

FOOD SAFETY



DEVELOPING A FOOD SAFETY PLAN FOR YOUR FRESH PRODUCE OPERATION

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The safety of fresh fruits and vegetables for direct consumption is an important issue for both consumers and producers. During the past few decades, consumption of fresh produce has increased substantially as people have learned more about the health benefits of a diet rich in fresh fruits and vegetables. Along with this increased consumption of fresh produce there has been an increase in food borne disease outbreaks associated with fresh produce. Both consumers and producers suffer adversely when fresh produce related outbreaks occur. Consumers suffer serious health risks and the produce industry suffers from a loss in consumer confidence and trust and the resultant loss of sales. Aside from the tragic losses in human productivity and potential caused by illness and even death, an outbreak can result in the loss of millions of dollars from lost sales and lawsuits.

Farm-to-School programs need to be proactive concerning food safety. This section provides the important simple steps that any produce grower, school kitchen or school garden should follow to ensure a safe locally grown fruit and vegetable supply to our students.

Good Agricultural Practices

Good Agricultural Practices (GAPs) are an important concept for producers of fresh fruits and vegetables to understand in order to assure the microbial safety of produce that is grown in their operation. GAPs involve many things, but suffice it to say they are practices used during planting, production, harvest and after harvest to guard the safety of fresh produce.

One point to understand is there is not a one-size-fits-all plan for food safety. GAPs must be uniquely tailored to crops and management practices for each farm. Basically, we should focus on reducing the risk of contaminating fresh produce. It is not possible at this time to completely eliminate food safety risks; in fact the Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables states “current technologies cannot eliminate all potential food safety hazards associated with fresh produce that will be eaten raw.”

Times when producers should be vigilant to reduce and control food safety risks include prior to planting, during the planting stage, during production, and during and after harvest. Before planting, growers should complete a grower risk assessment. Cornell University has a great publication to help with this, titled “Food Safety Begins on the Farm – A Grower Self Assessment of Food Safety Risks.” This publication is available online at <http://www.gaps.cornell.edu/index.html>. The document includes 24 sections that provide GAPs and checklists for everything from worker hygiene to petting zoos. Working through the assessment will help producers in developing a food safety plan for their operation.

Good Manufacturing Practices

Good Manufacturing Practices (GMPs) take over where GAPs leave off. GMPs cover issues such as sanitary design of the packing shed itself and any produce-handling equipment or produce contact surfaces, packing shed pest control, packing shed sanitation, worker health and hygiene monitoring, and temperature control for produce that requires refrigeration. Sanitizing washes or dips, which rely on chlorine or other sanitizers to kill harmful microbes, also may be part of a GMP program. The overall goal of a GMP program is to minimize and control the risks of contamination that occur after harvest and during packing, and includes many of the same principles that are applied as part of a GAPs program.

It is important to note that an on-farm packing shed is not normally considered a food processing facility. This means that an on-farm packing shed is generally exempt from state and federal licensing and inspection requirements that apply specifically to food processing facilities. However, there are certain produce-handling operations that would commonly be called a packing shed that could be regarded as a food processing facility by state and federal authorities. Specifically, any process that alters the natural state of a raw agricultural product may be construed as food processing. Generally this would include operations such as peeling, shelling, cutting and sometimes re-packaging harvested produce into retail packs. Be aware these sorts of activities will likely change the regulatory status of an on-farm produce handling facility.

The worksheets mentioned in this section can be found at www.okfarmtoschool.com/resources/fts-distro-foodsafetymanual.

