

# ABC Artisan Dairy Herdshare

SSOPs are written protocols that are specified in a food safety plan that define the procedures to be followed to achieve a specific goal or process. A SSOP may define temperatures, type of cleaning agent, various steps or practices to be used and the order of the procedure to be used.

## **Milking Conditions**

1. Ensure that milkers are well trained to follow milking protocols exactly. See detailed milking procedure page 2
2. Cows udders, first strippings of milk and milk filter are closely inspected every time. Milk is only added to the bulk tank, if it passes the inspection criteria.
3. Milking equipment is clean and well maintained. Before and after every milking the procedures for rinsing, washing and sanitizing are followed carefully.
4. Milkers wear disposable, food safe nitrile gloves and wash hands before, during and after milking.
5. Rubber gaskets and other parts are inspected regularly and replaced as needed. Plastic milk hose is replaced every 2 months. Rubber teat cup liners are replaced every 6 months.
6. Vacuum pump is always topped up with oil. Vacuum pressure is adjusted to 13.5 maximum.
7. Pulsators are cleaned and lubricated regularly. A spare pulsator is kept on hand, ready to exchange and use.
8. Milkers wear clean clothes and have their hair covered or hair tied back.

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Standard Sanitary Operating Procedures (SSOP)

Update: October 2016

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## **Milking Procedure**

### **Preparation:**

Measure feed and supplements for each cow according to feed schedule

### **Milk room set-up:**

1. Wash your hands with soap, use a fresh towel to dry.
2. Rinse the clean cloths with very hot water, minimum 2 per cow. Set them out in the milking parlour in a bucket of very hot water (74°C.). Set out a second bucket of water containing the chlorinated alkaline detergent from previous equipment washing for used cloths.
3. Rinse strip cup and set out in milking parlour.
4. Assemble milking machine.
5. Rinse milking machine by flushing with 10 litres of hot water (74°C.), pour water back into the bucket to use for first rinse after milking.
6. Wash your hands again before placing fresh filter sock into the in-line filter, close filter securely.

### **Bring the first cow into milking parlour:**

1. Observe her gait and attitude.
2. Lock into stanchion and give part of her feed, during milking watch her appetite, make a note of any observations other than normal behaviour.
3. Assess what cleaning needs to be done.
4. If the cow is dry and looks clean, brush udder, belly and inside of hind legs with a soft brush to remove dust and loose hair, pay special attention to the bottom of the udder, between and around the teats.

### **If necessary see “Additional Cleaning Methods” on Page 3**

1. Feel the udder for any abnormalities, swelling or heat.
2. Sweep up any hair and debris around and under the cow, always close milk room door while sweeping the floor or brushing the cow.
3. Use one cloth out of the hot water, drain and squeeze well, wipe teats and check cloth.
4. Place used cloth in the second bucket and repeat with clean cloth, pay special attention to the teat openings.
5. When the cloth remains white and the teats and openings appear clean, proceed to next step.
6. Use the strip cup with the black lid and take 4 to 6 squeezes of milk from each teat, observe the milk running over the black surface, it should be clear and free of any abnormalities.
7. In case you notice any lumps in the milk, continue stripping until the milk is clear, make a note on the calendar which quarter of the udder produced the lumps.
8. Make sure the cow has all of her feed in front of her at this time.
9. Bring milking machine and set into blue pan, to keep its bottom clean.

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10. Take care not to vacuum up any hair or dust off the cow, your clothing or any other place, keep the inflations off the floor at all times, attach to the teats and observe the flow of milk.
11. Unlock safety button on the claw.
12. Look at the clock, make sure the milking machine does not stay on the cow more than 3 to 5 minutes, in certain cases maximum of 7 minutes.
13. Stay with the cow and make sure she is comfortable, give some additional feed if necessary, keep hoses off the floor and out of the way of cow's feet.
14. Feel the udder and observe the flow of milk to make sure all quarters empty out evenly, if necessary hold the claw down to prevent cups from riding up on the teats.
15. If necessary, massage quarters to empty out better, "machine stripping".
16. Once the flow of milk has receded, pull safety button down to stop vacuum, remove machine slowly and carefully.
17. Take care not to spill any milk from the teat cups onto the floor.
18. Take milking machine into the milk room and shut off vacuum pump.

