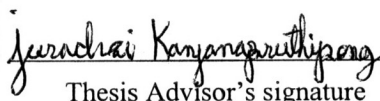


Nam Buathong 2008: Effects of CMT Using Frequencies, Showering and Disinfected Liners on Milk Quality: A Case Study Kamphaeng Saen Dairy Cooperative Limited. Master of Science (Animal Production) Major Field: Animal Production, Department of Animal Science. Thesis Advisor: Associate Professor Jeerachai Kanjanapruthipong, Ph.D. 76 pages.

An objective of this study was to evaluate effects of using California Mastitis Test (CMT), showering and disinfected liners on milk quality. An application of CMT once a week in the morning milking and before each milking was conducted by choosing farmers whose bulk tank milk have had somatic cell count (SCC)  $> 500 \times 10^3$  cell/ml<sup>3</sup> and Methylene blue reduction test (MBRT) ranging 1-2 at least 3 consecutive tests. Total 8 farms with 20 crossbred cows (75-93.75% Holstein; HF) with  $128 \pm 3$  days in milk and 1-5 lactation were divided into 2 groups according to a T-test comparison. An application of CMT before each milking had lower SCC after 6 weeks in the experimental period ( $P < 0.05$ ;  $642.70 \times 10^3$  vs.  $694.20 \times 10^3$  cell/ml<sup>3</sup>). It did not have an effect on MBRT ( $P > 0.05$ ) and had a slightly higher milk persistency ( $P > 0.05$ ; 9.49 vs. 9.80 kg/h/d at 1 week and 8.81 vs. 8.20 kg/h/d at the end of the experimental period). Milk composition had a slightly better trend in an application of each milking CMT ( $P > 0.05$ ). It can be concluded that an application of each milking CMT resulted in lowering SCC after consecutive 3 week applications. Effects of showering and no showering dairy cows before each milking were evaluated by choosing farmers whose bulk tank milk have had SCC  $> 500 \times 10^3$  cell/ml<sup>3</sup> and MBRT ranging 1-2 at least 3 consecutive tests. Total 8 farms with 16 crossbred cows (75-93.75% HF) with  $141 \pm 9$  days in milk and 1-6 lactation were divided into 2 groups according to a T-test comparison. Showering dairy cows before each milking had higher SCC than no showering ( $P < 0.05$ ;  $676.19 \times 10^3$  vs.  $624.98 \times 10^3$  cells/ml<sup>3</sup> at week 6 of the experimental period). It did not have effect on MBRT milk yield and milk composition ( $P > 0.05$ ). It can be concluded that no showering dairy cows before each milking could stimulate udder empty and thus lowering SCC. An application of unsoaked and 2 week alkaline soaked liners was determined by choosing farmers whose bulk tank milk have had  $SCC < 500 \times 10^3$  cell/ml<sup>3</sup> and MBRT ranging 3-4 at least 3 consecutive tests. Total 4 farms with 18 crossbred cows (75-93.75% HF) with  $129 \pm 3$  days in milk and 1-7 lactation were divided into 2 groups according to a T-test comparison. The unsoaked liners had higher SCC than those soaked liners after 6 weeks in the experimental period ( $P < 0.05$ ;  $280.89 \times 10^3$  vs.  $236.44 \times 10^3$  cell/ml<sup>3</sup>) and lower MBRT ( $P < 0.01$ ; 3.92 vs. 4.57 hr.). Milk persistency (10.0 vs. 9.78 kg/h/d at 1 week and 9.63 vs. 10.17 kg/h/d at the end of the experimental period) and milk composition did not differ between unsoaked and alkaline soaked liners ( $P > 0.05$ ). It can be concluded that an application of alkaline soaked liners can reduce microbial contamination and thus increasing MBRT and lowering SCC.



Student's signature



Thesis Advisor's signature

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