

Title: MICROBIOLOGICAL QUALITY OF RAW MILK APPLYING EDUCATIONAL ACTION IN MILKING WITH THE NORMATIVE INSTRUCTION N. 62, 2011

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Abstract:

The milk before milking is completely sterile, but it's contaminated by bacteria of lactiferous duct. Externally, the milk is exposed to contamination by different sources and numerous micro-organisms types. The hygiene of milking, the environment in which the cow is housed and equipment cleaning procedures and tools used during and after milking are factors that directly affect the microbial contamination of raw milk. This work aimed to evaluate the microbiological quality of raw milk applying educational action with the prophylactic procedures of hygiene of the normative instruction IN 62, 2011 in milking on five farms near the city of Perobal/PR (P1, P2, P3, P4 and P5). The monthly visits on farms were made between the months of February to June 2012 and the requirements of the IN 62 have been observed. For the non-conformities, the producers were alerted for adequacy and they were told about the prophylactic procedures of cleaning in milking. Milk samples were collected for analysis mastitis by CMT method and microbiological analysis: plate standard count for mesophilic and psychrotrophic aerobic, total and fecal coliforms, coagulase positive staphylococci, and *Salmonella* sp. It was performed the frequency analysis data, ANOVA and Tukey test. Mastitis was observed for four farms (P1, P2, P3 and P4) at all times of analysis and the P5 only in February and June. It was no significant difference of 5% between the months of study for mesophilic and psychrotrophic aerobic, and coagulase positive staphylococci. However, it was observed that P2 has a high count of coagulase positive staphylococci at start research, but with the educational support was possible to obtain a clear reduction in these scores. A similar behavior was also observed with P4, but this had a high score in the last month of the study, as well as P1, P3 and P5. In first month it was high count of total coliforms, but it was observed a significant reduction in these scores for all farms with significant difference between the average of February and the last two months. Fecal coliforms count had no significant difference between the months of analysis, but it was observed a reduction in scores for the P4 from the fourth month of the study. For all time analysis and for all farms it was obtained absence of *Salmonella* sp. in milk samples. The educational action in milking contributed to improving the quality of raw milk in this study.

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