

EFFECTIVENESS IN CURING EXISTING INTRAMAMMARY INFECTIONS AND PREVENTING NEW CASES IN BRED HOLSTEIN HEIFERS

C. Haviland and S. C. Nickerson

ABSTRACT

Bacterial infections in the cow's udder result in mastitis, the chronic inflammation of developing milk-producing tissues. Protecting these tissues during the greatest development of the mammary gland (1st gestation) from pathogenic bacteria will guarantee maximum milk production. Nonlactating cow antibiotics are effective in curing infected mammary quarters and preventing new cases of mastitis in uninfected quarters. In addition, teat sealant products have proven effective in preventing new infections and in reducing the chances of contracting clinical mastitis at the time of calving. For this study, mammary secretions were collected from bred heifers prior to treatment and processed for bacteriology, differential leukocyte counts, and total white blood cell counts (WBC) to determine initial infection status. Four treatments (untreated control, nonlactating cow antibiotic, teat seal, and nonlactating cow antibiotic + teat seal) were administered to each of 23 heifers 30-60 days prior to the expected calving date. Responses to treatment were monitored at 3 and 10 days postpartum. Significant treatment differences for cure rate, new intramammary infection rate, and WBC were determined with PROC GLM (SAS 9.3). Compared to the control, use of antibiotic and antibiotic + teat seal resulted in higher cure rates ($P < 0.05$); no differences were observed among treatments for new intramammary infection rate. Compared to the control, use of antibiotics, teat seal, and antibiotic + teat seal resulted in lower WBC on day 3 postpartum ($P < 0.05$). Results demonstrated that treatment with antibiotic, teat seal, or antibiotic + teat seal resulted in less mastitis and lower WBC after calving.