

Microbial Quality of Cow Milk in Dawa Chefa District, Amhara Region, Ethiopia

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Abstract

Background: The microbial load of milk is a major factor in determining its quality, which is indicates the cleanliness of the milking utensils, condition of storage, manner of transport as well as the cleanliness of the udder of the individual animal. The aim of this study was to determine microbial quality of cow's milk.

Methodology: The study was conducted in Dawa Chefa District, Oromia Zone of the Amhara National regional state. A total of 50 samples of raw cow's milk were collected at morning from hotels (27 samples), cooperative (3 samples) and household producers (20 samples). The farmers (producers) that involve in the study were selected based on potential of milk production, market orientation and willingness of households. Samples of raw morning milk were taken from each sampling point twice in a month. During collection, approximately 250 ml raw milk sample were taken aseptically from the owner's container then placed into sterile glass bottles.

Result: The average total plate counts of milk sampled from farmers, dairy cooperatives and hotels were 6.88 log₁₀, 7.10 log₁₀ and 7.54 log₁₀, respectively. The average coliform counts were 5.57 log₁₀ at farm level, 5.63 log₁₀ for dairy cooperative and 5.37 log₁₀ for hotels. The average yeast and mould counts at farmer, dairy cooperative and hotel were 0.46 log₁₀, 0.62 log₁₀, and 0.74 log₁₀ cfu/ml, respectively. The indirect tests and the actual bacterial count indicated that the microbial quality of milk produced by farmer and collected by dairy

cooperatives in the study area was poor and this calls for scrupulous hygienic measure during production and handling of milk.

Conclusion: The result showed that the microbial quality of raw milk obtained from local dairy farmer was very low. This was due to the unhygienic condition of milking; unclean milk handling equipment and the use of contaminated water. Therefore, Proper hygienic practice will become a useful parameter and model for other dairy farmers within the district to improve and upgrade their dairy production..

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