

MN School Garden & Farm To Cafeteria Safety

A Food Safety Operations Manual



Statewide
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Program

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H E A L T H R E F O R M

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Thank you!

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***To be considered
'healthy', food
must be safe as
well as nutritious.***

The benefits of fresh produce grown on site or locally include the avoidance of potential contamination that may accompany long-distance travel (where products frequently change hands) and lack of control over the supply chain from the local farm or garden to the table.

Introduction

This manual's focus is food safety for produce from school gardens or local growers; from field to consumption in the cafeteria. Gardens provide a way for people to grow, harvest, prepare, and ultimately taste locally grown fruits and vegetables. If not handled properly, produce grown in gardens can be contaminated during growth, harvest, transportation, preparation, or service. Information contained in this document is designed to help garden managers or growers, and cafeteria managers participating in farm to school initiatives to minimize the risk for foodborne illness.

We learned during the development of this manual that there can be challenges to starting a school garden or participating in a local farm to school program. Food safety was one of the major concerns that needed to be addressed. Following the guidelines outlined in this manual will help cafeteria and school management ensure food safety and prevent it from becoming a barrier to using local foods or establishing a school garden.



Through the support of the Statewide Health Improvement Program, the Minnesota Department of Health has identified four strategies to combat poor nutrition and childhood obesity. School gardens (also known as edible schoolyards, outdoor classrooms, or farm to school) is one strategy to promote access to local food and potentially increase consumption of healthier food options. Research has shown that children who are intimately involved in edible schoolyards have increased their daily vegetable and fruit consumption by 2.5 servings per day. (Academy of Nutrition & Dietetics)

Pre-Season Planning

Form a Planning Committee

Step 1: Organize a meeting for people who are interested in participating in the school garden. Post or send flyers home with students to encourage families and neighbors to get involved with the students. Volunteers, such as parents, grandparents, neighbors, scouts, faith-based organizations and volunteer master gardeners, are critical in sustaining a school garden (including over the summer break). In addition, it is essential that the school administration and the cafeteria manager (the food safety expert) approves and participates in the planning process.

Step 2: At the first meeting, select a person to coordinate and lead the garden project. It may be best (logistically) to have a teacher, cafeteria manager and/or other school personnel *co-chair* with a parent or volunteer for successful school garden coordination. **Plan ahead: who will be the consumers of the garden produce? And, how will the harvest to distribution timeline affect cafeteria menu planning (which usually starts even before the typical planting season) if that will be your primary consumer?**

Step 3: Form committees that will help organize different tasks such as finances, timelines, volunteer coordination, youth activities, recordkeeping, acquiring resources (seeds, equipment, water, land, etc.) & construction.

Step 4: Don't forget to *plan for* and celebrate school garden successes and accomplishments. Regular, planful recognition of volunteer & student successes and efforts, as well as local sponsorship recognition, is critical for school garden sustainability.

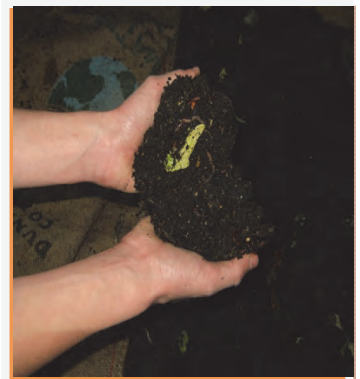
Resource: communitygarden.org

For more information on:

- Development of an Edible Schoolyard Initiative
- Garden design, including outdoor classroom areas
- Financial resources & grants, supplies and equipment
- Planting techniques
- Garden maintenance plan
- Sustaining the garden and ideas for showing appreciation to volunteers
- Linking to school curriculum
- Recommended vegetables & fruit

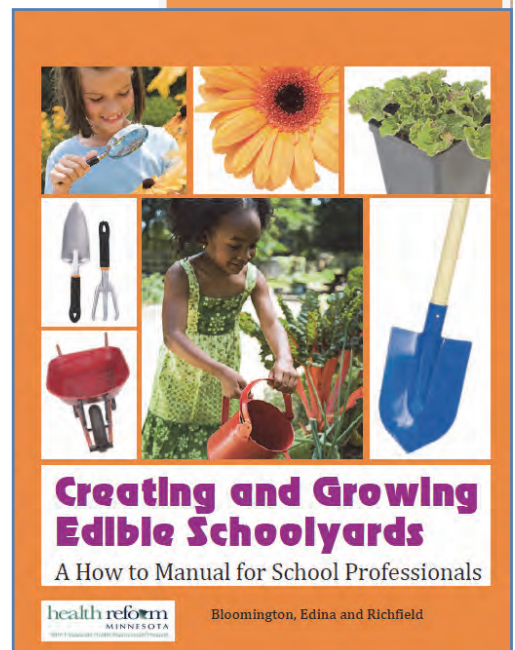
Go To:

<http://www.health.state.mn.us/divs/hpcd/chp/cdr/nutrition/docsandpdf/CreatingandGrowingEdibleSchoolyardsManual.pdf>



Students who plant and harvest their own fruits and vegetables are more likely to eat them.

