

Ruethairat Pajonpiree 2014: The Use of Somatic Cell Count to Evaluate Milking and Farm Management on Subclinical Mastitis in Dairy Farms of Tha-Muang Dairy Cooperative Limited. Master of Science (Food Safety) Major Field: Food Safety, Department of Animal Science. Thesis Advisor: Assistant Professor Sirinporn Sindhuvanich, Dr.Agr., 99 pages

The objectives of this study were to evaluate the effect of milking practices and farm management on somatic cell count in bulk milk and milk composition and the association between SCC and intramammary infection. This study was conducted in 40 dairy farms of Tha-Muang Dairy Cooperative Limited. Previous records of bulk milk somatic cell count (BMSCC) geometric means, which $\geq 250,000$ cells/ml indicates udder problems in farm, was used to classify farms into two groups (20 herds in each group). Questionnaire interview along with milk hygiene observation during afternoon milking was conducted. There were significantly differences between two groups in their total numbers of cattle and milk production per cow ($p < 0.05$). The factors related to the change of BMSCC included postpartum metritis occurred, cattle replacement purchasing during the last 6 months, cup slipping during milking, inappropriate vacuum level of milking machine, liner running out of the condition, cow showering before milking, CMT use and wiping teat tip with alcohol before dry cow therapy ($p < 0.05$). Correlation between somatic cell count and fat, protein, lactose, total solid and solid not fat content were -0.18, -0.21, -0.20, -0.10 and -0.21 respectively ($p < 0.05$). The bacteria found in milk sample which divided in minor and major pathogens were 60.89 and 24.58 % respectively. The results of microbial quality of milk sample in SPC, CC and LPC was found 15, 25 and 37.5 % respectively higher than standard. No statistical relationship between somatic cell count and the number of microorganisms in milk was found in this study.

Student's signature

Thesis Advisor's signature