STEP 1: ADDRESS PRE-PLANT ISSUES

- **Site Selection.** Prevention should begin with proper field selection. Property surrounding the site should be checked to determine the chance contaminants can enter the field from dust, runoff or animals. See site selection worksheet.
- **Water.** Water for irrigation should be tested annually or more often for fecal coliforms (2.2 fecal coliforms per 100 ml is the EPA limit for non-potable uses). Overhead irrigation water should be treated if fecal coliforms exceed the limit mentioned above. See worksheet for irrigation and spray water.
- **Land history.** History of site use including past crops, applications of pesticides or other chemicals, animal waste applications, etc. This should indicate if the soil has potential for causing crop contamination or has potential for crop damage from previous land use. See site selection worksheet.
- **Wildlife and domestic animals.** Animals have serious potential for contaminating the crop with feces. Scout the field for game trails and adjacent areas for the potential of harboring wildlife or domestic animals that could enter the field. If concern exists, you will need to develop a plan to reduce these risks. See site selection worksheet.
- **Crop selection.** Different crops vary in their potential for being contaminated. Root and leafy crops have a much greater potential for contamination than crops that flower and fruit (i.e. tomato, tree fruits, brambles, snapbeans), grain or forage crops.
- **Other potential risks.** These might include contamination by pets, workers, visitors, field machinery, etc.

STEP 2: ADDRESS PRODUCTION ISSUES

- **Irrigation / spray water.** Water is the most likely way of spreading contamination to fresh produce. During production, pay special attention to monitoring irrigation water safety and using only potable water for crop sprays. Water supplies should be tested at least annually and more often if well sites have experienced flooding or are uncapped. See worksheet for irrigation and spray water.
Irrigating using drip or furrow irrigation is less likely to spread contamination to produce than overhead or flood irrigation.
- **Field worker hygiene.** Field worker hygiene is an important part of keeping fresh produce safe during production. Provide not only convenient clean restroom and hand-washing facilities, but also training to

ensure workers understand the importance of personal hygiene for keeping fresh produce safe to eat. Worker training materials and videos are available at the National GAPs training website (<http://www.gaps.cornell.edu/educationalmaterials.html>). See worksheet on worker training.

- **Fertilizer use.** Fertilizers vary in their potential to harbor microbial contaminants. Synthetic fertilizers have low potential for contamination while un-composted and improperly composted manure has a high potential. Sidedressing during the growing season should use only well composted manure or synthetic fertilizers. See worksheet on fertilizer, compost and manure application.
- **Wildlife control.** Controlling access to the field will reduce the risk of contamination from people, livestock and wildlife. Exclude livestock, including pets and poultry, from the field with fencing or other means. Develop and implement a plan to manage wildlife access through appropriate methods. Workers and visitors access to the field should be controlled to limit access when wet field conditions exist. See worksheets on wildlife control.

STEP 3: ADDRESS HARVEST ISSUES

- **Harvest worker hygiene.** Worker and U-Pick customer health and hygiene is a key component of the overall program to guard the safety of fresh produce during harvest. Workers will need to be trained in their responsibilities, and well-maintained facilities will need to be provided to allow them to carry these out. U-Pick customers will need convenient well maintained restroom facilities and signage to encourage them to follow good sanitary practices. See worksheets for worker training and field and packing shed restroom cleaning.
- **Harvest equipment cleaning.** Harvest equipment must be maintained in a clean and sanitary condition. Pressure wash, rinse, and sanitize all harvest bins, harvest aids, and machinery daily. Cover washed and sanitized bins to prevent recontamination by wildlife. Maintain harvest equipment to minimize abrasion and wounding of fresh produce. See worksheets for worker training, field harvest/processing / packing / cleaning and the field and packing shed restroom cleaning and service log.
- **Avoid damaging produce.** Wounds or other damage provides an entry point for harmful microorganisms into fresh produce. And once inside, these microorganisms cannot be removed or killed by washing or sanitizing agents. Therefore, is it very important to

avoid damaging produce before or after harvest. Be aware of equipment or contact surfaces that may cut, bruise, or compress produce. Minimize operations that transfer produce from one container to another. Also, beware of damage to produce that may occur during harvest from improper use of equipment, untrimmed fingernails and so on. Remove damaged produce from packaging area to a cull pile.

- **Holding / transport equipment cleaning.** Transportation and holding equipment including bins, trailers, trucks, etc. should be checked on a daily basis and maintained in a clean and sanitary condition. Follow a checklist for inspection of vehicles that will be carrying fresh produce. See worksheets for truck checklist and processing, packing line, facility cleaning.

