

Food Safety in the Garden

Thousands of people in the U.S. become ill each year from eating commercially grown fresh vegetables and fruits that are contaminated with disease-causing microorganisms: lettuce, tomatoes, cantaloupe and other fresh fruits and vegetables. In fact, more foodborne illness outbreaks are linked to fresh produce than to meat or poultry. Bacteria such as Salmonella and E. coli O157:H7 cause foodborne illnesses. The reason may simply be that we are eating more fruits and vegetables. And, we often eat them raw. Contamination occurs when food crops come in direct contact with these or other disease causing microorganisms from animal droppings, human waste, polluted water, contaminated equipment or utensils, or other sources.

Fortunately, the risk of developing a foodborne illness can be minimized. Here are some common-sense guidelines for the safe handling of foods grown in the community garden, keeping foods free from pathogens, and maintaining a safe environment for those working in the garden.

Compost in the Garden

Compost improves soil quality and should be added every year with these recommendations:

- It is a good idea to wear gloves when handling compost. Always wash your hands after handling compost. Use a fingernail brush to remove particles trapped under the nails.
- Do not add any fresh farm manure or pet waste to compost bins or garden soil. Animal manures contain human pathogens that can contaminate vegetable crops. Commercial manure products (composted or dried at high temperatures) are safe to use in community gardens. Blood meal and dried blood are commercial garden products that are safe to use as a natural fertilizer or animal repellent.
- Items that can be safely composted include vegetable peelings, leaves, grass, and shredded paper.

Harvesting garden produce

- Use clean containers that are made from materials designed specifically to safely hold food. Examples include paper grocery bags, 5-gallon food-grade buckets (that held pickles or other food products), colanders or plastic kitchen bowls. Plastic garbage bags, trash cans, and any containers that originally held chemicals such as household cleaners or pesticides are not food-grade.
- Wash hands before and after picking produce. Use clean gloves (that have not been used to stir compost or pull weeds) or clean hands when picking produce.
- Brush, shake or rub off any excess garden soil or debris before putting the produce into the harvest container or bringing produce into the kitchen.
- Avoid eating unwashed produce in the garden.

Storing garden produce

- Even the experts disagree when giving advice on washing garden produce. Some tell you not to wash before storage, and some will tell you to wash off any garden dirt before bringing produce into the home. At issue is this: if you bring in fresh produce loaded

with garden dirt, you may also bring pathogenic microorganisms into your kitchen. However, if you wash your produce before storage, it may mold and rot more quickly.

- If you choose to wash fruits and vegetables before storing, be sure to dry them **thoroughly** with a clean paper towel.
- The temperature of the wash water can affect the safety of some fruits and vegetables. If the water is much colder than the produce, pathogens may be pulled into fruits or vegetables through the stem or blossom end. So, when washing produce fresh from the warm outdoors, the rinse water should not be more than 10 degrees colder than the produce. If you are washing refrigerated produce, use cold water.
- If you choose to store without washing, shake, rub or brush off any garden dirt with a paper towel or soft brush while still outside. Store unwashed produce in plastic bags or containers.
- Produce with thick skins, like potatoes, can be scrubbed with a vegetable brush to remove excess dirt and bacteria. Store without washing.
- Wash berries **immediately** before eating or cooking. Berries that are washed and then stored in the refrigerator will soon become moldy.
- Store fresh produce in plastic bags or containers so they don't contaminate other foods in the refrigerator.
- Fruits and vegetables needing refrigeration can be stored at 40° F or less. If your refrigerator has a fruit and vegetable bin, use that, but be sure to store fresh produce away from (above) raw meats, poultry or fish.
- Keep fruit and vegetable bins in the refrigerator clean.
- If you store fruits and vegetables in the refrigerator, use a thermometer to check that your refrigerator is at the proper temperature (40 degrees F. or less).
- Fruits and vegetables stored at room temperature (onions, potatoes) should be kept in a cool, dry, pest-free, well-ventilated area separate from household chemicals.

Personal Hygiene

- Because foodborne illness can often be traced back to the people who handle food, it is important to use good personal hygiene habits when harvesting or preparing produce for storage or eating.
- After working in the garden always wash your hands well with soap and warm water. Use a nail brush to clean soil from under fingernails. Dry with a paper towel.
- Change out of clothes and shoes soiled with garden dirt and debris before going into the kitchen.
- Ask a family member or friend to pick your produce if you're sick – especially if you have diarrhea. Or, wash your hands and use clean disposable plastic gloves to pick produce.
- Hands with infected cuts or sores can also contaminate produce as you harvest. Cover cuts or sores with a clean bandage and disposable gloves. [Gloves will also protect a cut on your hand from infection by microorganisms in the soil or on the produce].
- Always wash your hands *before* you prepare fruits and vegetables for a meal or snack.

Source: *Food Safety in the Garden* from Univ. of Maryland Extension www.growit.umd.edu; *Food Safety in your Garden*, University of California, <http://anrcatalog.ucdavis.edu/>; *Garden to Table*, New England Food Safety Partnership

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