



Food Safety Tips for School Gardens

Schools across the nation are using gardens to help children discover where food comes from and to develop healthy eating habits. Gardens provide a way for children to grow, harvest, prepare, and ultimately taste new fruits and vegetables. When appropriate precautions are taken fruits and vegetables from school gardens can be served safely to students. Before starting a school garden, check with your local health department about their policies on serving food grown in gardens in school meals.

Potential food safety risks should be taken seriously. Produce grown in gardens can be contaminated during growth, harvest, transportation, preparation, or service and result in foodborne illness. The practices addressed in this document will help program operators enhance the safety of fruits and vegetables grown in school gardens.

Produce grown in school gardens may also be served in classrooms. These food safety tips are also applicable for produce served in classrooms. For additional tips, see *Handling Fresh Produce in Classrooms*.

Site Selection, Materials, and Water Use

- Locate gardens away from potential contamination sources (garbage, utilities, animals, water runoff, flooding, septic systems, etc.).
- Contact the utility companies or call 811, the national “Call Before You Dig” number, a few days before digging to ensure that you avoid gas or electric lines.
- Identify soil history from all sources. Have soil tested to determine levels of contaminants such as chemicals, pesticides, lead, etc., especially if located near high-traffic zones. Contact your local Cooperative Extension Office for information on soil testing services available in your area.
- Create reasonable barriers to keep wild animals away from the garden. Examples include fencing or cages over produce items such as strawberries, leafy greens, etc.
- Consider purchasing soil that has been commercially packaged and labeled for growing food crops. Soil purchased from a commercial source ensures traceability.
- Use non-toxic, non-leaching materials for raised-bed gardens, containers, stakes, or trellises. Do not use pressure-treated wood, used tires, single use plastics, old railroad ties, etc.
- Select non-allergenic and non-toxic plants. Check with your local Cooperative Extension office if you need assistance determining plant safety or toxicity.





Food Safety Tips for School Gardens, continued

- Test all water sources annually, except municipal sources, for potentially harmful organisms, such as fecal coliforms, to make sure they meet the standards of the Environmental Protection Agency (EPA). Test water collected in cisterns. Contact your local Cooperative Extension Office for assistance.
- Maintain water testing records.
- Use food grade containers to transport water.

Chemical and Fertilizer Use

- Do not use any pesticides or herbicides due to potential health hazards to children.
- Check with your county Cooperative Extension Office for the best non-chemical method of control for local pest problems.
- Read and follow the manufacturer's instructions when using fertilizer.
- Secure all fertilizers in a safe and locked location when not in use.
- Allow only adults to handle fertilizers.
- Check with your local health department about applicable Occupational Health and Safety Administration (OSHA) hazard communication requirements. Maintain Material Safety Data Sheets (MSDS) as required. More information is available at: <http://www.osha.gov/dsg/hazcom/index.html>.
- Maintain information on safe use and potential hazards that is available on product labels or from the manufacturer, for all fertilizers.
- Label the container with the common name of the fertilizer if transferring fertilizers into a dispensing container. Never use a food container.
- Dispose of fertilizer and its containers according to the manufacturer's instructions.

Compost and Manure Use

Composting is a highly complex process that requires strict attention to specific procedures and conditions. This fact sheet summarizes key points, but is not comprehensive. Contact your local Cooperative Extension Office, or a composting expert for assistance.

- Avoid the use of raw manure, as it may increase the risk of contamination from pathogens.
- Use of composting manure in school gardens is not recommended due to increased risk of contamination from pathogens that are not completely destroyed. Contact your Cooperative Extension Office to ensure that proper procedures are followed if you plan to compost manure for a school garden.
- Consider purchasing traceable, commercially prepared compost, if manure-based compost is desired.
- Consider using worms to form vermicompost. Learn about vermicomposting at: <http://www.bae.ncsu.edu/topic/vermicomposting/>.



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- Add only plant products, such as fresh fruit and vegetable culls from food production (apple and pear cores and vegetable trimmings), to a school compost pile. Other plant material, such as grass clippings, leaves, and twigs also can be added to fruit and vegetable clippings.
- Do not use animal products, animal waste, or any cafeteria waste in a compost pile, as it might contain animal products. Harmful pathogens might be introduced through animal products and must be properly managed to ensure their destruction.
- Wear gloves when handling compost material.
- Locate the compost pile in a secure location away from potential contamination, such as garbage, water runoff, etc. Restrict access by animals as much as possible.



Growing and Harvesting Produce

A school garden provides an opportunity for children and volunteers to learn about how to handle food safely. The following are some food safety tips to follow when growing and harvesting produce.

- Ensure that all persons, including staff, students, and volunteers receive basic food and gardening safety training instructions according to local health regulations. The following topics are recommended:
 - ◆ Handwashing and personal hygiene
 - ◆ Cleaning and sanitizing garden equipment and containers used to hold produce
 - ◆ Handling produce during harvest, washing, and transportation
 - ◆ Glove use
- Ensure that volunteers are covered by the school district insurance policy in the event of accident or injury.
- Require signed permission slips for all student gardeners. Permission slips should list potential hazards of working in a school garden and identify any allergies the child may have.
- Do not allow anyone to work in the garden while sick, or until 24 hours after symptoms, such as vomiting or diarrhea, have subsided.
- Ensure that all harvesters wash hands thoroughly in warm, soapy water for at least 10 to 15 seconds, and then rinse with potable water. Ensure that all open cuts or wounds on hands, arms, or legs are properly covered prior to participating in the harvest.
- Require harvesters to wear closed-toed shoes to prevent cuts, stings, or other injuries.
- Consider using single-use disposable gloves when harvesting, or handling, fresh produce as an extra precaution.
- Harvest the garden regularly and remove any rotten produce.



