SANITIZING FOR FOOD SAFETY ON THE FARM

Farm operations use a variety of tools and equipment that touch produce. These tools should be sanitized after they have been cleaned and rinsed. Soaking or spraying tools and equipment is a common way to sanitize.

SANITIZERS

The products available for sanitizing food-contact surfaces come in different forms and concentrations.

- When using sanitizers on food-contact surfaces, make sure the label includes an Environmental Protection Agency (EPA) registration number and it is approved for use on food-contact surfaces.

- When choosing a sanitizer for your farm’s food-contact surfaces, consider the safety of workers, the environment, water hardness, pH, and corrosiveness. Choosing the correct sanitizer is important to the health and safety of your farm operation.

Some of the common sanitizers approved to use on food contact surfaces include chlorine, quaternary ammonium or “quats”, and peroxyacetic acid, also known as PAA. Common brands of sanitizers include Clorox Bleach™, Sanidate™, Tsunami™, and Vigorox™. These products are available in different forms and concentrations.

CHLORINE SANITIZERS

Chlorine-based sanitizers are a popular option for small farmers because they are easy to find and are low-cost. There are many chlorine bleach products available in stores and online.

- It is important to check the EPA label because some chlorine bleaches contain fragrances, thickeners and/or other additives not approved for food use.
THE STEPS TO VERIFY PROPER SANITIZATION

1. Use the Pesticide Product and Label System to find the EPA label for your sanitizer. Read the EPA label for directions on how to mix the sanitizer with clean water.

2. Measure and mix the right amount of sanitizer and clean water to make your sanitizer solution. Too much sanitizer could be too strong and corrode your equipment or leave a residue on produce and too little sanitizer will make your solution weak and useless. Remember, different brands of sanitizers vary in their concentrations. Always check the label of the sanitizer you are using.

3. Test your sanitizer solution to make sure that its concentration levels are correct for the item(s) being sanitized. The concentration of your sanitizer mix is measured in parts per million (ppm) and will be specified on the label. One way to test the concentration of your sanitizing solution is to use sanitizer test strips. Test strips can be purchased from your chemical supply company. IMPORTANT: Make sure to use the correct test strips for the specific type of sanitizer that is being used. If you are using chlorine bleach as your sanitizer, you must use chlorine test strips that measure free chlorine. If you are using PAA, then you must use PAA test strips.

4. Continue to check the concentration of your sanitizing solution frequently during use to ensure the concentration is still at an effective level. Sanitizing solutions can lose their effect over time due to exposure to air, soils, soap or other factors that cause the chemical to dissipate.

USE AN ALCOHOL-BASED SANITIZER AFTER DRY CLEANING

Some produce packing areas are best kept dry. Dry cleaning is typical for pecans and berry producers. Dry cleaning involves removing visible soil and other debris from the surface and then applying an alcohol-based sanitizer approved for food-contact surfaces.
SANITIZING

ADDITIONAL RESOURCES

A Guide to Cleaning, Sanitizing and Disinfecting for Produce Farms - [https://blog.uvm.edu/cwcallah/2020/03/30/clean-sanitize-disinfect/](https://blog.uvm.edu/cwcallah/2020/03/30/clean-sanitize-disinfect/)


Labeled Sanitizers for Produce - [https://producesafetyalliance.cornell.edu/sites/producesafetyalliance.cornell.edu/files/shared/documents/PSA-Labeled-Sanitizers-for-Produce.xlsx](https://producesafetyalliance.cornell.edu/sites/producesafetyalliance.cornell.edu/files/shared/documents/PSA-Labeled-Sanitizers-for-Produce.xlsx)

Pesticide Product and Label System - [https://iaspub.epa.gov/apex/pesticides/?p=PPLS](https://iaspub.epa.gov/apex/pesticides/?p=PPLS)

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### General Chemical Sanitizer Guidelines

<table>
<thead>
<tr>
<th>Sanitizer Product</th>
<th>Active Ingredients</th>
<th>Labeled Concentration for Sanitizing Hard Surfaces</th>
<th>Example of Standard Operating Procedure (SOP)</th>
</tr>
</thead>
</table>
| **Ultra Clorox**  | 6.0% Sodium hypochlorite | 200 ppm
1 tbsp. per 1 gallon of water | 1. Remove soil
2. Scrub with detergent
3. Rinse in clean water
4. Prepare 200ppm chlorine sanitizing solution
5. Apply solution- 2 minute of contact time
6. Air Dry |
| Regular Bleach    |                     |                                                 |                                               |
| EPA# 5813-50      |                     |                                                 |                                               |
| Clorox Disinfecting Bleach | 7.5% Sodium hypochlorite | 185 ppm
2 tsp. per 1 gallon of water | 1. Remove soil
2. Scrub with detergent
3. Rinse in clean water
4. Prepare 185 ppm chlorine sanitizing solution
5. Apply solution- 2 minute of contact time
6. Air Dry |
| EPA# 5813-120     |                     |                                                 |                                               |
| SaniDate 5.0      | 23% Hydrogen peroxide
5.3% Peroxyacetic acid | 147-500 ppm
1.6-5.4 fl. Oz. per 5 gallons of water | 1. Remove soil
2. Scrub with detergent
3. Rinse in clean water
4. Prepare 147-500 ppm SaniDate sanitizing solution
5. Apply solution- 1 minute of contact time
6. Drain and Air Dry |
| EPA # 70299-19    |                     |                                                 |                                               |