

## Cleaning vs. Sanitizing

**Always use water that has no detectable generic *E. coli* in 100 mL for all sanitation steps. Ensure workers have access to and wear appropriate Personal Protective Equipment (PPE).**

*What is the difference and why does it matter?*

**Cleaning:** Physical removal of soil (e.g., plant debris) from surfaces which can include the use of water and detergent

**Sanitizing:** Treating a cleaned surface to effectively destroy microorganisms of public health significance

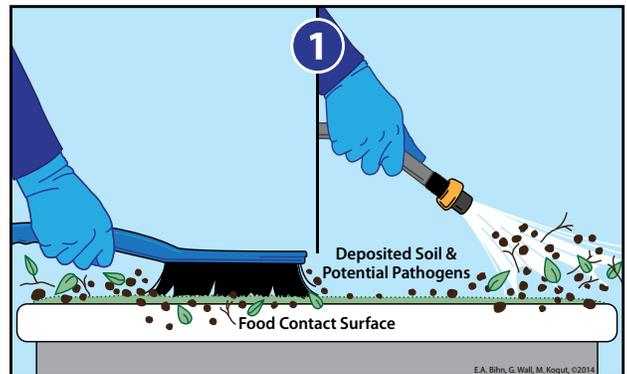
**Important point:** You cannot sanitize a dirty surface. Cleaning always comes first!

- A dirty surface cannot be sanitized! Not all surfaces can be sanitized, but all surfaces can be cleaned! This may include sweeping, wiping off tables, or brushing/rinsing off dirt from harvest totes. Cleaning must be done before sanitizing because sanitizing is generally not effective unless the surface is cleaned first.

### *Four steps to cleaning and sanitizing*

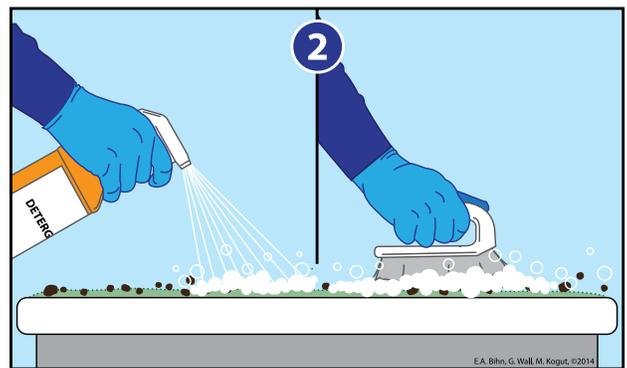
#### **Step 1: Remove any obvious dirt and debris from the food contact surface**

- First, remove any obvious dirt and debris from the food contact surface. This can be done using a brush to sweep, air to blow off, or water to rinse off debris. The right pressure is important.
  - Avoid cleaning with high pressure washers or air compressors, as this could spread pathogens and other debris over a large area.
  - Overly low pressure water or air may not effectively remove soil and debris from surfaces.
  - Use just enough pressure to remove the debris.
- Tools should have a designated area for use. This can be achieved through color coding. For instance, black handles can designate use on floors only and blue handles can designate use on food contact surfaces such as conveyor belts.



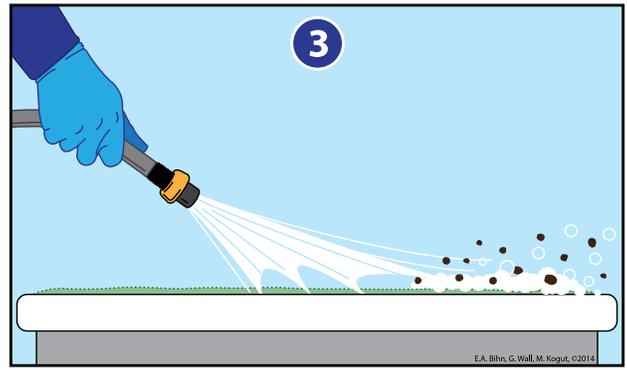
#### **Step 2: Apply a detergent and scrub the surface**