(Resource: California "School Gardens for Learning-Creating & Sustaining Your School Garden")



Site Selection & Preparation: Potential Health & Safety Concerns

Site Selection, Materials, and Water Use

- Research past land-use of the proposed garden site. Contact your local USDA Cooperative Extension Office or University of Minnesota Extension for information on soil testing services available in your area. Resource: *Understanding your soil test report for lawn, garden and landscape plants*. <http://www1.extension.umn.edu/about/offices/>
- Consider purchasing seeds and soil that have been commercially packaged and labeled for growing food crops. Soil purchased from a commercial source ensures traceability. Though the use of a manure/soil mixture in a school garden is not recommended, if it is used, ensure a commercial source and application by a trained adult.
- Locate gardens away from potential contamination sources (such as; garbage, utilities, storm water and manure runoff, areas prone to flooding, septic systems and animals).
- Create reasonable barriers to keep wild animals and roaming domestic animals away from the garden. Examples include perimeter fencing or cages over produce items such as strawberries and leafy greens. Ensure domestic animals and pets are contained a safe distance away from the garden site.
- Use only 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 University of Minnesota Extension if you need assistance determining plant safety or toxicity. In addition, ensure a safe seed source.
- Use of potable water is recommended. Test all water sources annually, except municipal sources, for potentially harmful organisms such as fecal coliforms; to be sure the water source meets the drinking water standards of the Minnesota Department of Health. Also, periodically test water collected in cisterns and rain barrels. Rain water collected in containers should not be used to water vegetable and fruit crops due to bacteria, viruses, protozoa and chemicals that are found on

**Remember to
“Call Before You
Dig!”
Contact the utility
company or dial
811 to avoid gas
and electric lines.**



roof tops and grow in the collection container. Rain water should be used to water non edible plants like flowers and trees. Resource: www.extension.umn.edu/environment/00023.pdf

Finally, don't forget your garden workers!

- Create a shady area for gardeners to relax out of the sun.
- Ensure a safe drinking water source near the garden.

Chemical and Fertilizer Use

- Use of chemical pesticides or herbicides is not recommended due to potential health hazards to children. Check with your local USDA Cooperative Extension Office or University of Minnesota Extension 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.
- Label the container with the common name of the fertilizer if transferring fertilizers into a dispensing container. Never use a food container.
- Allow only trained adults to handle fertilizer and pesticides.
- Maintain Material Safety Data Sheets (MSDS) per applicable Occupational Health and Safety Administration (OSHA) hazard communication requirements. More information is available at: <http://www.osha.gov/dsg/hazcom/index.html>
- Dispose of fertilizer and its containers according to the manufacturer's instructions and applicable state and local codes.

Compost Safety

- Composting is a highly complex process that requires strict attention to specific procedures and conditions. Contact your local USDA Cooperative Extension Office, University of Minnesota Extension, or a composting expert for assistance.
- Do not use manure, as it may increase the risk of contamination from pathogens that are not completely destroyed during the composting process.
- Add only plant products, such as fresh fruit and vegetable culls or peelings 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. Though when using grass clippings, check with the lawn service providing the clippings to be sure they do not contain pesticide residue.
- **Do not** use animal products, animal waste, or trash in a compost pile, as it might contain animal products and garbage. Harmful pathogens might be introduced through animal products and must be properly managed to ensure their destruction.
- Wear garden gloves when handling compost material. (Then wash hands thoroughly).
- 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.



Security & Liability Considerations

- Make a sign to identify the garden.
- Make a sign to prohibit non garden users from entering.
- Make fences – (if needed) to keep domestic and wild life out of the garden. Fences may also help to detour some individuals (though won't keep everyone out).
- Invite a local community officer to the garden to provide suggestions in making it safer and more secure.
- Indicate drop-off and parking areas.
- Establish severe weather and emergency plans, and train garden workers to those plans.
- First aid kit is available to garden workers.
- Ensure volunteers are covered by the school district insurance policy in the event of accident or injury, and they understand and follow the school's policy regarding interaction with minors and access to school property.
- 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.

For an overview of key legal issues involved in farm to school and school garden programs; reference the "**Legal Issues Impacting Farm to School and School Garden Programs in Minnesota**" legal synopsis provided by the Public Health Law Center at William Mitchell College of Law.

<http://publichealthlawcenter.org>

Resource: http://www.fns.usda.gov/cnd/Guidance/foodsafety_schoolgardens.pdf



Harvest Safety

Garden Worker Health & Hygiene

- Anyone who is ill, is **vomiting or has diarrhea**, must not work in the garden until 2 days after illness symptoms disappear.
- Restroom facilities, such as portable toilets, need to be conveniently located to the garden area & accessible during volunteer hours.
- A handwashing station must be available with soap, water, and paper towels at the garden site.
- Instruct garden workers to wash hands thoroughly with soap and water prior to harvesting and handling produce, such as trimming, packing, and transport and, after gardening and harvest activities.
- Designate a Person-in-Charge during all hours of operation to ensure;
 - Garden workers are trained on food safety principles
 - Garden food safety procedures are followed
 - Workers arrive healthy for work

Note: An example *poster for handwashing and illness prevention* are available in the appendix of this manual for posting at the field handwashing station.

- Garden gloves can be used to limit bare hand contact with harvested produce. When disposable gloves are used:
 - Wash hands thoroughly before and after wearing gloves, and when changing to a new pair of gloves.
 - Discard gloves when torn, contaminated, or removed for any reason.
 - Change gloves when interruptions occur in the harvest operation.
 - Change gloves frequently, *at least* once per hour.
 - Never reuse gloves under any circumstances.

