



## **Episode Twenty Five - Cleaning and Sanitizing**

Welcome to episode 25 of Food Safety Bites, brought to you the University of Wisconsin Madison, and funded by the USDA Food Safety Outreach Program. This is your host Harriet Behar. This episode is **cleaning, and sanitizing with a short discussion on disinfecting**. In these podcast episodes, I will identify issues, and provide suggestions for how to reduce various fresh produce contamination risks and keep your customers safe. I will not talk in detail about what is required for a GAP audit or a FSMA inspection. If you want more information on those, please see the links on the website where you found these podcasts.

Cleaning and sanitizing are different actions, and each have specific functions in produce handling. Each step needs to be done correctly to be effective. When doing any of these activities, it is essential to use water that is acceptable for drinking- taking water out of a stream, adding a sanitizer and then using it to clean a surface- will not provide the produce safety results you are looking for

**Let's start with cleaning-** this is the physical removal of dirt, plant debris, insects or whatever from a surface. The cleaning step starts with removing visible soil, plant debris etc. with a brush or spray of water. Next, use detergent like Dawn or other dish soaps with water that has a lather or bubbles to hold the dirt in suspension and remove it from the surface. Scrub the surface with soapy water to remove stubborn particles and any biofilms present. Then completely rinse with potable water - to remove all of those suspended particles in the soapy water. If using a tool, such as a scraper, scrub brush or sponge during this step, it is a good idea to have those used on direct food contact surfaces be dedicated to those surfaces and be replaced when they cannot be cleaned or are worn and ineffective. Dedicate different tools to the dirtier floor, which tend to be contaminated by dirt and bacteria more frequently than countertops. Consider using a color-coded system like red or green tape on the handles to ID tools

Choose a detergent that is meant for use on food contact surfaces, like dish soap and if certified organic, verify your detergents and sanitizers are approved. Cleaning involves scrubbing and depending on the surface different types of pads or stiff bristle brushes would be used. For example, if you use a screen to spray wash vegetables a soft brush could be more effective, for smooth stainless-steel surfaces, an abrasive pad might work best.

A complete rinse with drinkable water should remove all of the detergent and soils. High pressure sprays can splash that dirty soapy water into the air, around walls, floors, on packaging or other items nearby, so use a steady stream of water that is not pressured and has sufficient volume to remove that dirty soapy water. Congrats, you have done a good job of cleaning, but you are not done yet!

**Next step for food contact surfaces is sanitizing**, which reduces the volume of microorganisms by more the 99%, which are acceptable levels. Remember, we cannot see bacteria that might still be present and problematic, so sanitizing is done on a surface that appears to be clean. Using a sanitizer on a surface where you can still see soils will not work,



so make sure that you clean a surface well before attempting to sanitize. Make sure the sanitizer you use is approved for food contact, bleach you buy at the grocery store for cleaning clothes may not meet that requirement, check the label. You are looking for one that has a section listed on preparing a solution for “food contact surfaces”. You must always follow the recommended concentration of that sanitizer, to make sure you have enough sanitizer to do the job, but not so much as to damage your surfaces or have too high a concentration of sanitizer in the air negatively affecting your workers. Read the label well and follow the mixing and use guidelines for food contact surfaces.

In some cases, the sanitizer you are using might require a rinse afterwards. If you are certified organic and are not using one of the numerous sanitizers that are allowed on the National List for contact with organic produce, you may need to do a clear water rinse after using the sanitizer. If you need to do this rinse, it is a good idea to use some pH test strips to verify all of that sanitizer has been removed at the end of this rinse. In order to verify this, test your clean water for its pH, and then test the wet surface after applying the sanitizer and see the difference between the two tests. The pH of your clean water is what are seeking on your test strip on that food contact surface after the rinse.

If no rinse is required, allow the surface to dry after applying the sanitizer before using that surface for produce. It is a good idea to document your cleaning and sanitizing activities, so all workers can verify that the area is ready for produce handling. After cleaning and sanitizing, you should be ready to use that area. If an area has building up dirt or very dirty water during your produce cleaning, feel free to repeat the steps so the produce you wash last--- is as clean and has the same low risk of carrying pathogens, as the produce you washed first.

**Disinfecting** is a stronger step than sanitizing, perhaps using a different product or a stronger concentration of the sanitizer you are using. It is somewhat over-kill to disinfect every time you clean your food contact surfaces, but this step should be used when there has been an incident where bodily fluids, such as vomit or blood have recently been removed from the food contact surface. Viruses and pathogens that can cause human illness could be spread by these bodily fluids and doing the stronger concentration for disinfection that the product label describes, gives you more confidence that you have dealt with these problems effectively. After disinfection, the product label or organic certification might require a subsequent clear water rinse for food contact surfaces

I will discuss the various food contact surfaces when handling produce and the various schedules for cleaning and sanitizing in a future episode.

So that's it for this episode of Food Safety Bites, the next episode is pack shed zones and equipment cleaning. This is your host Harriet Behar brought to you by the University of Wisconsin Madison, talk to you next time!