

## EFFECT OF MILKING METHOD ON MILK QUALITY, YIELD AND MILKING TIME OF BUFFALOES

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### Abstract

The buffalo live body weight varies from 500 to 700 kg per mature animal. Buffalo population in Kosovo is around 400 heads in total and they belong mainly to Mediterranean type. Buffalo milk production is characterized by low yield (for the period about 240 days milk production is around 950 kg/lactation). There is a small number of households in Kosovo with two to five buffalo heads, with similar housing and feeding conditions. Despite an extremely stable profit realized through sales of dairy (mainly butter and cheese), the overall profitability of these farms is extremely low. Buffalo is generally hand milked (HM) twice a day in the morning and evening.

A twenty day assessment was performed to evaluate the effects of bucket machine and hand milking on milk yield, milking time and milk quality (total bacterial and somatic cell count) of buffaloes on a farm in Kosovo. A standard A4 (ICAR) sampling method was used. BactoScan device (Foss) was used to determine the bacterial load in milk (CFU), while Fossomatic Minor (Foss) was used to determine somatic cell count (SCC). The obtained results are compared with Administrative Instruction MA no. 20/2006 on standards for the quality of fresh milk. Statistical analyses of the data were done by using JMP- starter packet, of SAS program. Minitab 18 Software is used to perform a two sample T-test.

The average milk yield was 8.45 liters by machine milking (MM) compared to hand milking - 7.5 liter, and milking time was 5.4 min by machine milking, while 9.6 min. for hand milked buffalo. The average milk yield was 8.45 kg for the machine milking compared to 7.5 kg for hand milking. Milking time was 5.4 min by machine milking compared to 9.6 min for hand milking. Total count of bacteria was 47.200 CFU/mL for hand milking compared to 42.400 CFU/mL for machine milking. Somatic cell count was 75.000 SCC/mL for hand milking compared to 69.000 SCC/mL for machine milking.

Research show that buffalo machine milking has been much more efficient than hand milking, as it has resulted in higher amounts of milk, shorter milking time, and smaller number of bacteria and somatic cells. Results from this work demonstrated that machine milking of buffalo herds will increase milk yield of buffaloes.

**Key words:** Buffalo, Hand milking, Machine milking, Bacteria count, Somatic cell count.