Preparation for the Consumer, Volume, Storage & Distribution Considerations

- **Plan ahead – who are your consumers and what time frame do you or they need the produce distributed from harvest to consumption? Consider contacting the cafeteria manager early – prior to their menu planning**
- Use *only* food-grade containers for storage – no garbage bags, trash cans, or chemical storage containers or old sheetrock buckets. Harvest bins and containers that are cracked or damaged should not be used for produce.
- Plan to deliver produce promptly to the consumer directly after harvest.

“How to Build a Field Handwashing Station in 10 easy steps for under \$20”
(University of Minnesota, Agricultural Health & Safety Program)

Resource available at:

http://safety.cfans.umn.edu/files/2011/12/Handwashing_station_instructions.pdf



1. Water container
2. Soap
3. Trash can with lid
4. Water catching bucket
5. 'Drawer' for holding single use paper towels
6. Wood
7. Screws
8. Bungee cord

- If storage is necessary, best practice guidelines should be followed.
 - Harvested produce must be stored in a cool, dry, and pest free location. Harvest bins of produce being transported from the garden to the storage location should be covered to make sure the produce doesn't get dirty from birds or other animals and stays cool.
 - If refrigeration is needed, maintain refrigeration units below 41°F.
- Designate a place to store harvest tools and equipment and harvest containers. Establish a cleaning and sanitizing schedule for tools and harvest containers.
- Though not necessary, produce can be rinsed according to the same standards that the cafeteria has in place for conventionally received produce. Rinse under spray nozzle or clean running water (do not store/soak in a bin of water), no chemicals added, potable water.
- If not rinsing; shake, rub or brush off any garden dirt with a paper towel or soft brush while outside. Store in food-grade containers and label with the common name of the food and date of harvest.

Resource: University of Connecticut, College of Agriculture and Natural Resources Cooperative Extension System

School Garden Produce Rinsing Station (Golden Hill School, Rochester, MN)

*Plain, potable water can be used to rinse the soil from harvested produce.



clean dirty clean dirty clean dirty

- There are three produce rinsing stations for students to remove soil from harvested produce. **Note:** Only “limited processing” defined as; sorting, trimming as part of the harvest, brushing off soil, or rinsing with plain, potable water is recommended at the garden site.
- Before the rinsing station, remove excess dirt from the produce.

Another ‘best practices’ resource: *“Fresh, Healthy, and Safe Food: Best Practices for Using Produce from School Gardens”*. A document created with the support of the National Farm to School Network (www.farmtoschool.org)

Create a Harvest & Traceability Log that includes:

- Date harvested
- Field/garden location
- Name of produce harvested
- Amount harvested
- Name of Person(s) that harvested the produce
- Date shipped & amount shipped to consumer
- Name of consumer
- Initials of garden leader that had oversight over that day’s harvest.

(An example Harvest and Traceability Log is available in the **Appendix** of this manual).

Resource: *“FSP4U, A food Safety Plan for You. Templates and Log Sheets”* (University of Minnesota, Agricultural Health & Safety Program)

- Spray rinse produce in the sink basins (**do not soak**) under running water that drains immediately. Allow produce to dry on the 'clean' drying racks or dry with disposable single-use paper towels.
- Place produce into food-grade plastic tubs with bottom drainage grates (stored off the ground, such as on a cart) and promptly deliver to the cafeteria/consumer or appropriately store per guidelines above.

**Be sure that approved food grade water hose is used from the water source to the rinsing station, appropriate backflow prevention devices are installed, and the soiled rinse water is appropriately

drained away from the rinsing station in order not to create a nuisance. The rinsing station must be cleaned and sanitized before and after use for each day the rinsing station is used.

Additional Resources:

- *Growing School Gardens.* University of Minnesota Extension, Farm to School. <http://www1.extension.umn.edu/food/farm-to-school/school-gardens/getting-started>
- *MN School Gardens: A Guide to Gardening and Plant Science.* Featuring K-12 lessons & activities connecting the classroom, garden & food consumed in the cafeteria. <http://www.mda.state.mn.us/maitc>
- *Cleaning and Sanitizing Harvest Tools* factsheet. <http://safety.cfans.umn.edu/files/2012/08/Cleaning-Sanitizing-Tools-Feb2.pdf>
- (FSP4U) *A Food Safety Plan for You.* This resource provides a variety of detailed template agriculture procedures and planning charts. Standard operating procedures resource for local agricultural businesses, growers or farmers. <http://safety.cfans.umn.edu>

Training

Garden 'Rules' and Food Safety Procedures

Develop and provide a set of guidelines for teachers, students and other volunteers. Post some general garden 'rules' in the garden or growing site area.

Recordkeeping

Document the type of training and to whom the training was provided.

Training should include:

- Garden rules
- Health and handwashing instruction
- Equipment, garden tools, and garden area cleaning schedules
- Other equipment or garden operations training as needed

If a consumer of the produce harvested from the garden reports that they have become ill after eating that produce, the garden manager should contact their local health department. The health department can advise the garden manager on next-steps and will obtain the necessary illness symptoms and other food history information from the ill consumer and refer that information to the MN Department of Health as needed.

Training Resources Available

Note: This list is not inclusive of all resources available regarding food and garden safety, nor does this list indicate endorsement by Olmsted County Public Health Services or any other agency or persons that assisted in the development of this manual. These are just a few examples of resources available.

