

Appendix

How to Write a Standard Operating Procedure (SOP)

A Standard Operating Procedure (SOP) is a document that provides step-by-step instructions on how to complete a specific task properly. An SOP may have several distinct parts to help organize and outline all parts of the process. These parts may include a title, purpose (what), scope (who), responsibility (why), materials, and procedure (how). See the example SOP below for more detail on writing each one of these sections. Remember, this is *your* farm, *your* food safety plan, and *your* SOP. Use whatever terminology and layout work for you, your workers, and your farm. The template is provided to help you get started and think through the task in a logical order, but feel free to modify it so it works on your farm.

As you begin to develop an SOP, it is helpful to watch someone actually do the task and write down everything they do. If a particular step has multiple actions, you may want to break out longer steps into sub-steps to make sure your instructions are clear to the person following the SOP. Once you have developed your first draft of instructions, ask other workers or someone who is not familiar with the task to review your SOP. Your SOP should be clear enough that any person could pick up the instructions and complete the task without assistance. For example, if there was a family emergency and the farm must be taken care of by someone else, SOPs are critical in making sure all the farm tasks are completed properly while you are away.

After initial review and revision of your SOP, it is important to give it a trial run. Ask a worker, spouse, friend, or family member to follow the SOP while you watch. Take note of any clarification that could be provided in your instructions to make the process clearer to the user. Do they waiver on a specific step? Do they know where to find the tools, chemicals, and other materials needed to complete the task? Have they used the right equipment? If you find that

the person completing the SOP does not follow the directions as expected, ask for clarification and revise your instructions.

Once your SOP is complete, it should not disappear into a folder, never to be seen again. All workers who may be doing that particular task must be trained to follow the SOP. It is best to post the SOP near where the task is being completed. For example, you can use a plastic sheet cover and a bit of duct tape to post the SOP inside your packinghouse or barn where the task is normally performed. Encourage your workers to notify you if a particular SOP needs to be edited because of a change in the process, chemical supplier (e.g., new sanitizer being used), new equipment, or if it is unclear to them.

SOPs are more than just a piece of paper in your Farm Food Safety Plan. In the busy season, SOPs can save you time by avoiding having to repeat the instructions to new workers or seasonal volunteers. Having written instructions for how to complete specific tasks also makes sure that your Farm Food Safety Plan is being implemented properly.

In most Decision Tree portfolios, you will find sample SOPs for food safety practices. Another sample SOP is provided below. Again, this is *YOUR* farm and *YOUR* farm food safety plan, so edit the SOPs to fit your farm and reflect what you are doing!

Title: Washing and Sanitizing 5-gallon Red Plastic Harvest Totes

Date: July 5, 2014

1.0 Purpose

This section explains what task will be outlined and completed after following the instructions.

This SOP describes how to wash and sanitize the red plastic 5 gallon harvest totes.

2.0 Scope

The scope describes who is included and what areas of the farm may be covered under this SOP.

These instructions apply to the harvest crew and CSA volunteers using the red plastic 5 gallon harvest totes in the field and packinghouse.

3.0 Responsibility

This section outlines WHY the task needs to be done. Adults learn best when they are provided a justification of why the task is important and who is responsible.

Totes must be properly cleaned and sanitized to prevent contamination of produce that is harvested and carried in the totes.

4.0 Materials

Provide a list of all the materials you need to accomplish the task and where to find them in this section.

- Unscented dish soap (e.g., Dawn®)
- Clorox® (approved for use on food contact surfaces), 5.7% NaOCl
- Measuring tablespoon
- Plastic measuring cup (2 cup volume)
- 2 clean plastic buckets for mixing soap and sanitizer solutions
- Clean plastic brushes for scrubbing totes
- Sprayer nozzle for hose
- Potable water source

All materials are stored in the packinghouse side storage room on the second metal rack. Let Joe (farm owner) know if any of the supplies are running low or need to be replaced.

5.0 Procedure

The procedure should include step-by-step instructions on how to complete the task.

1. Measure 2 teaspoons dish soap and mix into clean plastic bucket filled to top line with 2 gallons of water from the packinghouse hose.
2. Measure 1 tablespoon Clorox® with the measuring spoon and mix into a clean plastic bucket filled to top line with 2 gallons of water from the packinghouse hose. This will make ~100ppm chlorine solution for sanitizing.
3. Spray out one dirty red plastic tote with clean water using the packinghouse hose to remove any dirt or leaves from harvesting, just outside the packinghouse entrance on the concrete washing pad.
4. Fill measuring cup to top with soapy water (2 C.) and pour it into one dirty red plastic tote. Use clean scrub brushes to scrub all surfaces to remove dirt. Flip tote over and pour out soapy water into the packinghouse floor drain.
5. Rinse the inside of the tote with clean water from the hose to remove residual suds.
6. Fill one measuring cup to the top (2 C.) with the Clorox solution you prepared. Pour the sanitizing solution into the red tote. Use a clean brush designated for use with the sanitizer to scrub the inside surface and swish around the sanitizer for 1 minute, so that the entire bucket has been sanitized. Flip tote over and pour out sanitizer solution into the packinghouse floor drain or designated area where water can be disposed of properly.
7. While holding the tote upside-down, rinse the inside with potable water from the packinghouse hose and shake out excess water.
8. Place cleaned and sanitized totes on the designated red hooks on the East side of the packinghouse to drip dry.
9. Repeat with remaining dirty red 5 gallon plastic totes.
10. When finished, fill out the *Cleaning and Sanitizing Recordkeeping Log* sheet taped to the storage area wall near the light switch.
11. If any of the totes are cracked or in bad condition, let Joe know by writing him a note and placing it on the cork board in the main office. He will replace them as needed.

Reference

Here is the math used to calculate the amount of Clorox needed to make different volumes of sanitizer water and achieve a 100 ppm solution.

$$= \frac{100 \text{ ppm}}{5.7\%} \times \frac{2 \text{ gal.}}{10,000}, \text{ note that \% (parts per hundred) } \times 10,000 \text{ gives you ppm}$$

$$= \frac{100 \text{ ppm} \times 7570.82 \text{ mL}}{57,000 \text{ ppm}}, \text{ gallons converted to mL}$$

$$= \frac{757,082 \text{ mL}}{57,000}, \text{ the ppm cancels, leaving you working in mL}$$

$$= 13.28 \text{ mL, solved to get the amount of bleach needed}$$

$$= 13.28 \text{ mL} \times \frac{1 \text{ tsp.}}{4.93 \text{ mL}} = 2.70 \text{ tsp, divided by 4.93 mL to convert to tsp}$$

$$= 2.70 \text{ teaspoons of chlorine needed to achieve a 100 ppm solution.}$$

1 Tablespoon = 3 teaspoons

In this SOP, we will round up to 1 tablespoon for simplicity to achieve a 100 ppm solution in 2 gallons of water.