

May 23-24, 2019
Zurich, Switzerland

J Food Nutr Disor 2019, Volume 8
DOI: 10.4172/2324-9323-C3-030

Assessment of risk factors in milk contamination with *Staphylococcus aureus* in urban and peri-urban small-holder dairy farming in central Ethiopia

Eyasu T Seyoum, Daniel Asrat, Tesfu Kassa, Thomas Sinmegn, Bayleyene Molla and Wondwossen Gebreyes

Ethiopian Public Health Institute, Ethiopia

Assessment of risk factors associated with milk production systems is central to ensuring quality and safety of milk and milk products. This study was aimed at identifying possible risk factors in milk contamination in urban and peri-urban areas of the central high lands of Ethiopia. A total of 477 on-farm pooled milk (n=433) and combined bulk milk samples (n=44) were collected and processed using standard microbiological techniques to isolate and characterize *Staphylococcus aureus*. In addition, 433 individual farm owners and 22 collection center owners were interviewed using a structured and pre-tested questionnaire. Multivariate logistic regression was used to determine risk factors. Of the total individual on-farm pooled milk samples analyzed (n=433), it was found that 103 of the individual milk samples (24%) and 17 of the combined bulk milk (39%) were positive for *Staphylococcus aureus*. This difference

in prevalence was statistically significant. Even though there were a number of potential variables associated with the recovery of *Staphylococcus aureus* in bovine milk, four variables including cleaning milk container with hot water and detergent [Adjusted OR: 0.342, 95% CI, (0.166, 0.701)], mastitis check [Adjusted OR: 3.019, 95% CI (1.542, 5.913)], travel time to collection centers [Adjusted OR: 4.932, 95% CI, (2.265, 10.739)] and amount of milk delivered by farmers to collection centers per day [Adjusted OR: 1.059 (1.032, 1.087 b=0.057)] were found to be statistically significantly associated with isolation of *Staphylococcus aureus*. We recommend a targeted educational intervention on defined risk factors to reduce the post-harvest *Staphylococcus aureus* contamination of raw milk in urban and peri-urban milk shed areas of central Ethiopia.

eyasutigabu@gmail.com