

PROFIT SEMINARS

By Rick Watters and Paul Virkler

Milking time evaluations are more than just numbers

Monitoring the milking center to evaluate parlor efficiency, risk factors for mastitis, milking equipment performance and protocol drift involves more than just analysis of the numbers.

Milking center analysis is often categorized into: 1) machine or mechanical related; 2) facilities; 3) cow factors; and/or 4) human factors. It is important not to fall into the trap that machine or mechanical issues are solely machine-related, and not impacted by humans, and vice versa. Evaluators should remember that cow, human and machine factors are all interwoven. Applying a one-dimensional approach to analysis is shortsighted.

The milking center evaluation involves analysis of milking procedures and routines, milking equipment performance and current settings, milk flow curves, completeness of milking, teat health, and hygiene of cows. Evaluate each area over an entire milking and, preferably, on a quarterly basis.

Quarterly teat analysis allows for quick comparison when conditions change or if teat dips or liners are changed. Of even more importance is determining if factors in the herd are increasing the risk of mastitis. Some of today's milking centers run around the clock, so it is important to constantly monitor the milking equipment to make sure it operates within industry guidelines.

Monitoring the milking center needs to be multi-dimensional because human, cow, facility and machine-related factors are all in

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play. Focus used to be only on humans when the lag time was too long, throughput was too low or cows were kicking during udder prep. Are these only human related issues or could cows, machines and facilities be the reason for poor performance? Is it a human issue when milking units stay on too long, leading to decreased cow throughput? The answer is yes and no. Overmilking or units staying on too long could be lack of equipment maintenance by ownership/

management.

Is unevenness of milkout a machine, cow or human issue? It could be from improper milking unit alignment after milking unit attachment. Unit alignment may be an equipment issue because the hose is not supported or it could be human in that milkers are not using the hose supports properly.

What if parlor turns per hour are only at three? Are three turns per hour the result of a poorly applied milking routine? Three turns per hour could be the result of an unshielded parlor entrance and cows not loading into the parlor without human interaction.

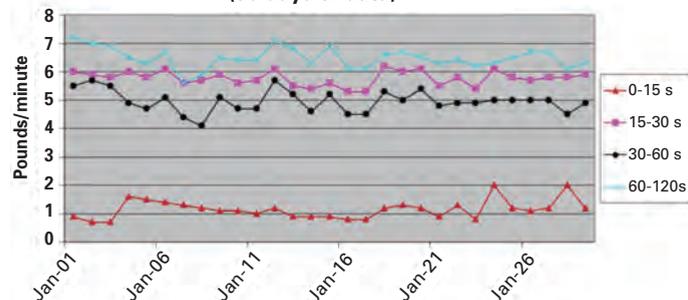
Gathering the data and summarizing the numbers is relatively easy. However, determining what combination of cows, humans, facilities or equipment, are in play for the issue at hand is the challenge.

Providing feedback to all staff and seeking input from everyone is important when reviewing the results. It is very important that ownership/management seek input from the milking staff during the review process. Milkers are in the milking center, moving cows and interacting with cows on a daily basis, thus the information that they have to share is invaluable. Implementing new processes and procedures requires training and follow-up. Implementation of a new process or procedure may involve management scheduling tasks to take place on a routine basis and not necessarily just a process that is implemented by the milking staff.

A significant amount of data is provided from an in-depth milk time analysis of this sort and providing useful interpretation of the data may be a challenge. If the data is gathered on a quarterly basis, it allows for prompt changes in management to rectify a situation that has a negative impact on teat health and/or milk quality. □

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**Milk Flow Rates By Intervals For Shift 1
(30 days of data)**



A poor milking routine on this dairy led to bimodal milk flow curves on the average cow as evidenced by the flow rate at 30 to 60 seconds (black line with circles) that is less than the flow rate at 15 to 30 seconds (purple line with squares).