- **FIGHT BAC! For Kids.** Food safety curriculum, games and activities, videos, and other educational materials, including all age groups; K-3, 4-8, and 9-12. <http://www.fightbac.org/kids/>
- **Food Safety Lessons.** Lessons and activities on food safety and handwashing available for elementary, middle, and high school students.

Additional information available from the University of Minnesota Extension:

Minnesota Toolkit for School Food Service

<http://www1.extension.umn.edu/food/farm-to-school/toolkit/>

‘Licensed’ or ‘certified’ does not necessarily mean ‘safe’. A safe source could mean a licensed or an exempt from licensing food source.

Both are considered an “approved source” if they meet applicable regulations and/or licensing exemption requirements.

“Approved” as defined in the Minnesota Food Code means acceptable to the regulatory authority based on a determination of conformity with principles, practices, and generally recognized standards that protect public health.

Available from Rhode Island, Food-Safe Schools.
http://www.foodsafeschools.org/FSAG_CD/Resoures/RI/RILessonPlans/index.htm

• **Fruits, Vegetables, and Food Safety: Health and Hygiene on the Farm.** Available in English, Spanish and Hmong. A resource for adult or high school garden workers. <http://www.gaps.cornell.edu/>

Produce Safety in the Cafeteria

Licensed food facilities, such as cafeterias, can accept produce directly from a grower or school garden. Generally speaking, cafeterias and restaurants are regulated by the Minnesota Department of Health (MDH) or local delegated health agency, and farmers/growers are regulated by the Minnesota Department of Agriculture (MDA). Cafeteria managers and farmers - prepare for and connect early with your regulatory agency to start a food safety conversation.

After a local farm or garden has been identified or you have been contacted by a grower, what are the next steps?

Verifying a ‘Safe’ Source

Cafeteria managers may or may not have time to actually visit the farm. As the person-in-charge of the food service, the cafeteria manager has the responsibility to ensure the safety of foods received from any supplier, large or small. With or without an on-farm visit, the following questions can help start the conversation to determine if the produce is a ‘safe’ source, i.e., the grower or distributor has taken *reasonable care* for food safety by implementing food safety policies and procedures to minimize the risk for foodborne illness; from planting to harvesting to delivery.

Ask the farmer or garden manager

- **Do you have written food safety procedures? May I get copies to review?**
- **If a license is required, do you have one?** Note: A license is not required of a grower selling directly to you their own whole produce, meaning produce in its natural, raw state or produce that has received only “limited process” defined as: sorting, trimming as part of the harvest, brushing off soil, or rinsing with plain, potable water only.

- **If you have received inspection(s) from a regulatory agency, may I see the last few inspection reports?** Note: A GAP (Good Agricultural Practices) audit is not an inspection by a regulatory agency. It is a voluntary process some growers choose to participate in. Getting a GAP audit is similar to a HACCP (Hazard Analysis Critical Control Point) food safety plan, but very few farmers in Minnesota are GAP audited and it is not required. However, if a grower has gone through a GAP audit, be sure to ask to see their certificate or food safety plan.
- **Do you have a safe, potable drinking water supply for irrigation and minor soil removal from produce? If it is a private (non-municipal) drinking water well:**
 - Is the well protected from contamination?
 - Are water test records available for review?
- **If produce is rinsed, what is the disposal method for waste water from the rinsing process?**
- **Do you have an employee illness, hygiene, and handwashing policy?**
 - Is a handwashing station (equipped with soap, running water, and paper towel) available at the garden or field, and are employees monitored to ensure hands are washed at all appropriate times particularly during harvest?
 - Are workers trained about handwashing?
 - Do workers know to put on clean aprons/clothes prior to handling, washing, or packing harvested produce?
 - Do workers limit bare hand contact with harvested, cleaned, and ready-to-eat foods?
- **How do you prevent cross-contamination risks?**
 - Are animals allowed into the growing area? Are animal pens located near the growing area?
 - How and on what schedules are harvest and food storage equipment cleaned and sanitized?
 - What is the storage mechanism (refrigeration, indoor or outdoor storage facilities, etc?) and for how long is produce stored between harvest and delivery to the cafeteria?
 - How does produce arrive, i.e. truck, refrigerated, in food grade containers, etc? Are food-grade storage containers and packing materials used for storage/transport of harvested produce? What is the cleaning and sanitizing schedule for all food equipment and transport vehicle interior?
- **Where and how are chemicals or pesticides stored?**
- **What kind of fertilizer do you use, i.e., compost, commercial, or animal waste?** [Use of manure fertilizer is not recommended]
- **Do you have a pest management plan?**
- **What kind of food safety training do you provide to the farm workers?** Resource: NFSMI (National Food Service Management Institute, University of Mississippi) and Iowa State University; *A Checklist for Purchasing Local Produce*

**** It is recommended that you review the answers to these questions with your health inspector or regulatory agency.**

“Buying Local Food for Food Service in Minnesota”.

A publication of the Minnesota Project is a resource that can provide information on using locally grown food, including:

- Directories that list farmers, cooperatives, distributors and collaboratives that sell local products in Minnesota
- A chart showing the peak season for locally grown produce availability.

While this information is geared towards purchasing from local growers, it should also be collected for school gardens since is useful in calculating the cost/benefit of using school garden produce within the cafeteria and important for future sustainability considerations.