- **Fresh produce cleaning.** Safe produce handling should include removing soil from produce as it may be a source of contamination. Clean equipment and produce before it enters the packing shed. Consider using a sanitizing agent as part of the cleaning process. Damaged or diseased produce should be culled in the field to avoid contamination. Note culled produce should be transported to a remote cull pile as soon as possible in order to avoid attracting pests or creating a reservoir for both human and plant pathogens.

STEP 4: POST HARVEST ISSUES TO ADDRESS

- **Packing shed cleaning.** The packing shed should receive a general cleanup to remove dirt, debris, and culled produce at least once a day. Produce-handling equipment and any surface coming in contact with produce should be cleaned and sanitized daily. Bathrooms, sinks, waste receptacles and floor drains also should be cleaned and sanitized daily, or more often if needed. Frequent inspections of the facility should be performed throughout the day to ensure sanitary conditions are maintained. Cold rooms should be cleaned and sanitized once a month or as operations allow. Rodent and insect traps and other pest control aids should be inspected and renewed as necessary – generally at least once a month. See worksheets on field, packing shed restroom cleaning and service, processing packing line facility cleaning, and pest / rodent control.

Note high-pressure hoses are not recommended for general cleaning when produce is being packed because high-pressure water sprays can spread harmful microorganisms over fairly long distances.

A 200 PPM chlorine solution (1 tbs household bleach / gallon water) makes an effective sanitizing solution when applied with a contact time of at least two minutes. Prior cleaning is important to ensure

that the sanitizer is effective. Note surfaces sanitized with 200 PPM or stronger chlorine should be rinsed with clean water or allowed to air dry before coming into contact with produce.

- **Cooling or wash water sanitation.** Water used for cooling or washing must be clean and potable (drinkable). If water is being sanitized by adding chlorine, then the strength of the chlorine solution must be checked at least daily, more often if required, or whenever a fresh tank of water is prepared. See Washing / Cooling / Sanitizing Water Treatment worksheet.

- **Cooling water temperatures.** If a water tank is being used to hydrocool fresh produce ensure the cooling water is no more than 10°F cooler than the incoming produce to minimize the risk that produce will imbibe water during cooling.

- **Strength of sanitizing washes.** Table 1 gives basic recommendations for chlorine-based sanitizing solutions that can be used to help ensure the safety of fresh produce. If a sanitizing wash is appropriate, the strength of the chlorine solution should be monitored at least once a day, more often if required or whenever a fresh tank of solution is prepared. Be aware the strength of the chlorine will dissipate over time, and the more soil is present on the produce, the more quickly the strength of a chlorine-based sanitizing solution will be lost. See Washing / Cooling / Sanitizing Water Treatment worksheet.

- **Proper storage of packed produce.** Hold and store produce away from possible hazards, e.g. cleaning agents, pesticides, etc. Hold and store produce off the floor, away from walls and in such a way as to avoid damage. If the produce is stored in a cold room, be sure to monitor and record temperatures. See cooler temperature worksheet.

- **Transportation of packed produce.** Trucks used to transport produce should be cleaned and sanitized prior to loading. If trucks are not used exclusively to transport produce, then be aware of what other items may have been previously transported and clean accordingly. If refrigerated transportation is being employed, consider using temperature monitoring systems to help ensure proper refrigeration temperatures are being maintained during shipping. See truck checklist worksheet.

STEP 5: ADDRESS IMPORTANT RECORD KEEPING ISSUES

- Create and maintain records for all employee trainings (see worker training log).

- Create and maintain records of facility cleaning and sanitizing (see processing, packing line, facility cleaning and field, packing shed restroom cleaning and service worksheets).

