

THE INFLUENCE OF AUTOMATIC MILKING ON MILK YIELD AND COMPOSITION IN COWS

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Summary. The objective of this study was to investigate the potential influence of automatic milking system (AMS) on the milk yield and composition. Ninety milking cows were randomly divided into two equal groups. The data on milk yield, milk composition and quality parameters using conventional milking (group 1, n=45) and AMS (group 2, n=45) was collected from January 2008 to March 2009. In group 2, AMS “A” phase was on 40.5 % longer ($P < 0.001$), “B” phase – 10.01 % shorter ($P < 0.001$) compared to conventional milking (group 1). There were no significant differences in the total time of milking of cows between groups 1 and 2 ($P > 0.05$). However, premilking period in group 2 increased, and was associated with adaption period to AMS and increased somatic cell count (SCC). It was shown, that introduction of AMS (group 2) in comparison to conventional milking (group 1) decreased milking time on 8.6 % ($P < 0.001$), increased milk yield on 18.5 % ($P < 0.05$), protein level on 0.08 % ($P < 0.05$), fat content on 0.09 % ($P < 0.01$) and urea concentration on 21.8 % ($P < 0.05$). Further, after introduction of AMS (group 2) SLL increased on 12.4% compared to group 1 ($P < 0.001$). At month 4, SCC in cows on AMS (group 2) slightly reduced, and at month 7, there were no differences in SCC between groups 1 and 2. The results from this study showed the possibility of AMS after adaptation period to improve milk yield and quality parameters.

Keywords: automatic milking system, conventional milking, milk yield, milk composition, SCC.