

**INVESTIGATION OF ANTIBIOTIC USAGE FOR
DAIRY CATTLE AND ANTIBIOTIC RESIDUES IN
MILK IN COCONUT TRIANGLE**

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ABSTRACT

Dairy farmers in coconut triangle of Sri Lanka rear Indigenous, Jersey, Sahiwal, Friesian, Ayrshire and their cross breeds mainly for the purpose of obtaining milk. Milk is marketed to milk processing companies or farmers use for their. These breeds are reared under intensive, semi-intensive or extensive management system. Cattle who are infected with bacterial diseases are treated with antibiotics and use of antibiotics can result in antibiotic residues in milk which can lead to destruction of favorable microorganism in the environment, disturbances to produce some milk products such as yoghurt, curd and cheese by inhibiting the starter culture and development of resistance bacteria strains for antibiotics. This study investigate the most commonly used antibiotics in cattle, identify the antibiotic residues in milk and analyses the factors affecting on the commonly occurring of bacterial disease of cattle. Stratified sample of 200 dairy cattle rearing farmers, 20 veterinary offices, 20 pharmacies were selected from Kurunegala and Puttalam districts. Data were collected using three pre-tested questionnaire. According to the record of having mastitis, 72 milk samples were collected from mastitis treated cows and tested by Twinsensor® and Delvotest® to identify the antibiotic residues in milk samples. Mastitis is the most common bacterial disease for which farmers use antibiotics in cattle. According to the results most of tested milk samples (84.1%) were negative and antibiotic residues were found in few milk samples (15.9%). Bacitracin, neomycin, tetracycline and sulfa-trimethoprim are the highly used antibiotics for treatment of mastitis in Sri Lanka. According to binary logistic model results average milk production, purpose farming and hygienic practices were significantly affecting factors for the occurrence of mastitis. It can be concluded that there is a risk of contamination of milk in coconut triangle with antibiotic residues and further studies are needed for the quantification of antibiotic residues. Antibiotics usage can be controlled by prevention and controlling of mastitis disease that helps to reduce antibiotic residues in milk.

Key words: Antibiotic, Mastitis, Dairy cattle, Milk