- Create and maintain records of produce sanitizing, if applicable (see washing / cooling / sanitizing water treatment worksheet).
- Develop a traceback system for your farm that will allow you to trace produce to the field it was harvested from, including harvest date (see produce tracing and recall traceback worksheets).
- Consider developing a HACCP-like program for your farm (Hazard Analysis Critical Control Points). This system will identify where contamination problems are likely to occur (Critical Control Points) and will provide ways to address these potential hazards.
- Records of all produce leaving your farm should be maintained to assist you in traceback and in any other problems that may occur. Remember if you don't record it, you didn't do it (see produce tracing worksheet).

Food Safety Log & Worksheet Templates

The following worksheets, as found on www.okfarmtoschool.com/resources/fts-distro-foodsafetymanual are intended to serve as templates pertaining to documentation and record keeping occurring within a typical fresh produce food safety program.

- Site Selection Review
- Irrigation Spray Water Treatment Log
- Worker Training Log
- Fertilizer / Compost / Manure Applications Log
- Wildlife Control Log
- Field / Packing Shed Restroom Cleaning and Service Log
- Field Harvest / Processing / Packing Cleaning Log
- Truck Checklist
- Processing / Packing Line / Facility Cleaning Log
- Pest / Rodent Control Log
- Washing / Cooling / Sanitizing Water Treatment Log
- Cooler Temperature Log & Calibration of Your Thermometer Information
- Produce Tracing Log
- Recall / Traceback log
- Illness / Injury Reporting Log
- First Aid Kit Monitoring Log
- Visitor Log

These worksheets were adapted from documents developed by Cornell University Department of Food Science.

Table 1. Strength of chlorine sanitizing wash recommended for various types of produce.

Type of Produce	Recommended PPM Chlorine	Bleach/gallon of water ¹
Apples, pears, squash, cucumbers	65 PPM	1 tsp/gal
Leafy greens, peaches, peppers, tomatoes, asparagus, broccoli, carrots	130 PPM	2 tsp/gal
Melons, citrus, root crops	400 PPM ²	2 tbs/gal
Berries (strawberries, blueberries, blackberries, raspberries, etc.)	No washing	N/A

¹ Bleach/gallon of water based on using household bleach containing no fragrances or thickeners with a base concentration of 5.25% sodium hypochlorite.

² Sanitizing wash should be followed by a potable water rinse.

Table 2. Common types of sanitizers and their characteristics.

Sanitizer	Chlorine-based	Quaternary ammonia "Quats"	Iodophors "Iodine-based"
Uses	Produce wash water, equipment and facilities	Hands, facilities, food contact-surface, & equipment	Facilities, food contact-surfaces & equipment
Recommended Concentrations	* <200 ppm without rinsing * < 2,000 ppm with potable H ₂ O rinse	* <200 ppm without rinsing * 200-500 ppm with potable H ₂ O rinse	* 12.5-25 ppm without rinsing * >25 ppm with potable H ₂ O rinse
Contact Time Required	1 to 5 minutes at 200 ppm	>1 minute	>1 minute
Advantages	<ul style="list-style-type: none"> • Inexpensive • Available • Wide range of effectiveness 	<ul style="list-style-type: none"> • Non-corrosive • Relatively non-irritating 	<ul style="list-style-type: none"> • Effective at: low concentration wide pH range hard water • Non-irritating • Good penetration • Prevents biofilm formation • Good residual
Disadvantages	<ul style="list-style-type: none"> • Corrosive • Irritating fumes • Rapid loss of effectiveness 	<ul style="list-style-type: none"> • Good residual activity/stability • Less effective than others for control of E. coli 	<ul style="list-style-type: none"> • Expensive • May stain • Not a cleaner

GLOSSARY OF FOOD SAFETY TERMS

Case. The illness of one person associated with food.

Clean or cleaning. Removing soils and residues from surfaces by washing and scrubbing with soap or detergent and rinsing with clean water.

Cold chain. The maintenance of proper cooling temperatures throughout the food system (farm to fork) for fruits and vegetables to assure product safety and quality.

Contaminate. To transfer impurities or harmful microorganisms to food surfaces or water.

Cull. To pick out and destroy fruits or vegetables that are not up to quality or food safety standards due to blemishes, wounds, bruises, being misshapen or due to obvious contamination, e.g. with fecal matter.

