Updated Thoughts On Heifer Mastitis and Its Control

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In recent years Dr. Larry Fox from the University of Washington has been one of the leading researchers on heifer mastitis and its control. His collaborative work with others has given dairy producers excellent information on the incidence and possible control methods of this disease. At the 2007 summer regional meetings of the NMC Dr. Fox presented his current thinking about heifer mastitis and its control. His concluding remarks as published in the proceedings of the meetings are reprinted below. They summarize the current information and guidelines about heifer mastitis management.

"Mastitis in heifers is not the rare event that perhaps was once considered. Intramammary infections (IMIs) by coagulase negative staphylococci are the most prevalent heifer mastitis form. However, infections by coagulase positive staphylococci may cause 5-7% prevalence in heifers, dependent on region. The warmer climates may have the greatest prevalence, and work in Louisiana suggests flies may transmit this disease, and that fly control may be effective in reducing the incidence in heifers. Work at Washington State indicated that prepartum skin colonization of heifers in the inguinal area (groin) was a risk factor for IMIs in heifers at calving. However, no method of control was identified. A second Washington State study determined that herds that import heifer replacements had more strains of \textit{S. aureus}, and a higher prevalence of \textit{S. aureus} IMIs in general, than other herds. Moreover, closed herds appeared to have the least problem with \textit{S. aureus} IMIs. This might suggest that biosecurity might have a role in \textit{S. aureus} mastitis control if carrier animals could be identified. Logically, it would seem that use of antibiotic therapy prepartum, similar to intramammary dry cow therapy for lactating cows, might have a role in control of heifer mastitis. Early work indicated excellent reduction in prevalence of heifer IMIs when such treatment was applied. A first study in one herd demonstrated an economic benefit, as demonstrated by improved milk production and reduced somatic cell count, in heifers that received intramammary antibiotic preterm. A follow up study done in 6 states and one Canadian province in 9 herds did not demonstrate that such therapy would improve milk production in the first lactation, nor improve milk somatic cell counts. However, such therapy in this study did significantly reduce IMIs during lactation. Thus it would appear that the reduction in the IMIs in heifers seen in the multi-site study did not translate to improved production and cell count, thus no improved economic benefit. It should be noted that results from a preliminary study recently conducted in The Netherlands would suggest that success of preterm intramammary antibiotic therapy may be a function of the herd mastitis prevalence; with greater economic success associated with herds with high somatic cell counts. This in turn might suggest that such efficacy might be greater when major pathogens are the predominant mastitis agent in heifers and cures of these agents lead to improved milk production, reduced somatic cell counts and therefore economic benefit."

While the incidence of heifer mastitis is not a serious problem in many herds, its prevalence is great enough that producers should give more attention to preventive practices. Greater milk production and herd profitability can result from a minimal effort in checking and treating infected heifers as needed preterm.