



Tropentag, September 20-22, 2023, hybrid conference  
“Competing pathways for equitable food systems transformation:  
Trade-offs and synergies”

## Causes and determinants of post-harvest milk losses among milk producers in Tanzania

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### Abstract

Tanzania's population increased from 44.9 million people in 2012 to 61.9 million people in 2022 and it is further projected to be 151.3 million in 2050. The projected population growth demands collaborative efforts to increase production and minimise food losses to meet the increasing demand for food, dairy products included. Despite the Tanzanian government's policies, strategies and programmes aimed at increasing production, milk processing and marketing infrastructures for milk and milk products are still weak. Overall milk losses continue to be substantially high. This paper evaluates the causes and determinants of post-harvest milk losses at the milk producers node (households and farms) of Tanzania's milk value chain. Data were collected from 370 household heads and 38 farm managers in both the dry and rain/wet seasons. Generally, study findings show that spillage, spoilage and contamination were the main causes of milk losses at each stage of milk handling (milking, collection, storage and transport to market). In addition, a multilevel mixed effects generalised linear model results show the existence of significant relations between husbandry practices, socio-economic factors, geographical locations, season of production, milk handling facilities, storage facilities, transport means and post-harvest milk losses. Furthermore, market availability, membership to an association and education on post-harvest losses was observed to influence post-harvest milk losses. Therefore, the Tanzanian government should improve extension services to impact knowledge on milk handling practices and milk marketing. In addition, it should improve public infrastructures for easier milk collection, storage and transportation. Strategies or actions targeting to minimise post-harvest milk losses can reduce dependency of Tanzania on milk imports.

**Keywords:** Households, milk producers, post-harvest milk losses, Tanzania