Foodborne illness. An illness transmitted to people through food products resulting from ingesting foods that contain pathogens, their toxins or poisonous chemicals.

Good agricultural practices (GAPs). The basic environmental and operational conditions necessary for the production of safe, wholesome fruits and vegetables.

Good manufacturing practices (GMPs). The basic environmental and operational conditions necessary for the packing and processing of safe, wholesome fruits and vegetables.

Hepatitis A virus. Virus that causes a disease of the liver. It can be found in water that has been contaminated with raw sewage. Infected workers also can transmit hepatitis A.

Imbibe. To absorb moisture into a fruit, leaf tissue or other plant part.

Microorganism or microbe. Bacteria, molds, viruses, etc. so small they cannot be seen without a microscope. Some are beneficial others spoil food, and some cause sickness and even death.

Nonpotable water. Water that is not safe to drink. Sources may be polluted by sewage, animal waste or chemical runoff from agricultural fields and urban landscapes.

Outbreak from foodborne sources. An incident in which two or more persons experience a similar illness after eating a common food and epidemiological analysis implicates the common food as the source of the illness.

Pathogen. Any microorganism that causes disease in humans.

pH (Acidity/Alkalinity). pH is the measure of acidity or alkalinity in a food product, expressed on a 0 to 14 scale with 7 being neutral, below 7 being acidic, above 7 being alkaline.

Potable water. Clean water that is safe to drink. Produce contact surfaces. Surfaces of equipment with which fruits and vegetables come into contact.

Rinsing. Removal of residues, soil, grease, soap and detergents from surfaces by flushing with potable water.

Sanitizer. A chemical compound designed to kill microorganisms. Two commonly used sanitizers are chlorine bleach and quaternary ammonium compounds (“quats”). Sanitizer solutions are made by mixing a measured amount of the sanitizer with potable water, according to label directions.

Sanitizing. Process to kill microorganisms. Includes rinsing, soaking, spraying or wiping the surface with a sanitizing solution. Surfaces should be properly washed and rinsed before they are sanitized.

Total titratable chlorine. The amount of chlorine determined by an acidified starch iodide and thiosulfate titration.

Traceback. Ability to trace a fruit or vegetable back to its field of origin.

Washing. Removing all solid soil or food residues from surfaces by scrubbing with soap or detergent.

Glossary of food safety terms were adapted from “Food Safety Begins on the Farm, A Grower’s Guide, Good Agricultural Practices for Fresh Fruits and Vegetables” by the Cooperative State Research, Education and Extension Service, the United States Department of Agriculture and United States Food and Drug Administration.

FRESH PRODUCE HANDLING TIPS FOR SCHOOLS

There are many resources available and already in place for food safety in the school food service program. You will find a sample for Standard Operating Procedures for washing fruits and vegetables and other resources for more in-depth food safety information.

Staying Healthy ... Staying Safe

Fruits and vegetables are an important part of a healthy diet. Local farmers carry an immense variety of fresh fruits and vegetables that are nutritious and delicious.

As you enjoy fresh fruits and vegetables, it is important to handle these products safely to reduce the risks of foodborne illness.

Buying Tips for Fresh Produce

You can help keep produce safe by making wise buying decisions with your local farmer.

- Purchase produce that is not bruised or damaged.
- Bag fresh fruits and vegetables separately from meat, poultry and seafood products.

Storage Tips for Fresh Produce

Proper storage of fresh produce can affect quality and safety. To maintain quality of certain perishable fresh fruits and vegetables — such as strawberries, lettuce, herbs and mushrooms — store them in a clean refrigerator at a temperature of 40°F or below.

Quick Tips ●●●●●●●●●●



All produce purchased pre-cut or peeled should be refrigerated to maintain both quality and safety.



Keep your refrigerator set at 40°F or below. Use a fridge thermometer to check!



