

LOW TOTAL BACTERIAL COUNT IN BULK MILK WITH AMS

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Abstract. *Using an AMS (Automatic Milking System) to obtain a good milk quality with low total bacterial count (TBC) in the bulk milk can be a challenge, but is manageable. A pre-survey within the AMS farms in Iceland, which had the lowest TBC in the bulk milk, showed that there are many similarities with the work routine of the farmers getting the best results. At all farms the system wash was done three times daily and all farms used pre-cooling systems. All farmers had focus on the cleanness of the robot, the AMS box and the floor around the box. Furthermore all farms had some kind of automatic system to scrape the main floors and walking alleys for the cows. The five lowest AMS farms had in common that in all of them the cubicles was scraped down at least three times daily and a fresh bedding material was put up into the cubicles twice daily. All farmers at those AMS farms with low TBC in the bulk milk also kept their cows clean by all above handlings plus getting the udder and tail hairs trimmed at or before calving.*

Key words: *TBC, Milk Quality, Automatic Milking.*

INTRODUCTION

Using an AMS (Automatic Milking System) to obtain a good milk quality with low total bacterial count (TBC) in the bulk milk can be a challenge but is manageable. In Iceland the milk from AMS, which accounts for about 30% of all the milk produced in the country, is of lower quality than from conventional dairy farms; however there is a big difference in milk quality within the AMS farms and some are producing milk on the same levels as the best conventional farms.

In a pre-survey within the AMS farms in Iceland, that had the lowest TBC in the bulk milk, showed that there are many similarities with the work routine of the farmers getting the best results.

MATERIALS AND METHODS

The average direct bacterial count was for all 665 dairy farms in Iceland (in 2010) was 29.400 CFU/mL. However the average bacterial count for the 95 AMS dairy farms was 52.400 CFU/mL compared to 25.600 CFU/mL for the 570 conventional dairy farms. The five lowest AMS dairy farms had, however 17.300 CFU/mL in average in bacterial count. The dairy farmers, running these five AMS farms, were interviewed about their management practice to establish a basis for recommendations to other AMS dairy farmers in Iceland and for the purpose of further research within the topic.

RESULTS AND CONCLUSION

The result showed that at all farms the AMS systems was set to make a full system wash three times daily and all farms used a pre cooling water system, when pumping the milk to the bulk tank. All farmers followed the manufacturer's recommendations for changing parts and had also a fixed routine for checking status on cleaning agents. The farms with Lely also disinfected and changed the cleaning brushes at least once to twice monthly. Two out of those five farmers just changed the milking filter once daily.

When asked about other work the farmers had in common that they all keep a good eye on the cleanness of the robot, the robot arm and the environment around the AMS box on both sides. All washed the box floor, the slotted floor close to the box and the robot arm at least 3 times daily and the AMS box at least twice daily.

In all dairy barns there where automatic systems used to scrape the main floors and walking alleys for the cows: farms with slotted floors to be cleaned every two hours and farms with solid floors every hour. All farmers also had their focus on manually scraping at least twice daily the alleys that automatic systems could not get to. Furthermore the process of scraping manure from the cubicles was done at least three

times daily in all farms and at least twice daily the cubicles were bedded with new bedding material, usually sawdust.

The cows was kept clean by all above handlings plus getting the udder and tail hairs trimmed at or before calving.

REFERENCES

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