“What Farmers Should Know”. Details of the new 2012 Healthy Hunger-Free Kids Act standards that were developed to increase nutrition, which provide more opportunity for farm-to-school programs to grow.

Available at:

<http://www1.extension.umn.edu/food/farm-to-school/farmers/getting-started/docs/what-farmers-should-know.pdf>

Menu Planning

Connect early with a grower to understand what kind, how much, and when the produce will be available to meet the needs of your menu.

Discuss the following with the grower *prior* to purchasing:

1. Ordering procedures:

- How far in advance will grower be able to inform you of product availability?
- How can orders be placed? (phone, fax, online)
- What is the communication process if the grower is unable to complete the order in the agreed upon timeframe?
- What is the price and unit of costing?

2. Delivery procedures:

- When is the best time for orders to be received?
- What is the frequency of deliveries?

3. Payment procedures:

- What is the lead time required by the school district accounting office to add vendors?
- What is the timing for payment of invoices?

4. Specifications:

- What is the desired quality, size, package unit and other specific information about the product that the produce needs to know?
- What substitutes are acceptable?
- What is inappropriate packaging? Note that the package must protect the integrity of food items – large trash bags are not acceptable.

Resource: Iowa State University; *A Checklist for Purchasing Local Produce*

Receiving and Storing

- When food products are delivered to an establishment's door, it is the responsibility of the person in charge to ensure inspection of every food delivery for general cleanliness, condition of containers, and signs of temperature abuse.
- Be aware of the potential for cross-contamination. Watch to ensure that containers or cartons filled with raw foods, such as meats or poultry, are not stacked on top of containers of produce or located in such a manner that leaking produce from one container could contaminate a different food in another container.
- When produce is cut or peeled, it must be refrigerated to maintain both quality and safety. Keep the refrigerator at 41°F or less. Use a refrigerator thermometer and check temperatures daily.
- Discard an produce that has *not* been refrigerated within four hours of cutting, peeling or cooking.
- Only food-grade storage containers should be used – no garbage bags, trash cans, or chemical storage containers.
- Fresh fruits and vegetables stored at room temperature (onions, potatoes, etc.) must be stored in a cool, dry, pest-free, well ventilated area separate from chemicals.
- Store produce above and separate from raw meat, poultry or seafood in the refrigerator.

School Kitchen Produce Safety

- Produce that has been cut, cooked, or processed in any way, must be refrigerated.
- Date-label prepared/cut (or processed in some way) produce that will be held for longer than one day. Discard refrigerated, prepared or processed ready-to-eat foods that have not been eaten within 7 days.



There are a number of steps that foodservice employees can take to minimize the chances for fruits and vegetables they handle to become contaminated. Best practices for handling all types of produce are included in this fact sheet, along with practices specific to leafy greens, tomatoes, melons, and sprouts.

Resource available at:
<http://www.fns.usda.gov/cnd/ffvp/bestpractices.pdf>

Washing, Preparation & Handling

- Designate a Person-in-Charge during all hours of operation.
- Inform all staff (and job applicants) they need to tell the Person-in-Charge if they have a) diarrhea, vomiting, or jaundice; b) infected wound or lesion; or c) Hepatitis A, Salmonella, Shigella, or E. coli O157:H7. Exclude staff from work when they have vomiting or diarrhea for at least 48 hours *after* symptoms disappear.
- In the designated food preparation sink, produce must be washed in potable, continuous running water. Do not soak produce. Avoid the use of detergent or sanitizer solutions to wash fresh fruits or vegetables (except the exterior of whole melons may be cleaned with a mild sanitizing solution). These solutions can affect flavor and may not be safe to ingest.
- Ensure cafeteria staff thoroughly wash hands with soap & water prior to handling food. Hand sanitizer gel is not a substitute for handwashing.
- Sanitize the food preparation sink and preparation/food-contact surfaces with an approved sanitizing solution before and after each use.
- Knives and utensils used to cut or prepare produce must be washed and sanitized before and after use.
- Avoid bare-hand contact with ready-to-eat foods such as produce. Staff can use utensils such as deli tissue, spatulas, tongs, single-use gloves, or dispensing equipment.
- If single-use disposable gloves are used;
 - Wash hands thoroughly before and after wearing gloves, and when changing to a new pair of gloves.
 - Discard gloves when torn, contaminated, or removed for any reason.
 - Change gloves when interruptions occur in the food operation.
 - Change gloves frequently, at least once per hour.
 - Never reuse gloves under any circumstances



APPENDIX

School Garden Food Safety Pilot Site: Golden Hill School, Rochester, MN

*"Give a man a fish, you have fed him for today.
Teach a man to fish and you have fed him for a lifetime."*



The above quote embodies the mission of the 2012 Leadership Greater Rochester Team as it embarks upon a community project to help the Golden Hill Outdoor Learning Environment grow stronger and prosper longer. The LGR Team's plan is to build a bigger and better garden and to help provide students with the necessary skills to sustain the garden.

Highlights of the expansion plan for the Outdoor Learning Environment include the following:

- Outdoor Classroom
- Apple Orchard
- Rain Garden
- Compost Area
- Dedication Fence
- Expanded and Enhanced Garden Plots
- Hoophouse



Indicators determining the success of the Outdoor Learning Environment:

- A fully functional seed to table operation will allow for the harvested products to be used at the Golden Hill Alternative Learning Center during meals and breaks and to be sold for profit.
- Students will experience a unique learning environment, incorporating myriad academic subjects.
- Students will gain confidence through their involvement and participation, and will have a sense of ownership and belonging within the Rochester community.

