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Comparison of milking systems based on milk quality and milk quantity

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Abstract: *We compared a parallel milking parlour and robotic milking machine, based on milk quantity and milk composition. We can conclude that significantly more milk and milk fat can be produced and significantly less the SCC with the robotic milking.*

Introduction

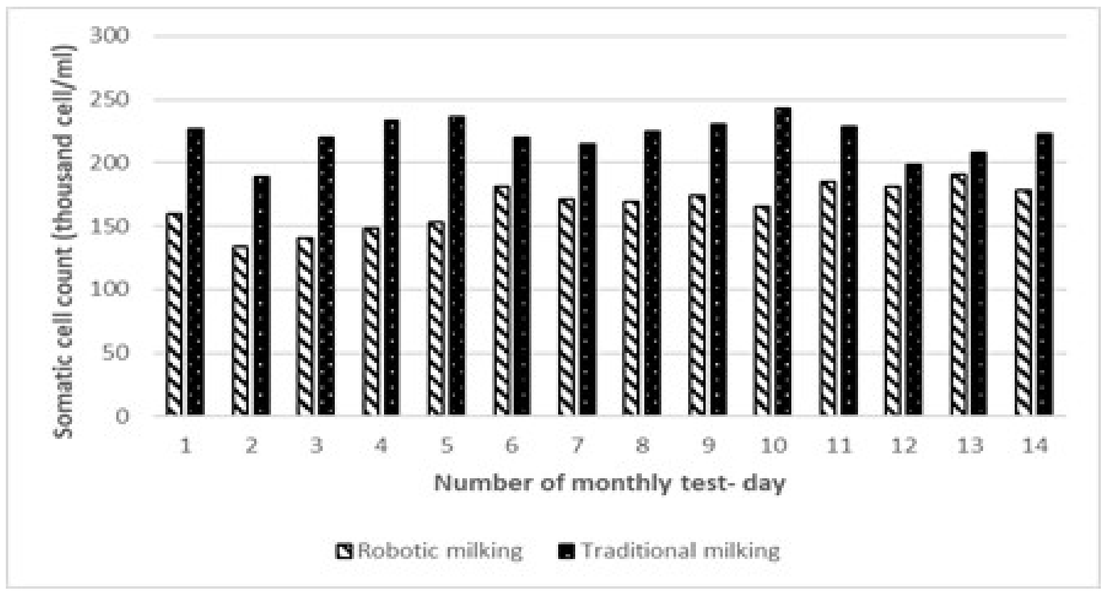
With robotic milking, the frequency of milking increases, therefore the milk yield also increases, so the reduction of SCC is a consequence of the dilution effect [15, 22].

Material and method

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. The average daily milking frequency is 2.8. 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 / cm3) data, based on a monthly test-day.

Results and discussions

Each month, there was significantly more milk production for robotic milking (P <5%) compared to conventional milking technology. Milk fat% was significantly higher in the second half of lactation and the SCC was significantly lower in the first 11 months of lactation with robotic milking. The milk protein content was higher in conventional milking, because less milk is more concentrated.



Changes in the somatic cell count (SCC) during lactation based on milking systems

Conclusions

We can conclude that significantly more milk and milk fat can be produced and significantly less the Somatic Cell Count with the robotic milking.