Preparation Tips for Fresh Produce

What About pre-washed produce? Many bagged produce items, such as lettuce, are pre-washed but usually need to be washed prior to use. As an extra measure of caution, you can wash the produce again prior to use. Pre-cut or pre-washed produce in open bags should be washed before using.

- ✓ Begin with clean hands. Wash your hands for 20 seconds with warm water and soap before and after preparing fresh produce.
- ✓ Cut away any damaged or bruised areas on fresh fruits and vegetables before preparing and/or eating. Produce that looks rotten should be discarded.
- ✓ All produce should be thoroughly washed before eating. This includes produce grown conventionally or organically at home, or produce that is purchased from a grocery store or farmers' market. Wash fruits and vegetables under running water just before eating, cutting or cooking.
- ✓ Even if you plan to peel the produce before eating, it is still important to wash it first.
- ✓ Washing fruits and vegetables with soap or detergent or using commercial produce washes is not recommended.
- ✓ Scrub firm produce, such as melons and cucumbers, with a clean produce brush.
- ✓ Drying produce with a clean cloth towel or paper towel may further reduce bacteria that may be present.
- ✓ Separate for Safety Keep fruits and vegetables that will be eaten raw separate from other foods such as raw meat, poultry or seafood - and from kitchen utensils used for those products.
- ✓ Wash cutting boards, dishes, utensils and counter tops with hot water and soap between the preparation of raw meat, poultry and seafood products, and the preparation of produce that will not be cooked.
- ✓ For added protection, kitchen sanitizers can be used on cutting boards and counter tops periodically. Try a solution of one teaspoon of chlorine bleach to one quart of water.
- ✓ If you use plastic or other non-porous cutting boards, run them through the dishwasher after use.

FRESH, HEALTHY, AND SAFE FOOD:

BEST PRACTICES FOR USING PRODUCE FROM SCHOOL GARDENS

These best practices were created as a collaborative effort among school garden practitioners from across the country. Thanks to Kelly Erwin, Deb Habib, Tegan Hagy, Noli Hoye, Dana Hudson, Marion Kalb, Emily Jackson, Catherine Sands and Amy Winston.

School Gardens serve as exciting living laboratories and are an important component of Farm to School efforts. The bounty from school gardens can contribute to the school cafeteria, students' families or be used in classroom and afterschool taste-testing activities.

The following practices are intended to provide basic food safety guidelines for those involved with school gardens. They include principles from Good Agricultural Practices and safe food handling procedures and are intended to serve as a framework that may easily be adapted to meet individual school settings and regional requirements. The safety benefits of fresh food grown on site include the avoidance of potential contamination that accompanies long-distance travel (where products frequently change hands) and control over the supply chain direct from garden to table.

Safe handling information should be provided to students, teachers and others involved in growing, harvesting and preparing. In addition to the many benefits of fresh food, healthy activity and learning, your school garden can be an educational tool that helps teach students about food safety procedures.



Recently the USDA Child Nutrition clarified that school nutrition programs participating in the National School Lunch and Breakfast Program could use federal reimbursable dollars from their school lunch and use for certain supplies for a school garden.

It also clarified that programs such as school gardens, FFA and 4-H could sell garden produce they grow to their school cafeterias.

With the clarification being made, it is important for school organizations to follow simple food safety protocol to ensure the safety of the produce they would sell to the school cafeteria or school markets.



GROWING PRACTICES

All organic matter should be fully composted in aerobic conditions and at high temperatures prior to application. Avoid raw manure and limit composted manure to what can be purchased from a commercial outlet to ensure traceability.

When using water for irrigation make sure it is potable and from a tested source. Check with your state cooperative extension or state health offices for simple testing kits.

If soil used for growing is coming from school property, test for contaminants before planting. Testing kits are usually available through your state, same as water testing above.

There are many places to purchase seeds for your school garden, so be conscious of where your seeds come from and consider source and quality. Look for those that are preferably non-genetically modified and come from companies that have taken a "safe seed pledge."

Materials used for garden beds, containers, stakes or trellises should be constructed of non-toxic, non-leaching material (no pressure treated wood or used tires).

