

## Abstract

There is limited epidemiological knowledge on udder health in Kenyan dairy cattle that would aid in a pro-active approach towards mastitis prevention. The study objectives were: (1) to investigate the prevalence and distribution of clinical and subclinical mastitis in dairy cattle in Mukurwe-ini and Nakuru Districts, Kenya, and (2) to determine the antibacterial sensitivity of the organisms causing bovine mastitis in these districts. The study involved field-screening of milk samples from 241 dairy cows on 128 farms by use of the California Mastitis Test (CMT) and, if CMT-positive, followed by bacteriological culture of the major causative agents and their respective antibiotic sensitivity to eight commonly used antibiotics. All participating farms were visited twice during the study period. The results obtained during the first and second visits showed the prevalence of clinical mastitis to be very low: 0.9% and 0.5%, respectively; 56.0% and 65.0% of cows were CMT-positive on at least one quarter and 49.6% and 58.7% of cows were culture-positive, respectively. There was no significant difference in mastitis prevalence between Nakuru and Mukurwe-ini districts ( $p > 0.10$ ). *Staphylococcus aureus* was isolated in 68.0% and 77.0% of samples during the first and second visits, respectively. Other frequently isolated agents included *Streptococcus agalactiae*, and other *Streptococcus* spp., *S. aureus* and *S. agalactiae* were most sensitive to gentamycin and norfloxacin, and least sensitive to cotrimazole and ampicillin. Knowing the prevalence of mastitogenic organisms and their antibiotic sensitivities could improve treatment efficacy and cow longevity.