

# Before and After Harvest Contamination

## Why should we prevent contamination before, during, and after harvest?

- To protect yourself and your customers from injury and illnesses
- This is an important time to assess risks (produce is about to leave the farm!)

**Reminder:** Contamination risks include microbial (bacteria, viruses, parasites), chemical (pesticides, fertilizers, etc.), and physical (wood, glass, metal, plastic, etc.)

## Best Practices

- Worker training and hygiene
- Clean and sanitize all surfaces, containers, transportation, etc.
- Proper use of toilets and handwashing stations
- Designated break areas in fields and packing sheds

- Clean water for drinking, irrigation, and cleaning
- Adequately maintained tools and machinery
- Create and enforce a traceability system
- Proper storage of chemicals (sealed and labeled containers in a locked cabinet)

*Photo credit: Bigstock*



## Before Harvest:

- Wash, scrub, rinse, and sanitize everything before use (discard damaged containers)
- Separate tools used for handling manure and tools for produce
- Keep equipment in good repair (no leaking fluids or loose

- or damaged parts)
- Protect light bulbs and glass on harvesting equipment so it cannot contaminate produce
- Store packing materials in a covered location
- Do not stand or sit in harvest containers
- Do not place hats, rags, or other objects in containers
- Remove dirt and debris from containers before stacking
- Do not stack containers directly on soil or floor

## During Harvest:

- Pick fruits and vegetables when they are dry
- Never harvest produce with animal droppings
- Never harvest fruit that is damaged or rotten
- Never harvest produce that touches or falls on the floor
- Minimize the amount

- of soil contamination, especially for field-packed produce
- Do not leave fresh produce in the sun or under a tree (remove harvested produce from field as soon as possible!)
- Exclude domestic animals and wildlife from fields
- Cover bins as they are transported from the field to the packing area

*Photo credit: Bigstock*



## After Harvest:

- Reduce risks in packing areas:
  - Keep it clean and organized
  - Proper hygiene facilities and break areas for workers



- Pest management (check building for holes and leaks, use traps and sprays as necessary)
- Avoid standing water and condensation
- If using water and ice, make sure it is safe for human consumption
- If using refrigeration or freezers, ensure that the cooling unit is functioning properly and avoid temperature fluctuations
- All vehicles used to transport produce should be inspected before loading (must be clean, sanitized and free from debris and bad odors)

Photo credit: Bigstock



## Traceability

- The ability to track produce back to its source and forward to the next destination (one step back and one step forward)

- Why?
  - Quickly identify the source of a product and speed up an investigation
  - Limit damage to the consumer
  - Prevent damage to the innocent grower
  - DOES NOT prevent a foodborne outbreak!
- How?
  - Map all production areas
  - Label all produce containers with the date and location of harvest

## Note

Put corrective actions in place, keep records, and monitor to make sure the corrective actions have fixed the problem!

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## Resources

<https://extension.psu.edu/food-safety-and-processing>

<https://producesafetyalliance.cornell.edu/>

<https://www.cdc.gov/foodsafety/>

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