

Microbiological characteristics of raw ass's milk: manual vs. machine milking

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Objectives

On the basis of the advantages recognised in infant nutrition of the use of ass's milk for its dietary and therapeutic properties, the aim of this study was to evaluate the influence of the dairy jennies' milking on the microbiological characteristics of raw milk, fresh and after storage.

Methods

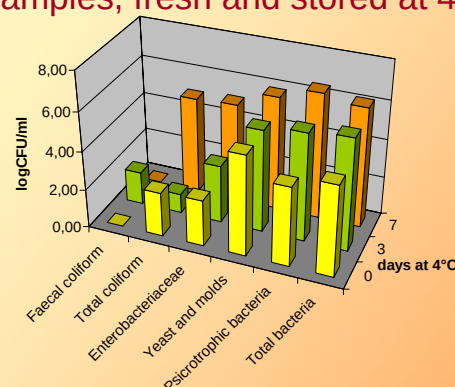
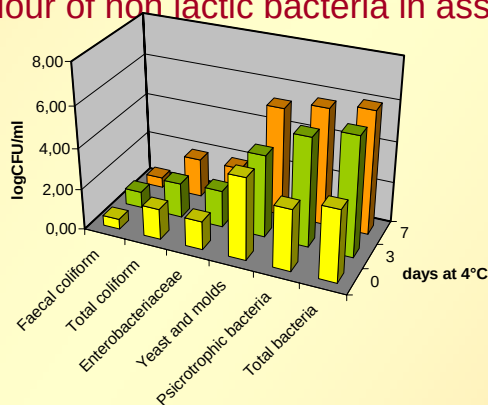
The study was carried out in farm A (600 donkeys) where jennies were machine milked and in farm B (20 donkeys) where dams were manually milked.

Total mesophilic bacteria, psicrotrophic bacteria, yeasts and molds, lactic acid bacteria (LAB), enterococci, *Enterobacteriaceae*, total and faecal coliforms were enumerated by plate count on appropriate media, on bulk raw milk samples, fresh and after storage at 4 °C (3 and 7 days).

Results and Discussion

The raw milk bulk samples from the farm A showed excellent microbiological characteristics (mean total bacterial count $\pm$ s.d., log CFU/ml: A - 3.50 ± 0.3 ; B - 4.70 ± 0.2): the good microbiological quality did not change during the storage at 4 °C for 3 days which is the legal shelf life for raw milk. Among the microbial populations, LAB were the most represented. The presence of undesired microorganisms found after storage at 4°C for 3 days in the bulk donkey's milk from farm B cannot be only attributed to the modalities of manual milking, but also to hygiene management of the animals. At 7 days of storage a progressive increment of studied microbiological parameters was observed without any variation in the organoleptic characteristics of the product. Results recommend special care in both management of dairy jennies and mechanical milking in order to achieve raw ass's milk with elevated hygienic-sanitary standard.

Behaviour of non lactic bacteria in ass's raw milk samples, fresh and stored at 4°C



Behaviour of lactic acid bacteria in ass's raw milk samples, fresh and stored at 4°C