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- Use cleaned and sanitized food grade containers, such as plastic bins or buckets, to hold harvested produce. Do not use garbage bags, garbage cans, and any container that originally held chemicals. These types of containers are made from materials that are not intended for food use.
- Clean harvesting tools, such as knives, scissors, etc., with soap and potable water immediately before and after each gardening session.

Using School Garden Produce in your School Meal Program

- Check with your local health department to ensure that local regulations permit food from gardens to be served as part of school meals.
- If the harvest from the school garden will be used in the school meals program, the school garden coordinator should work cooperatively with the school nutrition director to plan and implement the garden.
- Discuss food safety practices in the garden with school garden coordinators. Consider asking gardeners to document their practices. Use the information in this document as a guide to identify appropriate practices.
- Accept produce harvested from school gardens only when school nutrition staff is present to receive it. All produce dropped off or left when staff is not present should not be used in the school meal programs.
- See *Best Practices: Handling Fresh Produce in Schools* for guidelines on receiving, storage, preparation, and service of fresh produce in schools.
- Reject produce that does not meet school nutrition program standards.
- Receive and inspect produce harvested from school gardens according to the same procedures used to inspect produce from the district's distributors.
- Do not use any produce that has been noticeably contaminated by animals or insects.
- Refrigerate garden produce immediately, unless the particular item is normally held at room temperature.
- Store, prepare, and serve school garden produce separately from other sources of produce to maintain traceability.
- Document service of school garden produce on the menu management/ food production record. See *Ensuring Traceability of Fresh Produce* for more information.
- Ensure that liability for a potential foodborne illness caused by produce grown in school gardens is covered by your school district.



Food Safety Tips for School Gardens, continued



Addressing Community Donations

Members of your local community, or staff or faculty at your school(s) may want to donate produce grown in private or community gardens to your school meal programs or to your school(s). Although their intentions are good, these products must be safe and of acceptable quality to serve in your school meals program. Before accepting donations, ensure that donated produce food safety practices have been followed to grow, handle, and transport the produce.

- Check all local and state health regulations regarding receiving community donations before you accept these products.
- Provide information to community members about USDA policies and regulations for school meal programs and state and local health requirements that you must follow. Address questions in a positive manner.
- Determine whether your school district has liability insurance to cover any food safety issues that may result from produce received from private or community gardens. These entities typically do not carry product liability insurance for potential food safety risks.
- Develop guidelines and expectations for growing and handling practices for any fruits or vegetables used in your schools. Share this information with individuals or groups who are interested in donating produce to your schools.
- Visit any gardens that supply produce to your school foodservice program to evaluate food safety practices. Discuss the practices in this document with gardeners. (See *Verifying On-Farm Food Safety* for additional information)
- Only accept donations that are dropped off when a school nutrition staff member is present to receive them.
- Conduct a visual inspection of any vehicle used to transport produce to a school to assess whether it is clean. A vehicle should not be used to transport fresh produce if it is also used to transport live animals.
- Rotten or damaged produce should not be accepted.





Food Safety Tips for School Gardens, continued

Resources

Verifying On-Farm Food Safety

Ensuring Traceability of Fresh Produce

Best Practices: Handling Fresh Produce in Schools

Handling Fresh Produce in Classrooms

Healthy School Meals Resource System School Gardens and Farm to School Resources:

http://healthymeals.nal.usda.gov/nal_display/index.php?info_center=14&tax_level=2&tax_subject=526&level3_id=0&level4_id=0&level5_id=0&topic_id=2314&placement_default=0

National Gardening Association, www.kidgardening.org

Garden to Table: Five steps to food safe fruit and vegetable home gardening. University of Rhode Island, Connecticut, Maine, New Hampshire and Vermont. <http://www.sde.ct.gov/sde/LIB/sde/pdf/DEPS/Nutrition/OPmemos/10/5stepsOM1010.pdf>

Grow It Healthy, University of Maryland Extension, www.growit.umd.edu

Safety in the garden, California, <http://www.cde.ca.gov/ls/nu/he/gardensafety.asp>

Bucklin-Sporer, A. & Pringle, R.K. (2010). *How to grow a school garden: A complete guide for parents and teachers*. Portland, OR: Timber Press, Inc.

McGrath, M. (2006). *Book of Compost*. New York: Sterling Publishing Company, Inc.

Note: USDA's Food and Nutrition Service has addressed questions regarding the operation of a school garden in Memo SP 32-2009, dated July 29, 2009:
http://www.fns.usda.gov/cnd/governance/Policy-Memos/2009/SP_32-2009_os.pdf.

While this policy memo outlines how school food authorities may operate or purchase foods from school gardens, school nutrition programs are not required to grow or use any produce from school gardens.