EFFECT OF MILKING SYSTEM ON THE MILK QUALITY AND QUANTITY

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We analysed one Holstein- Friesian dairy farm using two types of milking technologies. One of them is a parallel milking parlour (2x8), where 200 cows are milked twice a day. The other part of the animals (500 cows) is milked with robotic milking machine. We processed data from nearly 700 cows. Based on the two different milking technologies, we formed two groups for the calculations. Within the groups, the animals were arranged according to their lactation period (14 months). We collected daily milk production (kg / day), milk protein (% / kg), milk fat (% / kg) and somatic cell count (SCC) (cell number / cm^3) data, based on a monthly test-day. Using the SPSS-26 program, we compared the results of the two groups with an independent T-test.

Each month, there was significantly more milk production for robotic milking (P <5%) compared to conventional milking technology. In the 2nd month of lactation, at the time of peak production, the average milk production of the animals was 43 kg and 37 kg, respectively. The milk protein content was higher in conventional milking. At months 2, 3, 4, and 11 of lactation, the difference was significant. In the month of peak production (month 2): 3.27 and 3.22 (milk protein %). Milk fat% was higher in conventional milking only in months 2 and 3 of lactation, however, this level was significantly higher in the second half of lactation in addition to robotic milking. The somatic cell count of milk was lower each month for robotic milking. This difference was significant for the first 11 months. At 2 months of lactation: 133,000 and 188,000 (number of cells / $cm^{3)}$ (P <5%).

Based on our results, we can conclude that significantly more milk and milk fat can be produced and significantly less the SCC with the robot milking. This technology milk the udder thoroughly, which stimulates the animal to produce more milk. At the end of milking comes the milk with a higher fat content, which can also be increased by thorough milking too.