



COMMUNITY



4-H & YOUTH



ENVIRONMENT



AGRICULTURE



FOOD

Harvesting Produce

The process of harvesting can introduce or encourage the growth of pathogens already present. Consider the following precautions to minimize risk.

Harvest Tools and Equipment

- Clean (wipe and wash) and/or disinfect (dip in an appropriate disinfectant according to manufacturer instructions for disinfecting surfaces) hand tools before each harvest to reduce the spread of human and plant pathogens from plant to plant.
- Wash clothing such as aprons daily and non-disposable gloves when dirty and at least daily. Store in a clean, dry place.
- Harvest equipment and vehicles for hauling crops should be cleaned with a hard spray or power wash before use, particularly if previously used for handling manure, compost or chemicals. A sanitizer might be required where there was previous contact with pathogens.

Field Contamination

- Remove excess field soil from produce prior to placing in harvest containers.
- Do not harvest produce near animal feces, particularly produce that grows on the ground (e.g., melons, strawberries).
- Do not harvest produce that is likely to have been in contact with run-off from nearby livestock fields, manure storage, pesticide applications, human waste systems, or flood waters.
- Do not sell “drops” and harvest-damaged produce, at least not to be consumed raw. Pathogens are better able to attach and grow on produce surfaces that are damaged, bruised or diseased.



An outbreak of *E. coli* 0157:H7 among consumers of local strawberries in Oregon

During the summer of 2011, 15 Oregon residents were diagnosed with *E. coli* 0157:H7. Laboratory analysis revealed that their bacterial strains matched (suggesting a common source) and epidemiologic investigation revealed that all but one person recalled eating strawberries from farmers’ markets or roadside stands, all of which sourced their strawberries from one farm. Deer and deer droppings were observed in the field where the implicated strawberries were grown. Ten of 50 deer droppings collected tested positive for *E. coli* 0157:H7 with a matching “fingerprint” to the outbreak strain. This outbreak resulted in 15 cases of illness, six hospitalizations, and two deaths. It illustrates that locally-grown produce is not exempt from food safety risks, and underscores the need to deter wildlife from fields and establish no-harvest zones around animal feces. <http://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/CDSummaryNewsletter/Documents/2012/ohd6113.pdf>

Produce Temperature

- Harvest early in the morning to avoid the mid-day field heat.
- Use tents or awnings to keep harvested produce out of the sun.
- Make sure that water and ice used for cooling is potable.

Harvest Containers

- Use harvest containers that are made of a material that is non-porous and easily washed and sanitized (e.g., plastic).
- Replaced broken or chipped containers as splinters can end up in food.
- Establish and maintain a harvest container cleaning schedule that is appropriate for your farm conditions and type of produce you are harvesting. Clean on a regular schedule or as needed, for example after harvesting muddy produce following heavy rains. Frequently clean containers used for produce most often associated with foodborne illness and/or typically eaten raw without peeling such as leafy greens, herbs, green onions, cantaloupes, peppers, strawberries, and tomatoes.
- Store harvest containers in a covered area to avoid overhead contamination with bird feces. Ideally, store off the ground on a pallet in a clean area away from rodents and other pests.
- It is best not to have harvest containers in direct contact with soil. Consider putting containers on a cart or plastic mortar mixing bin during harvesting to avoid contact with soil. However, if harvest containers are placed directly on the soil (e.g., in field rows), avoid stacking the containers to prevent soil from the bottom of one container from contaminating produce in the container beneath it. Attempt to remove soil from the bottom of containers before entering the wash area and/or pack shed to reduce the likelihood of contaminating wash water, food contact surfaces, floors, and other produce.
- Containers used for harvesting produce should not be used for non-edible materials such as culls, compost, pesticides, fertilizers, or trash. Clearly label containers for such uses.
- Label or color-code your harvest containers. For example, designate one color for containers that will go to the field (for produce before it is washed) and another color for bins that are used for storage (for produce after it is washed). This will help reduce the opportunity for cross-contamination.



A covered wagon keeps the hot summer sun off harvested produce.

Worker hygiene is critical during harvesting. Hands, gloves, clothing, and outer-garments should be clean. Sick or recently injured workers should not harvest or handle food crops. See the Farm Worker Hygiene fact-sheet for details.



Different colors and styles of harvest containers have specific uses.

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