

## **Preliminary Study on Factors Affecting the Keeping Quality of Milk in Batticaloa District of Sri Lanka**

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Raw milk is a rich source of nutrients which comprises protein, fat, carbohydrate, vitamins, and minerals. This study investigates the risk factors associated with keeping quality of raw milk in lactating cows and finds appropriate recommendations to improve the milk quality in Batticaloa district of Sri Lanka. For this study, 120 raw milk samples were randomly collected from dairy farmers at four milk collecting centers, and details on milking practices were collected from the farmers through a pre-tested questionnaire and interview. Accordingly, 31 raw milk samples from Kiran, 32 samples from Sittandy, 32 samples from Iluppadichenai, and 25 samples from Thumbankerny were collected aseptically from the containers used for milk collection process and transferred to the laboratory for keeping quality test. Results revealed that 40 % of the collected milk samples from dairy farmers had poor keeping quality. In terms of Odds Ratio (OR) value, buffalo milk had more chances for poor keeping quality than cattle milk, the OR value for buffalo milk was 21.4 times higher than cattle milk. When foreign materials had present in milk, the OR value was 14.4 times higher chances for poor keeping quality. The OR value for long duration after milking was 12.4 times greater poor keeping quality than short duration after milking. The OR value for the use of plastic milk collection cans had 10.6 times more chances compared to the use of metallic milk collection utensils. When the fat content had high compared to low-fat milk, OR value for higher milk fat content was 14.5 times more chances for poor keeping quality. Further, poor hygienic conditions had the highest incidence of poor keeping quality, the OR value for poor hygienic practices was 21.6 times more than good hygienic practices. A hygienic quality based incentives system can be imposed to motivate farmers to produce high quality milk in Batticaloa district of Sri Lanka.

**Keywords:** Batticaloa, Keeping quality, Raw milk, Risk factors