

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

- Because the cows are fed grass only, with very minimal amount of grains, they do not produce large quantities of milk. They are milked once daily.
- We use two portable milking machines and air tight stainless steel buckets to collect the milk from the cows. Vacuum pressure is set between 11.5 and 12, and pulsation is set for 60ppm.
- When not in use, the milk machines are hung high on hooks, to keep from the possibility of contamination from bacteria on the floor.
- The tank is housed in a separate room from the milking parlour.
- The floor of the milking parlor is washed down daily after each milking.
- We inspect the milking system daily, and replace the inflations and the milk lines as necessary.

Milking Procedure

PREPARING THE EQUIPMENT

Step 1: Sanitize – cold water + 3 ounces chlorine

1. One 5 gallon plastic bucket with cold water and add chlorine.
2. Rinse and assemble milk machines.
3. Put inflations into prepared chlorine water and turn machine on.
4. Run water through machine into milk can. Pulsate.
5. Agitate solution by shaking milk can. Drain hoses and hang to drip-dry.
6. Empty milk can.
7. Assemble hose to transfer pump.
8. Pour chlorine solution into transfer pump.

9. Use clean rag or brush to wash inside of the pump.
10. Drain transfer pump back into bucket.
11. Connect hose for milk room, and turn pump on.

Step 2 Rinse – Hot Water

1. Repeat same procedure as sanitation, using clean hot rinse water instead of chlorine water.
2. Once complete, place the milk can upside down on drying rack to drain.
3. Hang milk machine on hook ensuring hoses are completely drained.
4. For transfer pump, remove hose and turn on pump to expel any remaining water.
5. Drain hose. Attach hose.
6. Place filter system on transfer pump.

Preparing the Parlour

1. Hose down the milking parlour floors and the alley-way floors and wall. This makes clean-up easier.
2. Pour grain and supplements into place.
3. Have both milking buckets assembled and ready.
4. Fill one 5 gallon plastic bucket with hot water for washing the cows.
5. Have microfiber cleaning cloths ready.

Cow Preparation Procedure

1. Pre-dip each teat with iodine-based teat-dip to disinfect and loosen any dirt on their teats.
2. Pre-strip each cow to ensure the milk looks healthy. If any doubt, test the milk.
3. With hot water wash each teat and bottom of each quarter where the inflations will be applied.
4. Dry with a new cloth.
5. Verify that the udder is clean and dry.

Milking

1. After verifying that the cow is clean and dry, turn on vacuum pump and apply inflations.
2. After a cow has finished, detach claw and hang it on the can.
3. Post-dip with lactic acid-based teat dip, covering entire teat.

4. Turn on transfer pump. Remove any water left at the bottom of the pump by slowly pouring in milk in which pushes the water out. Send that into a bucket that is sitting on the tank. Once all the water's out, turn the pump off, remove the bucket and hook the hose into the tank.
5. After removing the lid, hang lid and claw on the hooks attached to the high shelf until milking the next cow.
6. Pour milk from the can through filter into the pump.
7. Make sure tank is clean and dry. Turn on cooling tank.

When I turn the transfer pump on there still a little bit a water left in the bottom of the pump and so I slowly pour the milk in which pushes the water out and I send that into a bucket that is sitting on the tank and then once enough it's going to the hose to ensure that all the waters out I turn the pump off and I remove the bucket and hook the hose into the tank and then proceed to turn the tank on. Also before turning to take on I also open the bottom top to make sure that there is no excess water in the tank from the previous clean.

Additional Cleaning Methods for Dirty Cows

1. Brush off dry dirt, using proper brush. Then follow wash procedures.
2. If excessively dirty, spray clean with hose.
3. Milk all other cows in that shift allowing time to dry, then follow wash procedures ensuring entire udder and bottom of belly are completely dry.

After Milking

DAILY AFTER EVERY MILKING:

Step 1 Rinse – Cold Water

1. Hang milk machines on hook and rinse with cold water, running water through hose until no milk remains. Do not recirculate water.
2. Rinse milk cans with cold water and empty.

Step 2 Wash – Hot Water Must be 165 – 180 degrees (very hot) 3 ounces Basic H soap

3. Fill Transfer pump with hot water and soap. **Circulate** for 10 minutes.
4. Fill Sink with hot water and soap. **WASH** each milker individually by soaking in hot soapy water for minimum 2 minutes. Use appropriate brushes to clean inflations and hoses.
5. **RINSE** milker and hoses thoroughly with warm water until no soap remains. Hang on hook, ensuring all water is drained from hoses.

Step 3 Acid Rinse – Cold Water 1 ounce acid to 6 gallons of water

6. Fill Transfer pump with cold water and acid. **Circulate** for 10 minutes.
7. Fill 2 Rubbermaid bins with cold water and acid. Place milkers into bins until next milking.
8. Remove hose from transfer pump and hang, ensuring no water can remain in hose.