Quick Note:

The Golden Hill Alternative Learning Center building is the oldest in the Rochester School District. Golden Hill ALC provides education for students who, for a variety of reasons, are unable to thrive within the traditional public school model; some students are "hands-on learners" and others have a difficult home life. One of the goals of the LGR community project is to help these students reach their educational goals, expand their educational opportunities beyond high school and become outstanding citizens of Rochester following graduation.

For more information, please e-mail us at goldenhillgarden@yahoo.com or visit our Facebook page at www.facebook.com/goldenhillgarden.



Keep germs out of the garden!

Wash your Hands!

Steps to washing your hands:

1. **Wet hands**
2. **Use soap**
3. **Scrub hands together for 20 seconds**
4. **Rinse**
5. **Dry with paper towel**



Keeping Germs Out of the Garden!



Stay home if you are ill with a fever, diarrhea, or vomiting.

Also follow the hand washing steps above to make sure germs do not spread.

When working with vegetables, make sure to wash your hands before handling the vegetables.

Serving Locally Grown Produce in Food Facilities

Minnesota Department of Agriculture; Minnesota Department of Health; University of Minnesota Extension

Introduction

Can food facilities like restaurants, grocery stores, and school lunch programs legally buy or accept donated produce from a farmers' market or directly from a grower and serve it to their clients, students, or customers?

The answer is "Yes." In fact, this trend has been on the rise since 2003. This fact sheet provides answers to some frequently asked questions about how food facilities can use locally grown produce safely and legally.

Definitions

Food facilities: restaurants, caterers, school food service, institutions, day cares, community centers, churches, hospitals, health care facilities, food shelves/banks, grocery stores, food markets, cooperatives, bakeries, convenience stores, temporary food stands, warehouses and wholesale food processors and manufacturers.

Growers: farmers, school gardens, community gardens, or gardens at food facilities.

Sell/Sale: includes keeping, offering, or exposing for sale, use, transporting, transferring, negotiating, soliciting, or exchange of food (MN Statutes, Chapter 28A.03 Subd. 6).

Can food facilities buy or accept donated produce directly from growers?

Yes, produce growers are an "approved source" if the food is grown on a farm or garden that is occupied or cultivated by the grower, and has not been prepared or stored in a private home.

Growers are responsible to ensure that all produce (food) that they sell or donate complies with applicable regulations. Responsibility includes proper handling and that the food is safe, wholesome, and unadulterated. For assistance on obtaining information about Good Agricultural Practices (GAP), water potability, organic and related items, please contact the Minnesota Department of Agriculture (MDA) at 651-201-6027.

Is a grower required to have a food handler license to sell or donate their produce?

It depends on the situation:

- ♦ People who sell or donate produce from a farm or garden that they rent or own are exempt from licensing.

This includes growers selling their own whole produce or produce with "limited processing" (as described below). (Minnesota Statutes 28A.15 and MN Constitution Article 13, Section 7.)

- ♦ People who sell or donate produce that is "processed" (as described below) are normally required to be licensed.
- ♦ People who wish to sell produce that they have not grown themselves must be licensed to sell to any customer.
- ♦ In other circumstances, a Wholesale Produce Dealer license may also be required (e.g., if a person buys produce from a farmer for resale).

All producers, processors, handlers, and vendors of food, whether or not they are required to be licensed, must comply with other food safety rules and requirements. Contact the Minnesota Department of Agriculture at 651-201-6062 for additional information on licensing, and specific product or processing requirements.

What is considered "processing" of produce?

MDA refers both to "processing" and "limited processing" of produce:

Processing includes slicing, heating, canning, freezing, drying, mixing, coating, bottling, enrichment, or similar actions. Any addition of off-farm ingredients (e.g., salt) prior to use or sale is also considered processing.

Limited processing includes sorting or trimming (e.g., topping carrots or husking corn) as part of the harvesting process, or washing (e.g., to start the cooling process or to remove extraneous soil and debris).

In accordance with the Americans with Disabilities Act, an alternative form of communication is available upon request. TDD: 1-800-627-3529. An equal opportunity employer and provider.

June 2010
Locally Grown.indd

Growers that choose to process their food by canning, bottling etc., must use an inspected and approved kitchen or processing facility, and follow all other applicable regulations.

What are the requirements for an inspected and approved retail kitchen or processing facility?

There are a number of requirements that must be met whether you are beginning a new business or expanding an existing business. Contact MDA (651-201-6027) before you begin processing. MDA will provide details about licensing, kitchen standards, or approval to use a facility for a new purpose. Also note the following:

- ♦ An approved kitchen or processing facility must have a certificate of occupancy with documented approval from local building, plumbing, fire, electrical, and zoning inspectors as required by state and local laws.
- ♦ Equipment must meet National Sanitation Foundation International standards, or its commercial equivalent. The facility must have adequate storage space for ingredients, equipment, packaging materials, and finished goods.
- ♦ Plan review is required at least 30 days prior to starting business. Find plan review information and other requirements for food facilities at: <http://www.mda.state.mn.us/en/food/business/plan-review.aspx>

What are the roles of persons-in-charge and community volunteers involved in produce processing at a licensed facility?