No synthetic pesticides or herbicides should be used.



Q: Can the school food service use funds from the nonprofit school food service account to purchase seeds for a school garden?

A: Yes, with the understanding the garden is used within the context of the program, i.e. selling the food or providing food in the classroom as part of an educational lesson.

Q: Can the school food service use funds from the nonprofit school food service account to purchase items for the school garden such as fertilizer, watering cans, rakes, etc.?

A: Yes, as long as the items are used for the purpose of starting and maintaining the garden.

Q: Can a school sell food grown in its school garden that was funded using the nonprofit school food service account?

A: Yes, as long as the revenue from the sale of the food accrues back to the nonprofit school food service account. Schools can serve the produce as part of a reimbursable meal or sell it à la carte, to parents, to PTA members, at a roadside stand, etc.

Q: Are there health/safety issues involved with school gardens?

A: Yes. School Food Authorities need to familiarize themselves with the federal, state and local requirements regarding health and sanitation issues.

Q: Can the school food service purchase produce from another school organization that is maintaining and managing the garden, such as FFA?

A: Yes, the school food service may purchase produce from a garden run by a school organization such as FFA, which is an agricultural education program for students.

Q: Can funds received through the Fresh Fruits and Vegetables Program (FFVP) be used to purchase seeds/tools/equipment for a school garden?

A: No. FFVP funds may not be used for the purchase of any materials for school gardens.

Q: What if there is excess produce from the garden at the end of the school year?

A: The school should first see if the excess food can be used to benefit another program such as the SFSP. If that is not possible, they could try selling the food (as always, the profit must accrue back to the nonprofit school food service account) or donate it in accordance with state and local health/safety regulations.



http://www.fns.usda.gov/cnd/governance/policy-memos/2009/sp_32-2009_os.pdf





HARVESTING AND HANDLING

Students, staff, parents or volunteers involved in harvesting should wash hands thoroughly in warm soapy water for at least 20 seconds prior to harvesting. Anyone with open cuts or wounds on their extremities should not participate in harvest until they have healed.

All harvesting tools — scissors, bowls, tubs — should be food-grade and/or food service approved and designated solely for harvest and food handling. The tools should be cleaned regularly with hot water and soap, then dried.

School garden produce delivered for use in a school cafeteria should be received and inspected by food service personnel upon delivery with the same system used to receive and inspect all other incoming products.

If storage is necessary, produce should be cooled and refrigerated promptly after harvest. Temperatures vary on type of produce being harvested; specific post-harvest storage and transportation temperatures can be found at <http://postharvest.ucdavis.edu/produce/storage/index.shtm>.

School garden produce should be washed according to the same standards that the cafeteria has in place for conventionally received produce. A person with ServSafe or comparable food-safety certification should supervise students, parents or staff who participate in any food preparation, i.e. taste-testings or special cafeteria events.

OTHER CONSIDERATIONS AND RECOMMENDATIONS

Those planning and planting the school garden should review your school's rules and regulations. Some plants that can cause serious allergic reactions may be prohibited.

If the garden is near parking areas or other high-traffic zones, consider testing for contaminants before growing fruits and vegetables. Many states have agriculture extension services that can help with this. If building a raised-bed garden, consider purchasing soil meant for food production from an established retail entity to ensure soil safety and traceability.

If your school has a composting program for cafeteria waste, use the resulting compost for flowers, ornamental plants and trees rather than for garden beds where food is grown. Compost that comes from garden waste can be applied to food-growing beds if deemed appropriate by the school garden supervisor and/or compost coordinator.

Be sure to coordinate with school grounds-keeping or custodial staff about your garden's goals, protocols and maintenance plan. If you are concerned about the presence of pesticides on or near your garden, be sure to communicate that, too. Consider using your school garden as an educational tool that can teach students about food safety procedures and incorporate curricula that teach to these issues in your garden educational plan.

Be sure your school garden program is aligned with any relevant school district policies including, but not limited to, wellness policies, school procedures for receiving gifts and donations, working with parent and community volunteers, and liability policies.