

CAMEL HERD AS FOOD SECURITY BIORESOURCES IN ARID LAND UNDER CLIMATE CHANGE CONTEXT: SURVEY INVESTIGATION AND HYGIENIC ASSESSMENT OF RAW CAMEL MILK IN TAMANRASSET REGIONS SOUTHERN ALGERIA

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Camels serve as a crucial food source in Tamanrasset, a hyper-arid region in southern Algeria, known for their ability to provide sustenance in challenging environmental conditions. Traditionally, camels in this region were raised in nomadic pastoral systems. However, a shift to peri-urban camel production is now evident, characterized by herds located close to urban markets. We conducted a survey to explore this transition and assess the sale of raw camel milk. Our findings reveal that peri-urban camel farms consist of around 30 camels, evenly split between males and females, with 75% of raw camel milk designated for family consumption. The daily quantity of raw camel milk sold in stores averages 337 liters (± 29), with a minimum and maximum of 206 and 263 liters, respectively. Microbiological analysis revealed that only 21% of the analyzed samples meet the required hygienic standards, namely for the count of reverifiable aerobic mesophilic flora (RAMF) at log CFU/ml 5.13 ± 0.28 . However, all samples displayed a very high total coliform load, with an average value of log CFU/ml 5.85 ± 1.16 . Additional microbiological parameters were also examined, indicating that raw camel milk produced in peri-urban farms often falls short of the desired hygienic quality. Therefore, there is a clear need, to focus on improving milking practices and animal healthcare to enhance the safety and quality of raw camel milk production in peri-urban areas.