

## Prevalence of Mastitis in Camel, Cattle and Goats at Benadir Region in Somalia

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### Abstract

Mastitis is one of the major problems that lead economic inefficiency in dairy farm. It is categorized into clinical and subclinical mastitis and has multiple causes that are both infectious and non-infectious. Mastitis is one of the major problems and the top list of complaints from dairy farmers in Banadir region and this is ascribed as result of the inexperience of dairy farmers in Somalia who ventured camel dairy farms, cattle dairy and goat in the vicinity of the capital city of Somalia. Therefore, this study was launched to assess the prevalence of mastitis in Banadir region as well as identify the risk factors that are associated with mastitis occurrence. It was also surveyed the knowledge, practices and attitudes of farmers towards mastitis. The study was cross sectional and took place between August 2018 to January 2019, to determine the burden or the prevalence of mastitis in the study area. The study conducted multistage sampling by first purposely selecting five districts from the 18 districts that comprises Banadir province. The area selection was based on the availability of dairy farms. Farms were also randomly selected by first listing farms in a piece of paper and selecting it from bowl, while systematic selection was conducted at animal level by selecting every three Animal for sampling and screening. Qualitative data was collected through questionnaire administered to farmers in order to gauge their knowledge, attitudes and practices on mastitis. The research used California mastitis test to screen the animals. In this study the overall prevalence found was 23.4% and species wise the prevalence was 27.4%, 25.5% 16% for cattle, camel and goats respectively. Cattle mastitis was high compared to camel and goats. In cattle the exotic breed showed the highest (38%) prevalence for mastitis. The study found three risks factors that showed statistical significance at  $P < 0.05$  and the three risk factors include: age, parity, and lactation period at a  $P < 0.05$ . It was also found out that farmers had poor knowledge, practices and attitudes on mastitis control and management. In this study KAPs analysis points out that there is overall poor practice of dairy farmers in Benaadir region. It was found out that only 16% of the respondents practice hand washing before milking, this is compounded by poor milking techniques in which tit stripping is practiced by 58% of the respondents. Eighty percent (80%) of the respondents answered yes to washing the udder of the animal before milking. Where, 16% of the respondents practice post and pre milking tit dipping. These poor practices are attributed to be predisposing factors that caused mastitis. In this study it was found that the frequency of slurry and dung removal was low, 16.7% removed the slurry once a day, 33.3 of the respondents removed the slurry once a week while 50% of the respondents removed the slurry/dung once a month. This study is preliminary study and eye opener to other researchers and academician on the prevalence of mastitis, risk factors as well as KAPs of the dairy farmers on mastitis. Therefore, it is recommended that farmers follow the proper milking protocols and mastitis control guidelines as stipulated in the national mastitis council (NMC). It is also recommended that farmers are educated and given proper extension services by the relevant bodies.

### Justification

The study will provide information on the extent to which mastitis is present among the dairy animals in Benadir region. This would be beneficial to both dairy farmers, other stakeholders in the dairy value chain to improve on the food security and increase households' income in line with the vision of the ministry of livestock in Somalia. This study is also important to the future researchers, civil society, local authority, community based organization, business union and NGOs that involves to the health animals and animal productions.

### Conclusion and Recommendations

This study collected both qualitative and quantitative data and it was found out that the overall prevalence of mastitis 23.4% and is a major health problem of dairy Animals and will have an adverse effect on productivity of dairy industry and hence need serious attention. The study also revealed that there are general poor hygiene, poor practices and attitudes to dairy farmers. There was strong association between mastitis and risk factors as stipulated to be age, lactation period and parity. The risk factors could be exaggerated by the poor practices and attitudes of the farms. It is clear that, due to the farmers neglecting the ability of the veterinarian and livestock professionals to help alleviate the production impacting mastitis, mastitis prevalence is high. Therefore, there is need of the farmers to trust livestock professional and veterinarians. This study recommends the following measures in order to control and prevent mastitis in large or small farms:-

Dairy farmers should improve hygiene during milking by;

- Proper washing of hands before milking and between animals.
- Only using clean water and separate towels for cleaning the udders.
- Implementing the use of teat-dip after milking.
- Keeping animals from lying down immediately after milking.
- Milking order where you milk non mastitis Animals first and Animals or quarters with mastitis infections last should be adhered to.

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