INFLUENCE OF MILKING MANAGEMENT TECHNIQUES AND TECHNOLOGIES ON MILK QUALITY

EMPREGO DE TÉCNICAS E TÉCNOLOGIAS NO MANEJO DE ORDENHA INFLUENCIANDO A QUALIDADE DO LEITE

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The objectives of this study were to verify if the use of techniques and technologies involved in milking activity influence milk quality of small dairy farms, before and after technical training. The experiment was carried out in the northeastern region of Sao Paulo state with 36 dairy producers assisted by the CATI Leite program. Visits were carried out at the farms and a semi-structured questionnaire was applied to collect milking management information and mastitis identification techniques. All questionnaires were answered by the farmers (completed by the CATI agents). Milk samples were collected monthly from the bulk milk tank from March to June 2016, before technical training, and from March to June 2017, after technical training. Technical training related to the management of milking and control of mastitis was carried out by the CATI agents, who also provided technical assistance to the farmers participating in this experiment. The data were analyzed by frequencies, through the SAS 9.2 program. According to the somatic cell count (SCC) values specified in Normative Instruction 7 (NI-7) from the Brazilian Ministry of Agriculture, two classes were established: class 1: less than or equal to 400,000 cells/mL, and class 2, greater than 400,000 cells/mL. For total bacterial count (TBC), two classes were established: class 1: less than or equal to 100,000 cfu/mL, and class 2: greater than 100,000 cfu/mL. The frequencies were determined by contrasting the calves' presence during milking (C1 = no, C2 = yes) versus SCC class versus training class (1 = before, 2 = after training). For TBC, the frequencies were determined by contrasting the type of milking (1 = bucket milking system, 2 = does not use bucket milking system) versus TBC class versus training class (1 = before and 2 = after training). For TBC, 42.55% of the producers using bucket milking system were classified in class 1 (values less than or equal to 100,000 cfu/mL) before technical training, while after the training the figure was 57.45%. The increase in the frequency of class 1 is due to the adoption of good hygiene practices of the milking instruments and shorter cooling time of the milk, an improvement of 14 percentage points. For the SCC results regarding the calves' presence during milking, 44.04% of the producers were classified as class 1 (values less than or equal to 400,000 cells/mL) before training, while the figure afterward was 55.96%, an increase of almost 12 percentage points, in compliance with NI-7 standards. As conclusion, the use of milking techniques and technologies can improve milk quality for SCC and TBC parameters, as defined in NI-7, but requires intensification and expansion of training programs for technicians and extension agent aimed at improving milk quality and sustainability of milk production

Keywords: Milking Techniques and Management, Milk Quality.

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