

## Personal Hygiene

Personal hygiene and sanitation are essential for preventing foodborne illness in the home. This awareness should constantly be reinforced, especially among children.

- Establish family awareness of proper handwashing techniques (wash hands for 20 seconds using warm water and soap, rinse and dry with a clean cloth or paper towel). Pay special attention to cleaning around the fingernails—especially after working in the garden.
- Be aware of the potential for garden gloves and shoes to transfer contamination from one place (such as a compost bin) to another.
- Be aware of children's habits in the garden, especially toddlers in diapers, in handling potentially contaminated material or playing with or petting domestic animals (turtles, cats, rabbits, chicks, etc.) before handling or eating produce.

## Handling Fresh Produce

Information about safe handling fruits and vegetables are available online at:

- Safe-Handling of Fruits & Vegetables  
[http://wifss.ucdavis.edu/pdf/ucfoodsafety\\_english.pdf](http://wifss.ucdavis.edu/pdf/ucfoodsafety_english.pdf)
- Safe Handling of Raw Produce and Fresh-Squeezed Fruit and Vegetable Juices  
<http://www.cfsan.fda.gov/~dms/prodsafe.html>



## Garden and Harvest Sanitation



Any surface or implement that comes in contact with fresh produce could be a source of contamination with pathogens. Well-planned food handling practices in the garden and home can reduce the likelihood of cross contamination.

- Clean all surfaces that contact food including harvest containers or bins prior to use.
- Surfaces can be cleaned with hot soapy water.
- Surfaces can be cleaned with a dilute solution of bleach (1 teaspoon liquid bleach per quart [4 cups] of water). Flood the surface with the bleach solution, allow to stand for several minutes, then rinse and dry with a paper towel or clean cloth.



## Resources

- Good Agricultural Practices  
<http://ucgaps.ucdavis.edu>
- Vegetable Research & Information Center  
<http://vric.ucdavis.edu/selectnewtopic.garden.htm>
- The California Backyard Orchard  
<http://homeorchard.ucdavis.edu/>

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# Food Safety Tips for Your Edible Home Garden



This publication provides an outline of food safety practices important to consider in the edible home garden. You can develop an individual food safety plan for your home garden by applying these principles, which are drawn from research and practical experience.

## Food Safety

Most of the fruits and vegetables consumed in the United States are wholesome and free of pathogens (microbes that cause foodborne illness). Many fruits and vegetables have natural barriers, such as skins and rinds, that protect the internal edible parts from contamination with pathogens.

However, contamination of fruits and vegetables can occur any time from planting through food preparation. Most pathogens can be killed by cooking, but they are difficult to remove by washing from fruits and vegetables that are eaten raw. Therefore, prevention of microbial contamination is the most effective way to maximize the safety of fruits and vegetables.

While most individuals can recover from foodborne illness without complications, others such as the very young, the very old, and those whose immune system are compromised, are at greater risk and can suffer serious complications and even death.

The home garden is not free from pathogens. The best approach to maintaining the wholesome nature of your home garden's harvest is to be aware of potential risks and establish commonsense practices that will minimize the chance of contamination.

## Minimizing Animal Fecal Contamination

Gardens with pets and plants that attract birds and deer may increase the risk of some types of contamination.



It is not possible to eliminate all influences of animals from the garden environment, but you can take steps to minimize their presence or activities.



- During the growing and harvest seasons, keep domestic animals and pets out of the edible garden area.
- Carefully consider whether weed-eating geese or pest-eating ducks and chickens are sensible additions to your garden. Feces from these animals can contain pathogens.
- Minimize vegetation at the edges of fruit and vegetable patches. They can serve as gathering, nesting, or hiding places for animals (rats, mice, etc.) that serve as vectors (sources) of human pathogens.
- Minimize the presence of vector attractants (such as piles of decaying fruit and vegetables) adjacent to your garden.
- Keep harvest equipment surfaces (bins, totes, gloves, boxes, buckets, bushel baskets) clean and sanitary.

## Manure

Be informed about proper home compost management for pathogen reduction, especially if you are using animal manures.

**Green manure:** Typically, a plant cover crop that is grown and then chopped and incorporated into the soil or allowed to decompose for the purpose of soil improvement. "Green manure" does not mean raw animal manure.

- **Properly** composted manure fertilizers, domestic green manures, or heat treated manure fertilizers are **unlikely to be** a source of microbial pathogens.
- Do not use manure from pigs, dogs, and cats for composting or to fertilize your garden. Some parasites from these animals are not destroyed by composting and might remain infectious to humans.
- Maximize the time between the application of composted animal manure to garden areas and harvest.
- Be careful not to contaminate edible crops when applying uncomposted manure to other landscape areas or plants.
- If you are going to use uncomposted manure in your garden, mix it into the soil at least 60 days before planting. Do not leave manure on the soil surface. Do not apply manure after seeding or transplanting edible plants.
- Pathogens survive longer if manure is left on the soil surface. This practice is more likely to result in run-off transfer to non-treated areas. Guidelines to optimize pathogen reduction in compost are available online at <http://ucgaps.ucdavis.edu>.
- Evaluate and reduce the potential for direct and indirect contamination of produce when using manure slurries or manure teas for pest control and foliar nutrients.
- Ensure that any septic system is properly installed and maintained. Faulty septic systems and poorly designed drain fields have caused foodborne illnesses and other diseases.

## Water

Water is one of the most likely vehicles to bring pathogens in direct contact with fresh produce.

- Be familiar with the seasonal quality of any surface water source used for gardening. Surface water can include water from ponds, lakes, streams, and any other water source that is directly exposed to the environment.
- Carefully review all uses of graywater (wastewater from baths, showers, clothes washers, and bathroom sinks) for irrigation of edible garden plants. Do not use any water that could contain pathogens.
- Potable water (pathogen free) equal in quality to water from a municipal water system should be used for:
  - ◊ any foliar (leaf surface) applications
  - ◊ cleaning fresh produce after harvest
- Ensure that home wells are designed and maintained to prevent contamination of the water from surface runoff or soil infiltration.
- Irrigation methods, such as trickle irrigation, that minimize contact between the water and the edible parts of the plant reduce the potential for contamination.



Photo from University of Rhode Island