cow treatment protocol.

The objective of the study done by University of Wisconsin researchers was to look at the risk of developing clinical mastitis in the early part of subsequent lactations based on previous SCC history. All cows received quarter antibiotic infusion plus a teat sealant at dry off. Milk samples were taken at dry off, 6-days after calving, at the first DHI test after calving which averaged 16.8 days in milk, and before treatment of clinical mastitis during the first 4 months of lactation. The types of microorganisms present in all samples were determined. A threshold of 200,000 cells/ml was used as the SCC level to define when a quarter was considered as likely having a subclinical infection.

At dry off only 13% of the quarters contained some type of bacterial infection. That % decreased to only 7 at calving, and was 8% at the first test. Within the first 120 days of lactation twenty three percent of the cows had at least one quarter infected. The predominant pathogens isolated from clinical infections were Gram negative ones, whereas the predominant pathogens isolated from the subclinical cases during the previous sampling periods were CNSs. The researchers concluded that chronically infected quarters across the dry period had a higher risk of developing clinical mastitis in early lactation than did quarters which were either uninfected, had new, or had cured infections prior to dry off.

In the other study reported, researchers from the Ohio State University compared the effect of no dry cow therapy with the traditional all quarters of all cows approach given to uninfected cows. Cows were considered uninfected if they either 1) did not have a clinical mastitis case and their SCC was <200,000 cells/ml during the last three months of lactation, or 2) they had a clinical case during the first 90 days in milk, but their SCC was <100,000 cells/ml the rest of the lactation.

This study showed interesting results, but because the cow numbers are relatively few (220 dry treated and 212 untreated), caution must be used when interpreting the results. The hazard of getting a clinical infection differed with parity. Cows in their second lactation that received the traditional dry cow therapy had a greater chance of getting a clinical infection during the first 90 days in milk than did untreated cows. However, cows with three or more lactations that received the dry therapy treatment had a lower chance of getting a clinical infection than did the untreated cows. While the results were not statistically different, the results do agree with another study done in 1990. Perhaps additional research is needed on this issue.
These two studies should not change significantly the way producers manage mastitis at dry off. Producers that consistently have bulk tank SCC levels above 200,000 cells/ml should probably continue to infuse all quarters of all cows and use a teat sealant at dry off. For sure, cows that have had a clinical infection during at least the second half of their lactation should be dry treated. Producers that have bulk tank milk SCC values below 200,000 consistently may want to consider culturing cows at dry off to determine which ones to dry treat. Cows that have low SCCs at dry off (<100,000) can be candidates for either no treatment, or just a teat sealant infusion without an antibiotic.