WEEKLY:

Step 1 Rinse – Cold Water

1. Hang milk machines on hook and rinse with cold water, running water through hose until no milk remains. Do not recirculate water.
2. Rinse milk cans with cold water and empty.

Step 2 Wash – Hot Water Must be 165 – 180 degrees (very hot) 1 cup powdered soap

3. Fill Transfer pump with very hot water and powdered soap. **Circulate** for 7 minutes.
4. Fill Sink with very hot water and powdered soap. **WASH** each milker individually by soaking in hot soapy water for 7-10 minutes max. Use appropriate brushes to clean inflations and hoses.
5. **RINSE** milker and hoses thoroughly with warm water until no soap remains. Hang on hook, ensuring all water is drained from hoses.

Step 3 Acid Rinse – Cold Water 1 ounce acid to 6 gallons of water

6. Fill Transfer pump with cold water and acid. **Circulate** for 7 minutes.
7. Fill 2 Rubbermaid bins with cold water and acid. Place milkers into bins until next milking.
8. Remove hose from transfer pump and hang, ensuring no water can remain in hose.

Milk Room Procedures

Cleaning the Cooling Tank

1. Rinse tank with warm water by spraying all around the inside with the hose to clear out the milk residue.
2. Cover bottom of tank with warm water and add 3 pumps of soap.
3. Spread soap over all surfaces of the tank and lid for a pre-soak. Treat the outside of the tank like the inside of the tank.
4. Let soak for a few minutes.

5. Scrub tank, lid, blades, and dip-stick. Make certain to get sides of the blade, not just the blade. Keep scrub brush off the floor.
6. Remove butterfly valve and scrub inside valve and spout.
7. Drain tank and rinse with warm water.
8. Cover bottom of tank with either cold or lukewarm water. Add ½ cup of acid and mix. Wash all surfaces to remove any soap residue.
9. Drain.
10. Rinse with hot water, allowing the rinse water to run out.
11. With a clean cloth, dry tank rim and lid, but don't touch the inside. Just wipe the outside dry. Wipe hose and hang up. Make sure tank valve is turned off and the little black cover goes on the pump-hose attachment.
12. Visual inspection: All surfaces should be sparkly-clean.

WEDNESDAY: extra rinse with ¼ cup chlorine.

Cleaning the Tank Pump

- Every Tuesday & Saturday, you will need to take apart the tank pump after you are done emptying and cleaning the tank.
- Let the parts sit in a mild acid bath until the next day.
- Don't put the clamps in the acid water as that tends to eat away at them too fast. Put the clamps through the dishwasher along with everything else before putting everything back together.
- After the acid soak and before washing, you may need to take a soft scrubbie and remove any buildup on the parts.

Cleaning the Milk Room

- Wash/wipe down all counters with bleach, as well as front of dishwashers, ice machine, and sink
- Drain dishwasher, scrub inside with a brush and soap, than spray down.
- Wipe out with a cloth to pick up debris
- Spray down the floor
- Take a quick look at the window panes on milk room doors, sometimes they are splashed with milk and need a quick wipe
- The green scrub brush should go through the dishwasher regularly at the end of the shift as part of clean up duty. It doesn't have to every day, but 2-3 times a week would be good, and especially if you were using it to scrub yucky bins.
- Put the tank brush through the dishwasher once a week. You can unscrew the handle and just put the brush through.

Once-Weekly Deep Cleaning

- Floor and cement blocks need to be bleached/scrubbed.
- Walls need to be regularly hosed/scrubbed.
- Lid table should be taken out and cleaned behind, weekly or bi-weekly
- Spray behind where empty bins are stacked

Bottling Milk

Livestock owners are responsible for jarring and transporting their milk from their cows in their jars.

Washing Returns/Dirty Jars

- All jars and lids must go through the dishwasher prior to use, even if they have already been previously washed.
- Dirty or milky jars must be washed, rinsed, and sanitized.
- Clean jars and lids can be stacked on table in racks for the next shift, or placed neatly in bins under the table protecting the rim of the jars. Even though they have been sanitized, owners must redo the sanitize cycle prior to use.
- Clean lids can be sorted by type in the bins on the lid table.

Filling Jars

- Attach sanitized milk room hose from tank pump to milk room.
- Use a tap/connecter on milk room end of hose to fill jars.
- Fill sanitized jars with fresh milk from the tank.
- Only use clean, sanitized lids on jars, and be sure to check lids before putting them on the jars to make sure they are clean.
- Fill jars to the first line of the neck. Filling too full not only raises chances for milk to spill, but also encourages bacterial growth if the temperatures are not kept stable.