Abstract

The objective of this study was to compare udder health and milk quality in a bulk tank in two groups of cows of small herds. The first with 14 cows milked manually (G1) and the second with 21 machine milked cows (G2). Adequate milking practices were applied and controlled in both groups. The study was carried out for five weeks in a herd located in a dry tropical region of Mexico. Prevalence and incidence of subclinical mastitis was studied by clinical examination and by the California mastitis test in each gland. The milks sanitary quality was studied by bacteriological analysis and by determination of acidity of the milk. In G1, the mean prevalence rate of subclinical mastitis was 57%, incidence rate was 29 per one hundred weeks-cow (8 of 27), and prevalence rate of clinical mastitis was 7%. In G2, the prevalence rate was 33%, incidence rate of subclinical and clinical mastitis were 10 per one hundred weeks-cow (7 of 70) and 0.96 per one hundred weeks-cow (1 of 104), respectively; thus udder health was better in G2 than in G1 (P < 0.05). Mean values of bacteriological characteristics were: mesophilic microorganisms 5 130 ± 2 354 for G1, and 7 260 ± 3 393 for G2 CFU/ml. Bacterial load was 1.4 times greater for G2 than for G1 (P > 0.05). Coliform counts for G1 and G2 were: 421 ± 286 and 144 ± 180 CFU/ml, respectively; bacterial load being 2.9 times higher in G1 than in G2 (P < 0.05). Acidity in both groups was, on average, 1.53 g/l of lactic acid (P > 0.05). It is concluded that udder health and sanitary quality of milk obtained by mechanical milking were better than in cows that were manually milked.

Keywords

MASTITIS, MILK QUALITY, MANUAL AND MECHANICAL MILKING.