

July 27, 2022

Milking Procedures

1. Currently the herd is being milked two times per day. The milking times are 5:00 AM / 5:00 PM.
2. As cows enter the milking stall line, monitor ID system for cow ID pick-up. Correct if necessary.

3. Cow prep sequence

Cow 1

- a. With your gloved hand, remove any external organic matter from the udder and teats.
- b. Using udder dip wand with 0.5% I₂ (iodine) pre-dip foam, taking care to ensure that the backside teats are covered.

c.

Repeat steps A and B for cows 2-5. The goal is to get 10-12 seconds of contact time on the teats.

d. Return to cow 1 and strip*, wipe and attach milker.

d. Repeat step c for cows 2-5.

After a cow is done milking only reattach the milker if it is an EXTREME case like when the animal is in heat and didn't let down her milk. When milked out, dip teats with post dip wand (1.0% Iodine), making sure backside teats are covered.

*Strip 2-3 squirts of milk from each teat on concrete. If mastitis is detected, run CMT (California Mastitis Test) test to determine severity. (See section titled: If Mastitis Detected)

STUDENTS: Please bring to the attention of a full time employee an inflamed quarter, discolored milk, clots, flakes, and bloody milk.

4. Observe milk meter operation. Record data in parlor log book and notify office of a problem.
5. Any quarter with a CMT ≥ 3 , collect a sterile milk sample from the positive quarter, inject 1 cc oxytocin IM, milk her in the can, place milk sample in the refrigerator. (See SOP "Collection of Milk Samples for Microbiological Culture")

IF MASTITIS IS DETECTED:

1. Fresh cows (day 1- 8):
 - a. Prior to milking 8, CMT, culture, and treat only if milk looks abnormal or is stinky. Be sure to get culture before starting any mastitis treatment.
 - b. On the 8th milking, CMT all four quarters. Normal milk should be the same from all 4 quarters on the CMT.
 - a. A sterile composite sample is taken to screen for Staph Aureus, Prototheca etc.
 - c. Any quarter with a CMT=3 get sterile quarter sample for culturing.
 - d. Record in Parlor book.
 - e. Continue to quarter milk.
 - f. Wait for notification on treatment protocol from the managers.
 - g. Take temperature.
 - h. If systemic (off feed, temp >103 F, watery or foul odor):
 - ❖ Treat with an appropriate intermammary antibiotic based on culture results or vet recommendation * See below
 - ❖ Hypertonic Saline 1-2L IV
 - ❖ 500cc of CMPK or 23% Calcium IV
 - ❖ Banamine (1cc per 100 lbs) IV every 24 hours for 3 days
 - ❖ Naxcel (1-2cc per 100 lbs) IM for 4 days
 - ❖ Fluids as needed
2. All other cows that are suspect:
 - a. CMT and get sterile sample for culturing.
 - b. Record in Parlor book.
 - c. Continue to quarter milk.
 - d. Wait for notification on treatment protocol from the managers.
 - e. Full time employees will be trained to plate cultures.
 - f. Acute cases – follow step H under fresh cows.
3. All treated cows are marked with an orange leg band on each of their rear legs. Their milk is dumped down the drain until they are negative on a Delvo test.
4. Cows marked with green leg bands signify high somatic cell count, staph aureus, or prototheca infection and are milked last.
5. All dry cows are marked with a yellow leg band and should NOT be milked.
6. Cows marked with a white or pink band are 3-quartered animals.
7. Cows marked with blue bands must be milked at the very end of milking and you must attach the green pipe extender to drain the milk into the drain in the parlor pit. It cannot go down the drain in the milkhouse.

*Infusion of Antibiotics into the Udder

Materials

1. Antibiotic treatment tube
2. Alcohol swabs (70 % isopropanol)
3. Latex or nitrile gloves

Protocol

1. Antibiotics should be infused after a regular milking (udder and teats should be cleaned prior to milking).
2. Put on gloves to prevent bacteria on hands from infecting the cow.
3. Remove any debris from teat end and wipe.
4. Wait 5 seconds before infusion of antibiotic.
5. Insert the cannula (tip) of the infusion syringe only 1/8 inch into the teat canal and infuse antibiotic. (See note below.)
6. Withdraw syringe and massage udder while pinching the teat closed to distribute the medication.
7. Repeat for other quarters, as needed.
8. Dip teats.
9. Follow manufacturer's withholding specifications and perform Delvo test to ensure milk is free of antibiotics before saving the milk.

Antibiotic infusion note

It is important to insert the cannula (tip) of the infusion syringe the minimal amount necessary to administer the antibiotic. If the entire length of the cannula is inserted, there is potential to damage the teat end/streak canal and to introduce pathogenic organisms.

Mastitis Treatments & Organisms

Proven Susceptible

Amoximast - *Staph aureus*, *Strep agalactiae*

Cefa-Lak - *Strep agalactiae* and *Staph aureus*

DariClox - *Staph aureus*, *Strep agalactiae*

Hetacin K - *Strep agalactiae*, *Strep dysgalactiae*, *Staph aureus* and *E coli*

Pirsue - *Staph aureus*, *Strep dyslagactiae*, *Strep uberis*

Spectramast LC - *E. Coli*, *Coag. Neg. staph*, *Strep dyslagactiae*

Today - *Strep agalactiae*, *Staph aureus*, *gram negatives*