

FIVE STEPS TO FOOD SAFE SCHOOL GARDENING



Food Safety and Your School's Garden Produce

Establishing and maintaining a garden in a school setting is a great learning project for students, staff and the surrounding community. All involved will certainly feel a sense of pride as the garden yields fruits and vegetables that were planted by their own hands. Teaching basic food safety practices is a great way to incorporate healthy habits that will last a lifetime.

Increasingly, foodborne illness outbreaks are being traced to lettuce, tomatoes, cantaloupe and other raw fruits and vegetables. These outbreaks are caused by pathogenic (disease causing) bacteria, viruses, molds and parasites found on raw produce. ***These microorganisms are a natural part of the environment and can be a problem whether you choose to use organic or conventional gardening methods.***

You can reduce the levels of these microorganisms with good gardening and harvesting practices. Thorough washing and careful preparation will further *reduce* the level of the pathogens found on the outer surface of fresh fruits and vegetables.

It is also possible to get sick from contamination of produce with chemicals such as cleaning solutions, fertilizers, pesticides, and heavy metals (lead) and other chemicals that may be found in garden soil or well water.

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Here are five simple steps school gardeners follow to reduce the risk of foodborne illness from eating the produce from your school garden.

STEP 1-PREPARE THE GARDEN FOR PLANTING

- Be aware of your school's rules and regulations and how they pertain to your garden project.
- Test soil for contaminants, particularly lead, prior to planting.
- Locate vegetable gardens away from manure piles, well caps, garbage cans, septic systems, run-off from any potential sources of contamination, and areas where wildlife, farm animals, or pets roam.
- Use compost safely. Compost is the natural breakdown product of leaves, stems, manures and other organic materials--and also a source of pathogens. To be safe for gardening, your compost must reach a temperature of at least 130°F. Check the temperature with a compost thermometer. Do not use any animal waste, including pet waste, meat scraps or dairy product waste in your compost bin.
- Work with the maintenance staff at the school to ensure safe practices on the school grounds near the garden.

STEP 2- MAINTAIN THE GARDEN

- Schools must water their gardens with water from an approved public water system. You can be sure that water from a municipal or public water system is safe and potable (drinkable).
- Surface water (lakes, ponds, rivers and streams) can be polluted by human sewage or animal waste, fertilizers and pesticides from lawns and farm fields, or chemicals from industry and should not be used.
- Instead of using chemical herbicides, control weeds by using mulch or pulling them out.
- During the gardening season, keep cats, dogs and other pets out of the garden, as animal waste can be a source of bacteria, parasites and viruses.
- Curtail nesting and hiding places for rats and mice by minimizing vegetation at the edges of your fruit and vegetable garden.
- Do not feed wild animals, even birds, near your garden. Fencing or noise deterrents may help discourage other wild animals.

STEP 3-HARVEST GARDEN PRODUCE

- Do not work in the garden when suffering from vomiting and/or diarrhea.
- Always wash your hands before and after harvesting fresh produce.
- Use clean gloves (that have not been used to stir compost or pull weeds) or clean hands when picking produce.
- Use clean, food-grade containers. Food-grade containers are made from materials designed specifically to safely hold food. Garbage bags, trash cans, and any containers that originally held chemicals such as household cleaners or pesticides are not food-grade.
- All tools used in the garden must be used solely in the garden and cleaned regularly.
- Do not eat fresh produce while harvesting.

STEP 4-STORE GARDEN PRODUCE

- If you choose to wash fruits and vegetables before storing, be sure to dry them thoroughly with a clean paper towel. (NEVER wash berries until you are ready to eat them).
- 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. Be sure to label the container in a way that makes it clear to others that it must be washed prior to use.
- Keep fruit and vegetable bins clean.
- 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.
- Fresh fruits and vegetables needing refrigeration (melons, cut leafy greens, and cut tomatoes) can be stored at 45° F or less.
- Fresh fruits and vegetables stored at room temperature (onions, potatoes, whole tomatoes) should be in a cool, dry, pest-free, well-ventilated area separate from household chemicals.

STEP 5-PREPARING AND SERVING FRESH GARDEN PRODUCE

More often than not, we eat fresh fruit and vegetables raw, so we cannot rely on the heat of cooking to destroy pathogens that might be on our lettuce or tomatoes. It is important to prepare raw produce with food safety in mind.

- Always wash your hands before and after handling fresh produce.
- Rinse fresh fruits and vegetables under cool, running, potable, clean water even if you do not plan to eat the skin or rind.
- Never use soap, detergent, or bleach solution to wash fresh fruits or vegetables. These solutions can affect flavor and may not be safe to ingest.
- Avoid cross-contamination when preparing fruits and vegetables. Cross-contamination occurs when a clean work surface, such as a cutting board or utensil (paring knife) or uncontaminated food, is contaminated by dirty work surfaces, utensils, hands or food. Be sure to wash your hands (as well as the knife and cutting surface) before preparing any ready-to-eat foods such as salad, fresh fruit or a sandwich.
- If you have leftover produce that has been cut, sliced, or cooked, store it in clean, airtight containers in the refrigerator at 45°F or less.

Additional resources to be noted: *FDA's Guidance for Industry: Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables*; *Fresh, Healthy, and Safe Food: Best Practices for Using Produce from School Gardens* by National Farm to School Network; *Food Safety in the Garden* from Univ. of Maryland Extension

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