

# MILK QUALITY

*Waupun Veterinary Services, LLC - Your Progressive Dairy Partner since 1958*

## The Key to Successful Milking Routines

### *Ruegg Explains 7 Important Habits*

Dr. Pam Ruegg produced a podcast called, "The 7 Habits of Highly Successful Milking Routines." This article summarizes that podcast.

**Habit 1** is to milk calm and clean cows. This starts before the cows enter the parlor. Cleanliness of the cows and the area they are housed influences the rate that the cows are milked and the amount of clinical mastitis in the herd. Exposure to bacteria in the area that the cows are housed will result in an increased amount of mastitis infections. Organic sources of bedding have more moisture and more bacteria than inorganic sources. Calm cows will have superior milk let down. Calmness is gained by the proper training of people on how to interact with cows. Research has shown that when cows get excited, they release adrenaline which will interfere with milk let down for 30 minutes. Cows will defecate while milking when they are nervous. There should be less than five cows defecating in the parlor for every 100 cows that are milked.

**Habit 2** is the proper grouping of cows. The purpose of grouping cows is to insure the mastitis is not spread to uninfected cows. We want to milk the healthiest cows first. First lactation cows usually should be milked first. The second group to be milked would be cows of unknown status or older cows. Chronically infected high SCC cows should be grouped and milk last before the equipment is washed.

**Habit 3** is to have a consistent pre-milking routine. Cows love consistent routines. Research shows that cows milked in a consistent manner will produce 5% more milk. The pre-milking routine

should include fore stripping for milk let down and observation for milk cases of mastitis. Proper fore stripping is to remove three streams of milk from each teat. The only symptom in 50% of mastitis cases is abnormal milk. Gloves should be worn so they can be easily cleaned if they get milk on them.

**Habit 4** is to properly disinfect the teats and dry them. To properly disinfect the teat, we need to use a good commercially formulated pre-dip. The dip needs to be applied to debris free teats. There needs to be appropriate contact time of the pre-dip to the teats depending on what dip is used before it is wiped off. Drying of the teats is one of the most effective ways to decrease the amount of bacteria on the teats. If using cloth towels, make sure they are effectively washed and dried.

**Habit 5** is the milking units are properly attached. The milking unit should be attached 90-120 seconds after stimulation. We need to wait for the oxytocin to travel from the pituitary gland to the udder which takes about 90 seconds. When attaching the units we want to limit the amount of air that is let into the milking units. In a herring bone parlor, the milk outlet from the claw should be aligned with the head of the cow.

In a parallel parlor the milk outlet comes out between the hind legs and often need a device to help align the unit. In properly aligned units there should be less than 5-10 liner slips per 100 cows milked. Less than 5% of the units should need to be reattached.

**Habit 6** is that the milking units are removed when milking is completed. In general, a fully milked out cow can have 100-200 ml per teat left in the cow. A total of 90-95% of the units should

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come off using the automatic take offs versus manual detaching if automatic take offs are on the farm.

**Habit 7** is that cows are managed post milking. The most important thing to do after milking is to do an excellent job of post dipping. Research shows that using post dipping reduces the farms SCC by about 70,000 per ml compared to farm that do not post dip. About 75-90% of the teat skin should be covered with dip on 90-100% of the cows. The cows should calmly exit the milking parlor and return to fresh feed so they remain standing for 30 minutes to give time for the teat sphincter to close. After the cow leaves the parlor the milk technicians should make sure that the milking units are clean and dry before they are put on again.



## Milk Quality Award at the FDL Fair!

Maverick Grahl and his cow number 1895 won a milk quality award at the Fond du Lac County Fair! Waupun Vet purchased the cheese basket at the auction. Congratulations Grahl family!

# Milk Quality Visits

We are often asked what is involved in a milk quality visit. When we do a milk quality visit, we analyze the three factors involved in the Mastitis Triangle, including the milking equipment, the cow and her environment and the milking routines.

When we analyze the equipment, we test the claw vacuum on 10 cows to find the average claw vacuum at peak flow. We make sure that the liners match the recommended claw vacuum. We also do a unit fall off to test to see if the system can maintain stability when a unit falls off. The industry standard is that the system vacuum neither drops or raises more than .6" Hg with one unit fall off with systems less than 32 units or 1 milker. For systems greater than 32 units or 2 milkers we do a 2 unit fall off test. We also graph all the pulsators to make sure they are functioning properly.

We check the cleanliness of the cows. We walk the cows' environment to check for both cow comfort and cleanliness. We look at the bedding, the stalls, and the air quality.

We do timing on the milkers to check the time from stimulation to unit attachment. We also watch the milkers to make sure they are properly applying the dip and cleaning the teats. We do teat end swabs to see how well the milkers are getting the teat ends clean.

If there are records available, we exam cow and parlor data. To do a proper milk quality visit all three components of the Mastitis Triangle need to be evaluated.

For more information, or to schedule a milk quality visit, please contact the clinic at 920-324-3831.

## Keep Your Ears Open

Many problems in a parlor can be detected by what you hear. When in the parlor listen for air leaks. Cracked pulsator hoses, cracked liners, and malfunctioning pulsators can often be heard.

Another thing to be aware of is buzzing noises from the pulsators. A buzzing pulsator often indicates problems with the solenoid.