The person-in-charge (PIC), generally a Minnesota Certified Food Manager, must be well-informed about the food safety concerns and requirements relating to the food facility’s operation. PIC duties include directing food preparation activities and correcting conditions that may lead to health risks for the consumer.

Under PIC supervision, community volunteers may help to process produce in an inspected and approved kitchen facility. For example, parents can help to process food from a school garden.

What are some other purchasing and receiving guidelines for local produce?

- ♦ Check with the state or local regulatory authority that licenses and inspects your facility before changing your menu or expanding your business by using new foods or methods. They can help you determine whether there are training, licensing or permit requirements that you must follow before expanding your business or menu.
- ♦ Visit the farm or ask questions about the food production, handling, and storage.
- ♦ Inspect the transportation vehicle. Inspect for evidence of chemicals, odors, and obvious debris.
- ♦ Inspect the produce for signs of insects, disease, bruising, damage, over-ripeness, and immaturity.
- ♦ Ask for documentation that references the USDA Certifying Agent if the produce is advertised as “Organic.”
- ♦ Properly wash produce to remove soil and surface contamination before use.
- ♦ Ask for a receipt of purchase and keep good records. Good recordkeeping is particularly important if illness or injury prompts the need to trace product back to the supplier.

What kind of receipt should food facilities get from the grower?

Food facilities should use a receipt that includes the following purchase/donation information:

Date: _____ Received by: _____

Donated: _____ Purchased: _____ Purchase price: _____

Description and amount of produce: _____

Date harvested: _____

Harvest location: _____

Name of grower: _____

Address: _____

Phone: _____ Email: _____

<http://www.mda.state.mn.us/food>
 (651) 201-6027 • 1-800-967-AGRI

www.health.state.mn/divs/eh/food/fs/index.html
 (651) 201-5000 • 1-800-657-3908



Safe Use of Salad Bars in Schools

Minnesota Department of Agriculture; Minnesota Department of Health; University of Minnesota Extension

Introduction

Research and experience have shown that school children significantly increase their consumption of fruits and vegetables when they are given a variety of choices at a school fruit and vegetable salad bar. This experience can lead to a lifetime of healthy food choices. Therefore, public and private agencies throughout the country are working together to expand the use of salad choice bars. (www.health.state.mn.us/divs/hpcd/chp/cdr/nutrition/FTS/saladbars-schools.html).

The Food and Nutrition Service of the U.S. Department of Agriculture encourages schools to follow food safety standards and best practices with all foods served in school meal programs. The addition of salad bars to these programs raises new concerns. This fact sheet provides answers to frequently asked questions about regulatory and food safety matters related to salad bars in Minnesota schools.

Part One: Regulatory Matters

Can any school have a self-service salad bar?

Yes. There has been some confusion that salad bars are only allowed in elementary schools if the food is either pre-wrapped or served by a school nutrition employee. This is not the case.

Elementary students are allowed to self-serve from salad bars that are designed specifically for small children. These salad bars must have a plastic barrier (food shield) positioned at the appropriate height for small children, and have a lower serving surface than full-sized salad bars.

If a school serves meals to children in early and middle grades and only has a full-sized salad bar, food for the younger children can be pre-packaged or served by an adult.

Will a new menu mean other new requirements from the health inspector?

Any time you add a new food process, equipment, or a time and temperature sensitive food item, you should involve your state or local health inspector before and during the menu change. The health inspector can help assess food safety risks and identify practices to reduce those risks. They can also help you to decide if the changes you are planning will require plan review by your regulatory authority.

When time and temperature sensitive foods are added to the menu, you will need standard procedures to support your HACCP plan for safely handling these items. Such procedures might include guidelines for purchasing, receiving, storage, washing, processing, holding, temperature logging, serving and re-serving of fresh produce.

What kind of equipment will we need?

First, you must have a food preparation sink for washing fruits and vegetables, as required by the Minnesota Food Code (4626.0780). This sink cannot be used for any other purpose such as washing hands, meat or dishes.

For the salad bar itself, you may use a mechanically cooled unit, or a non-mechanically cooled salad bar along with *time as a public health control*. Any unit must be NSF approved. You may also use an existing refrigerated service line with cold wells and food shields. One-sided service will be slower but will make it easier to monitor the salad bar and to assist younger children.

The Minnesota Food Code (4626.0395) requires potentially hazardous food (PHF) (e.g., *cut* fruits and vegetables, ready-to-eat meats, cottage cheese) be kept in mechanical refrigeration at 41°F or below, and hot foods at 140°F or above.



If we plan to use a salad bar that is not mechanically cooled, what steps must we take to use *time as a public health control*?

- First, submit prior written notification to the regulatory authority of your intention to use time as a public health control.
- Maintain a written copy of your detailed plan to use time as a public health control and make it available upon request. The plan must include details about how you will:
 - Maintain food temperatures according to the Food Code.
 - Clearly mark food containers to indicate the time that the food will expire (no more than four hours after food is removed from temperature control)
 - Discard food that is unmarked or for which the time has expired, and
 - Discard food at the end of meal service, even if it has not been four hours since the food was placed on the salad bar. Exception: Whole fruits can be re-washed and reused.



Can salad bar foods be part or all of a reimbursable meal?

Salad bar offerings can be part of a reimbursable meal for schools participating in the National School Lunch Program. The salad bar can be used to provide all the meal components. Or, salad bars can be limited to offering a selection of vegetables and fruits that will serve only as the fruit and/or vegetable component. The rest of the components of the reimbursable meal should then be served elsewhere in the cafeteria line.