- Be sure to use a detergent effective on the type of soil that needs to be removed. Some detergents are designed to remove fats (e.g., from animal slaughter) while others may be more effective at removing carbohydrates (e.g., sugars from fruit), or proteins, so select the detergent that removes the type of soil that is present.
- Detergents should be appropriate for use on food contact surfaces.
- Apply the detergent at the level recommended on the label and physically scrub the surface to remove any soil.
  - Removing the soil and other organic build-up can help minimize the formation of biofilms.



### Step 3: Rinse the surface with clean water, making sure to remove all the detergent and soil

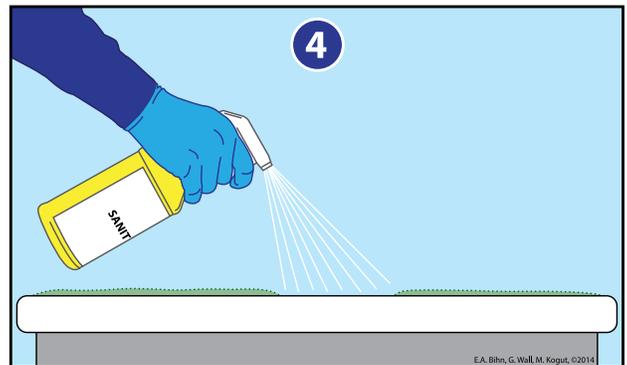
- Rinse the surface with clean water that has no detectable generic *E. coli* in a 100 mL sample.
- Make sure all of the detergent and soil is removed.
- Avoid rinsing with high pressure washers as this could spread pathogens over a large area, recontaminating areas that may have already been cleaned.
- Minimize splashing or aerosolizing to prevent the spread of contamination from one surface (e.g., floors, floor drains) to another by using high volume, low spray water.



### Step 4: Apply a sanitizer approved for use on food contact surfaces, rinse as necessary, and let the surface air dry.

**Note: not all materials can be sanitized.**

- Sanitizer: A substance that reduces the amount of microorganisms to acceptable levels. Sanitizers are generally considered to be part of a broader group of substances called antimicrobial pesticides. The label will describe approved uses, such as for water or for food contact surfaces, as well as approved concentrations.
- Apply a registered sanitizer approved for use on food contact surfaces. Ensure that the product is the proper concentration per the label instructions.
- Apply and use sanitizers according to label instructions. There may be a 5th step if the sanitizer requires a final rinse, so be sure to read and follow the label. See [Selecting an EPA-Labeled Sanitizer](#) fact sheet for more information.
- Allow the surface to air dry.
- Document this as a clean break if the farm separates 'lots' using this process.
- In organic operations, the application of a sanitizer may need to be followed by a potable water rinse. Follow the certifier's requirements for application and residue management on food contact surfaces.



### Clean Breaks

- Establishing a 'clean break' can help limit the amount of product subject to a recall or withdrawal from the market. Many produce packers establish a traceability program, including 'lot' designation, to follow their products through the food system and to limit risk to their business from a recall. A sanitation 'clean break' is needed before and after the production of a 'lot' to consider it separate from other production 'lots'. In a recent produce-associated recall, the lack of a defined clean break resulted in an entire season's worth of production being withdrawn instead being limited to specific 'lot' or 'lots' (Krug, Chapman and Danyluk, 2020).
- Documentation is key to establishing a clean break. Be sure to keep records of when, how, and what was cleaned and sanitized in the packinghouse as well as any monitoring steps and who completed each task. These records will help establish distinct lots and document clean breaks.

### Reference:

- Krug, M., Chapman, B., & Danyluk, M. (2020). [Establishing Lot Size through Sanitation Clean Breaks in Produce Packing Facilities](#). University of Florida/IFAS Extension.