## Additional Cleaning Methods

In the event that the cow enters the milking parlour and she does not appear clean and dry, use the following methods:

- If the cow has manure on her hooves, use broom to sweep her feet clean, sweep up into scoop.
  - If there is any dry manure on the coat, use round shedding blades to remove.
  - If there is any wet manure on the cow, use single shedding blade to remove.
  - If there is any dry manure on the udder, remove with shedding blade, then coarse brush,
  - if the manure is close to the teats or doesn't come off easily and completely, use hose as described below.
1. If there is a small spot of manure on the teats, use a separate rag with warm water and hand soap, lather and wash the teats thoroughly, pay attention to the teat openings, rinse away soap with clear water, dry with fresh towel.
  2. If there is wet manure on the udder, attach hose to tap and wash udder with warm water and shampoo. Pay special attention to the crevice in the center of the udder.
  3. Rinse away shampoo with warm water. Dry thoroughly with a fresh towel.
  4. Alternatively a disinfectant udder wash can be added to the water. Follow the directions on the label.

**Once the cow is clean and dry, proceed as described on page 2, wipe with clean cloths.....**

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## Handling the Fresh Milk:

1. Place the milk can about 2 feet away from the vacuum pump, all hoses need to be between the milk can and the vacuum pump, so they will not touch the rim of the milk can **when you take the lid off.**
2. Have a close look at the milk filter. If the filter is clean, the milk needs to go into the cooling tank immediately.
3. **If you notice any impurities in the filter, do not pour the milk into the cooling tank.** (Put in separate containers and mark accordingly or use for feeding calves or pour into buckets outside the barn, wash hands and place a fresh filter sock into the inline filter)
4. Make sure the top of the cooling tank is free of dust. If necessary wipe with fresh cloth and sanitizer.

## **Pay special attention when opening the lid of the cooling tank and the lid of the milk can, not to contaminate the milk.**

1. Take the lid off the milk can and hang onto the handle of the vacuum pump. Do not touch the underside of the lid and don't let the hoses touch it.
2. Pour milk into cooling tank and close tank lid immediately. Return milk can and close lid immediately.
3. If the tank was empty, make sure there is enough milk for the agitator paddle to reach the milk before turning it on.
4. Monitor temperature display to ensure proper functioning of the cooling tank.

## After milking each cow:

1. Hand strip all teats to make sure all quarters are empty.
2. Post dip each teat with an iodine-based teat dip containing a skin conditioner.
3. If the cow has finished her feed, let her out.
4. In the event the cow did not finish her feed, move her to the other stanchion and let her finish the feed or put feed back into a bowl and label with cow's name.
5. Bring in the next cow and repeat the process.

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## Cleaning the Milking Machine:

1. After milking the last cow, remove the inline filter. Flush milking machine with lukewarm water to rinse away milk. Dump the rinse water. Fill wash bucket with 10 litres of very hot water, 74°C.
2. Add chlorinated alkaline detergent as directed on the label.
3. Flush milking machine with the soapy water. Brush all surfaces thoroughly.
4. Start by brushing the inside of the milk can, pour the soapy water back into the wash bucket.
5. Brush around and under the rim of the can ( lower part of the can will be cleaned later ), set milk can on the drain board upside down.
6. Brush lid with gasket in place. Hold right side up, so water does not run into the pulsator.
7. Remove rubber gasket. Brush lid again without the gasket. Hold gasket against the inside of the wash bucket and brush from both sides. Rinse gasket and place into sanitizer, leave there until later.
8. Open inline filter, brush all parts thoroughly, place in sanitizer.
9. Open claw, brush thoroughly with special brush, remove gasket, brush gasket and grove, brush teat cups and liners, rinse and sanitize. Now rinse the large gasket and put in place, re-assemble all parts.
10. Flush milking machine with 10 litres of sanitizer solution, pour sanitizer back into bucket.
11. Hang up claw, open inline filter to let all parts drain and dry.
12. Wash strip cups with soapy water, rinse and sanitize.
13. At last, brush outside of the milk can with white brush and soapy water, rinse, rinse the top rim off the can with sanitizer.
14. Wash out cloths and bucket with soapy water. Put any dirty cloths in laundry. Fill bucket with soapy water and cover with the lid. Use towels from the laundry to wipe up any milk off the tiles. Use the swiffer to sweep off tile floor out the door, close milk room door. Sweep milking parlour with the broom. Flush floor with water if any milk was spilled.

