

# North Star Veterinary Services Newsletter

February 2019

## Milking Procedures

Whether you are milking cows in a parlor or tie-stall barn, excellent milking routines will decrease incidence of mastitis, increase udder health, and increase milk production. This month, we review some simple yet essential tips for maintaining the optimal milking procedure on your farm. A good milking procedure should:

1. **Be consistent.** Every farm, no matter what size, should have a set milking procedure. Simply writing it down and training all milkers to follow that written protocol is the only way to ensure that everyone is following the same procedure at milking time. Even if you do not have any employees, taking the time to write down your milking protocol will challenge you to think about the steps involved and encourage you to consider the completeness and effectiveness of the routine. Additionally, having written protocols for any procedure or routine done on your farm reflects well to any outside party such as inspectors or certifiers.
2. **Be complete.** A good milking procedure should in some way include the following steps:
  - a. **Pre-dip:** Using a reliable pre-dip product is essential for killing bacteria on the teat that could contaminate milk or cause mastitis. Pre-dip should thoroughly cover the entire teat and have a contact time of at least 30 seconds in order to work properly. In order for these disinfectants to be effective, any bedding or manure should be removed from the udder before applying the pre-dip since the presence of organic material decreases the effectiveness of most disinfectants. On some farms, this is done by adding in a “dry wipe step” before pre-dip.
  - b. **Forestrip:** While forestripping is not the only way to stimulate milk let down, it is an essential step in identifying clinical mastitis cases early. Three squirts from each teat is ideal.
  - c. **Dry:** Drying the teat with a clean dry towel (reusable or one-time use) should be done before the milking unit is attached. A new clean towel should be used for each cow to prevent spread of contagious mastitis organisms between cows. Special care should ensure that the teat end is clean and dry.
  - d. **Attach Unit:** Research shows that unit attachment should occur at least 60-90 seconds from the initial contact with the teats in order to ensure optimal milk letdown.
  - e. **Remove Unit:** Units should come off the cow once the cow is done milking. Leaving a unit on past this time contributes to teat end damage.
  - f. **Post-dip:** The post-dip step kills any bacteria left on the teat that could migrate into the udder causing mastitis. The teat ends remain open for approximately 30 minutes after milking is complete so it is important to decrease the chance of mastitis causing bacteria to enter the udder during this time.

*Emphasize cleanliness:* CLEAN and DRY cows should be coming into the parlor. If this isn't the case, bedding management and cleaning of areas where cows walk/lie should be assessed. Once in the parlor, your milking routine should ensure that the teat ends are clean and dry before the milking unit is attached. This will decrease the chances of mastitis causing bacteria to enter the teat during milking and decrease the bacteria load in your milk.

*Allow for optimal milk let down:* You should see milking flowing well into the unit as soon as the unit is attached to the cow. If this is not the case, check unit alignment and assess time between initial stimulation and unit attachment (at least 60-90 seconds ideal). Additionally, it is important to remember that stressed cows will take much longer to let down their milk, because the stress hormones will overcome the release of milk letdown hormones. For this reason, cows should be moved into the parlor quietly and slowly. If crowd gates are being used, make sure they are being used with care and not pushing animals too readily into the parlor. All cows in the crowd gate area should be standing calmly and facing the parlor entry. Optimal milk let down matters because an increased time in low flow increases teat damage, mastitis incidence, and can even decrease milk production.

When contacting North Star call 518-483-6223

# North Star Veterinary Services Newsletter

5. *Result in removal of the unit when the cow is finished milking.* The milking unit should not remain attached longer than the cow is letting down milk. Overmilking can contribute to teat damage such as hyperkeratosis (thickened teat ends) and teat edema (swelling). Edematous or damaged teats can take much longer to close after milking, allowing a significant amount of time for mastitis causing bacteria to enter. A good way to assess whether cows are being milked out to the proper level is to choose 10 cows across groups and milk all four quarters into a cup by hand once a unit is removed. If there is less than one cup of milk produced, the cow is being over-milked. Greater than 2 cups of milk means they were undermilked. If you are concerned about over or under-milking, adjust your automatic take off settings and make sure units are properly aligned when milking. If you are manually removing units, make sure to pay attention to when a cow is done milking and shut off the vacuum before removing.

6. *Should be taught and practiced.* Routine training to all employees ensures that good protocols are followed. Spending time in the parlor with employees routinely allows observation of any protocol drift. Timing how long between each step of your protocol for different employees can also be valuable, because depending on the speed and number of animals being milked, the proper milking procedure may need to be adjusted for different employees. For example, in a parlor setting you may choose a territorial routine where one employee performs all procedure steps on a group of animals or sequential routine where employees perform every other step and work together on a group of cows. The optimal routine will depend on employee speed and parlor size. Figuring these things out takes practice and trial and error.

If you have questions about your milking procedure, talk to your veterinarian. We are able to help write protocols, assess existing ones, perform parlor evaluations, and train employees. Following excellent milking procedures will decrease mastitis, and increase udder health and cow performance.