

Effect of milking routine performance and turnover of personnel on milk losses in dairy herds

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Introduction

It is common to observe large within-herd variation in milking personnel performance (MPP) and turnover (TO) over time. Assessing team performance, resolution of conflicts, and comprehensive training of dairy personnel are critical tasks to achieve consistent performance of dairy herds. One of the positive aspects about TO is that it provides opportunities for remaining team members to increase or change responsibilities. Some herds keep a multi skilled person(s) who serves as the trainer and is readily available, but not allocated to any specific mandatory daily role on the farm, to plug the gaps caused by absentees with the goal of maintaining productivity levels. The objective of this study was to assess the effect of MPP (95% versus 85%) and TO of personnel (5% versus 30%) on milk losses of dairy herds.

Materials and Methods

For the simulation, the performance of each milker (compliance with milking routine protocol) was set to 85% or 95%. Milk losses were set at 1 kg/cow/d due to lack of udder stimulation or re-attachment. An adjustment period of 14 d with a 66.5% performance was estimated for each new personnel. The overall risk performance (%; RP) was estimated taking into account the team milking performance and TO. The number of cows at risk (n/d) was estimated based on the RP (10 milkers) and herd size (2000 cows). Milk price was set at \$0.52/kg. Costs for herd audit were set at \$1000 and training program at \$1000 (for 4 sessions per yr). Milk

losses (\$/yr/herd) and return on investment (ROI) were estimated. For this analysis, losses associated with the time and resources spent in recruitment, selection, and hiring as well as the orientation and initial training of new personnel were not included.

Results

For a 2000-cow herd, the overall effect of TO (5% vs 30%) on milk losses was \$8554 while the overall effect of RP (85% vs 95%) on milk losses was \$35412. Cows at risk and milk losses were higher (\$14.6 per cow/yr) for RP 85% with 30% TO (342 cows/d) compared with RP 95% with 5% TO (110 cows/d). The ROI for high performance teams (RP 95% and 5% TO) was \$26 for every \$1 invested in herd auditing and training. The estimated ROI assumes that facilities are adequate, participants are willing to learn and apply the newly learned concepts, and the herd audit correctly identifies the needs and the training program correctly addresses them. Both TO and RP affect the bottom line of dairy herds.

Significance

Frequent assessment of performance, educational needs, and training of dairy personnel should be top priorities for dairy operations to achieve a consistent and efficient herd performance over time. Practicing veterinarians regularly visit their clients and are ideally placed to identify at-risk dairy herds likely to benefit from personnel training, conflict management, and development of preventive SOPs.