

# DO YOU KNOW HOW TO WASH YOUR HANDS?

Brooke Keadle Emery, Produce Safety Extension Assistant  
Annette Wszelaki, Professor and Extension Specialist

Department of Plant Sciences

Do you know how to wash your hands? It may seem like a silly question, but proper hygiene is essential to reduce food safety risks on your produce farm. Ensuring you and your employees follow proper handwashing guidelines is an easy way to help prevent contaminating the produce that you grow with germs, or microorganisms.

## WHY SHOULD YOU WASH YOUR HANDS?

Farm workers can easily, but unintentionally, spread human pathogens such as E. coli, Salmonella, Hepatitis A, Norovirus, and Shigella from their hands to produce. These microorganisms can get on our hands after going to the bathroom, changing a diaper, handling animals on the farm, and coming into contact with contaminated surfaces (i.e., tools, equipment, sorting tables, faucets). Specifically, many human pathogens are spread from the fecal-oral route, where contaminants from the restroom remain on the unwashed, or improperly washed, hands of a worker. Those contaminants move from the workers hands to the produce, and then the produce is consumed by another human who becomes ill. Proper handwashing can help to reduce this food safety risk. Figures 1 & 2 show a person with simulated contaminated hands that glow under the blacklight before and after proper handwashing. Imagine the “before” hand touching your produce! Proper handwashing also is a requirement within the Food Safety Modernization Act (FSMA) Produce Safety Rule (PSR). FSMA PSR Subpart D 112.32(b) describes practices, including handwashing, that must be completed to satisfy subpart D 112.32(a) requiring all farm personnel to use hygienic practices while working to limit the risk of contamination spread.



**Figure 1.** Hands covered in simulated germs prior to being washed. These ‘germs’ glow under black light. Pay special attention to the high number of germs around the person’s ring!



**Figure 2.** Hands after proper handwashing. All simulated germs have been removed.

## WHEN SHOULD YOU WASH YOUR HANDS?

All farm workers who come in contact with produce must wash their hands:

- before starting the workday
- before resuming work after a break
- before and after eating or smoking
- before putting on gloves
- after using the restroom
- after touching animals (even pets) or animal waste
- and after any other activity that may have contaminated their hands.

**Hand sanitizers CANNOT replace handwashing at any of these times, as hands must be cleaned before they can be sanitized.**

## WHERE SHOULD YOU WASH YOUR HANDS?

Hands must be washed in sinks designated for this purpose using clean water and soap (Fig. 3). Hands cannot be washed in sinks where produce is washed, in irrigation water, or surface water. Water that was used for handwashing must not come in contact with produce, as contaminants from hands will be carried through the water onto the produce. For example, if you have an easily moveable, low-cost handwashing station available for workers as they move from field to field (Fig. 4), it is important to have a bucket or another container to catch the handwashing water. If that water goes onto the ground, employees can track what they have just washed off their hands into the field on their boots or the dirty water can run directly into the field and potentially contaminate produce.



**Figure 3.** Packinghouse handwashing sink with handwashing only sign, how-to sign, soap, single-use paper towels, and trash bin for used paper towels.



**Figure 4.** Movable handwashing station in the field with soap, single-use paper towels, labeled dirty water catch bucket, and labeled trash bin for used paper towels.



## HOW SHOULD YOU WASH YOUR HANDS?

It is a great idea to have a sign near the sink where you wash your hands that shows the steps for proper handwashing (Fig. 3). There are many handwashing signs available to download or purchase. Make sure that they include the following steps:



**Step 1.** Workers should begin by wetting their hands with water.



**Step 2.** Apply soap. Just using water and not using soap can spread contaminants all over your hands, making this practice potentially worse than not washing your hands at all.



**Step 3.** Workers should lather both fronts and backs of hands as well as in between their fingers, around nail beds, and any jewelry. Rub hands together for at least 20 seconds. Singing the happy birthday song twice can be a great way to keep track of time.



**Step 4.** Rinse hands with clean water.





**Step 5.** Use a single-use paper towel to dry. Using paper towels instead of reusable towels helps reduce the risk of contamination. For example, reusable towels can spread contamination to all subsequent people using the towel if someone does not wash their hands properly.



**Step 6.** Use that paper towel to turn off the water faucet. This is an important step! Your hands were dirty when you turned the water on, so if you turn the faucet off with your bare hand, it is now germier again! Consider using the paper towel to open the bathroom door as well in case someone has left without washing his or her hands!



**Step 7.** Be sure to throw the paper towel away in a proper trash can, and do not add used paper towels to the compost pile.



**Step 8.** Now your hands are clean!

Proper handwashing is a simple and effective way to reduce food safety risks on your farm. Moreover, handwashing can help keep your workers healthier by reducing diarrhea-related illnesses and respiratory infections like the common cold (Centers for Disease Control, 2023). Make sure that you and your employees have the knowledge and supplies to do it right!

## RESOURCES:

Centers for Disease Control, 2023. Show Me the Science- Why Wash Your Hands?

<https://www.cdc.gov/handwashing/why-handwashing.html>

Tennessee Department of Agriculture, 2019. Wash Your Hands!

<https://www.tn.gov/content/dam/tn/agriculture/documents/foodsafety/2019/2019%20HandWashing%20Flyer.pdf>

University of Minnesota, 2020. Build a low-cost handwashing station for food safety on the farm.

<https://extension.umn.edu/growing-safe-food/handwashing-station>

## FUNDING STATEMENT:

This publication is supported by the Food and Drug Administration (FDA) of the U.S. Department of Health and Human Services (HHS) as part of a financial assistance award 5U2FFD007410 totaling \$1,321,641 with 100 percent funded by FDA/HHS. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by FDA/HHS, or the U.S. Government.

## PHOTO CREDITS:

All photos taken by Brooke Keadle Emery



UTIA.TENNESSEE.EDU

Real. Life. Solutions.™

SP 1036 12/23 24-0069

Programs in agriculture and natural resources, 4-H youth development, family and consumer sciences, and resource development. University of Tennessee Institute of Agriculture, U.S. Department of Agriculture and County governments cooperating. UT Extension provides equal opportunities in programs and employment.