**Thank you for your good work !**

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## Additional Notes

- Heifers and fresh cows: Milk them last, after the 'good old cows'. An inexperienced cow or a cow who just gave birth may be nervous during milking.
- Try to have a calming and reassuring influence on her. Don't rush, but move through the procedure as smoothly as possible so she is not in the milking parlour any longer than necessary. This is not the best time for 'show and tell' to cow owners who may be dropping in, explain to them to keep quiet.
- The cow may lift her tail in preparation to defecate. If you notice it, hold the floor scoop under her tail to catch the manure. Otherwise the manure will hit the ground and may splatter far and wide. If that happens, have a close look at the claw and hoses all around. Wipe away any spots of manure with a fresh tissue.
- After removing the milking machine, inspect all teat cups, hoses and the milk can and wipe as necessary.
- You may have to rinse off and wash the claw before the usual cleaning procedure.
- Scoop up manure and put in wheelbarrow.

Same principles apply if a cow kicks off the machine during milking.

- If the vacuum stops immediately and the filter is clean, the milk may still be used. If there is any chance the milk may have been contaminated or the filter is not spotless, pour the milk into buckets outside the barn to be used for calves or other animal feed.
- If the udder is not completely emptied, the machine has to be attached again as soon as possible and the udder milked out.
- Keep colostrum separate as directed, use for feeding calves or put in buckets outside the barn.
- After milking wash the floor in the milking parlour.

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## **Bottling Milk**

(Must wear clean clothes and clean shoes, hair tied back.)

After every 2 or 4 milkings, maximum 48 hours, all the milk in the tank needs to be bottled, the tank needs to be rinsed, washed and sanitized.

1. See if there are enough clean jars and lids to bottle all the milk in the tank. If not, pre-heat the dishwasher. Follow the instructions posted above the dishwasher.
2. Set up the bench, plastic stool with fresh cloth and seat. Take the plastic wrap off the spout on the tank. Use a fresh tissue to wipe away condensation.
3. Rinse all parts of the filler adapter with hot water and assemble.
4. Check the temperature on the cooling tank and in both fridges. Count number of gallons left in both fridges and fill in the "bottling record".
5. Use only jars and lids from the wire rack that have gone through the high temperature dishwasher. Do not fill milk into hot jars, they may break. Have a close look at each lid and jar before filling it.
6. Fill the jars to the neck only, leaving some air space in each jar.
7. After every 5 or 6 gallons, label with the date and place them in the fridges. Record the number of gallons bottled on the bottling record.
8. When the level of milk in the tank is below the agitator paddle, turn off tank. If the refrigeration starts up with too little milk in the tank, it will freeze to the bottom. If you turn the tank off too soon, the cream will separate from the milk.
9. When the tank is empty, rinse with lukewarm water.

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## Cleaning the Cooling tank

(Must wear clean clothes, hair tied back.)

- 1. Rinse.** As soon as the tank is empty, use the hose to rinse the tank with lukewarm water. Use a fresh wet cloth to wipe away spots of milk on the lid, agitator shaft and inside the tank. Use the hose to spray directly into the spout from the inside.
- 2. Wash.** Fill one of the stainless steel buckets with very hot water. Add chlorinated alkaline detergent as directed on the label. Using the blue brushes, brush all parts of the tank, agitator and lid with the soapy water. Imagine the tank divided into quarters. Brush the wall and bottom of each quarter thoroughly. Brush the inside of the spout. Rinse away soapy water.
- 3. Sanitize.** Close the valve on the spout. Pour bucket of iodine solution into the tank. Use the soft brush to wipe all parts of the tank, agitator and lid with the sanitizing solution. Drain back into the same bucket. Put bucket into the sink. Place drain bucket under spout and rinse the tank with warm or hot water. Wipe away sanitizer from agitator and lid.
- 4. Disassemble** filler adapter. **Rinse, wash and sanitize all parts.** Set on the wire rack to dry, cover with stainless steel bucket.