

## ABSTRACT

The study was accomplished to evaluate bovine mastitis therapeutics and control in Tatton Agriculture Park (TAP), Egerton University. Causative agents were investigated through culture and identification then subjected to commonly used antimicrobials to determine their sensitivity hence identify drug of choice. A total of 41 dairy cows or 164 quarters were sampled from TAP. Of all the samples, 34.1% were California Mastitis Test (CMT) positive for sub-clinical mastitis while 82.9% yielded bacterial growths. When cultured 21.4% of the CMT positive were without growths (false positive) while 85.2% of those that tested CMT negative yielded bacterial growths (false negative). The most prevalent bacterial species were *Staphylococcus aureus* (58.8%). The CMT was not a fully reliable test for detection of sub-clinical mastitis, therefore, should be accompanied by a bacteriological test for accurate diagnosis. The study showed that the causative organisms were most sensitive to Tetracycline, Gentamycin, Enrofloxacin, Sulfamethoxazole, Cefitfour and Streptomycin, with the least effective drugs being Ampicillin, Neomycin and Cloxacillin. Most drugs used on the farm were Terrexine, Intramammary tubes (multiject), Adamycin, Penstrep, and Neomycin. The incidence rate of mastitis in TAP was at 82.9%. The specific causative agents were *Staphylococcus aureus*, *Streptococcus agalactiae*, and *Escherichia coli*. *Staphylococcus ssp* accounted for 58.8% of the mastitis cases while *Streptococcus ssp* accounted for 11.8%, and *Escherichia coli* accounted for 8.9%. Mixed infections of *Staphylococcus ssp*, *Streptococcus ssp* and *Escherichia coli* accounted for 20.5% of the cases of mastitis infection. It is concluded that the most effective method for the prevention of mastitis is through the establishment of good husbandry practices, sanitation, sound milking procedures, including post-milking, teat dipping and treatment during the non-lactating period and culling of chronically infected cows.