Part Two: Health and Hygiene

“Handwashing is the single most important means of preventing the spread of infection.” (Centers for Disease Control)

Kitchen staff: School nutrition staff already understand the importance of handwashing. Hand hygiene reminders must be reinforced when you introduce fresh fruit and vegetables to the kitchen and the menu.



Kitchen staff must continue to wash hands thoroughly with soap and water after using the toilet or changing tasks. Wash hands before handling or cutting fresh produce. Use gloves or a clean utensil to touch ready-to-eat produce. Wash hands before putting on disposable gloves and change gloves when they may have been contaminated or in-between tasks.

Re-train staff on the importance of illness reporting and logging. Make sure that food service workers do not work while ill, and stay away from the kitchen for 72 hours after their last episode of vomiting or diarrhea. To avoid non-food related outbreaks, re-train maintenance staff on the correct way to clean-up after accidents involving feces or vomit.

We recommend a written plan for changing food service if the school has a very high number of colds, flu or gastrointestinal illnesses. This plan could include pre-packaging raw foods or discontinuing self-service during that period of time.

Students: You may prevent students from touching food at the salad bar but you cannot prevent them from handling these foods while they eat. It is important that students come to lunch with properly cleaned hands. It is recommended that a universal handwashing policy be in place before your salad bar program begins.

Handwashing education must be included as part of the pre-salad bar education and information campaign for families, staff, and students. Handwashing education that includes family members will help reinforce good hygiene behaviors taught at school. Student handwashing needs to be promoted, monitored, and reinforced by staff at all levels. Remember, hand sanitizers are NOT a substitute for handwashing with soap and water.

Part Three: Food Safety Concerns

Education

A successful salad bar program will include education and training before the salad bar arrives, and continuing education as it is used in the school.

Before the salad bar arrives: Send information home to families about the salad bar, including handwashing and salad bar etiquette. Discuss the salad bar and new menu at school meetings and conferences.

In the kitchen: Provide fresh produce training for all food service staff. Discuss personal hygiene, salad bar maintenance, cleaning, monitoring, and other changes to the mealtime routine.

In the classroom: Spend time in the classroom to discuss new menu items and teach children about salad bar manners. Teach them why they must use utensils to handle food and stay behind the sneeze guard. Explain the importance of trying new foods and to take only as much as they will eat.

Especially for the early grades (K-3), having classroom exercises incorporating the use of various styles of tongs would help build student confidence in their use.

At the salad bar: Use signs with pictures to remind students about handwashing, salad bar manners, and portion sizes. Provide adequate monitoring for when they forget.

Source, selection, and shipments

Good food safety practices begin when you select a vendor that not only provides quality food at a good price but also delivers fresh, fruits and vegetables that are properly dated, labeled, packaged and transported. Kitchen staff must carefully examine deliveries of fresh produce and be prepared to reject food that is old, over-ripe, bruised or damaged. After receipt, store produce immediately in dry or cold storage. Keep food in original packaging or label to identify its source. Make sure to store produce away from chemical products in dry storage, and away from raw meat, poultry and eggs in refrigerators or walk-in coolers. Store produce at least six inches off the floor, below the ceiling and away from walls.



“Shower, never bathe” fruits and veggies

All but pre-washed fresh fruits and vegetables must be washed before they are peeled, cut, processed, served or eaten. Foodborne pathogens will spread easily from one fruit or vegetable to others if they are soaked in water. Always wash fresh fruits and vegetables under a running tap.

- It is not necessary to rewash packaged produce labeled “ready-to-eat,” or “washed”.
- Wash all other produce - even those with skins and rinds that will not be eaten.
- Rub firm-skin fruits and vegetables under running tap water or scrub with a clean vegetable brush while washing under a running tap.
- To wash tomatoes, the water temperature should be at least 10 °F warmer than the tomatoes. This prevents the absorption of bacteria into the tomato.
- Dry fruits and vegetables with a clean paper towel.
- Never use detergent, bleach or the dishwasher to wash produce.
- Chemical washes, if used, must be approved for use on foods and used according to the manufacturer’s directions.

Avoid cross-contamination

In the kitchen: Always separate raw foods from ready-to-eat and cooked foods. Store and prepare each produce item separately. Document produce use on a production record. Use a different, clean cutting board and utensils (e.g., knives) for each food item. Wash, rinse, sanitize and air-dry kitchen tools, utensils, cutting boards, other surfaces and containers that come into contact with produce immediately after using them.

At the salad bar: Consider using longer handled utensils, especially for younger students. Use separate utensils for each container. Be sure to change-out utensils every four hours or sooner if the food contact area has been touched or the utensil has been dropped or placed in the wrong container, and whenever you change-out the food container. If students return to the salad bar, be sure they use a clean plate. Consider changing utensils after each individual class or after each “run.”

Salad Bar Factsheet, continued

Never add food to a partially full container on the salad bar. Replace food containers when they are getting low in product, empty or have been contaminated.

Monitor salad bars to prevent students from ducking under sneeze guards, touching food with their hands, returning food, using utensils in more than one food container, or taking unmanageable portions.

Use reminder signs – with more pictures than words - to help students remember their salad bar manners.

After meal service: Clean and sanitize the entire salad bar at the end of each day's meal service.

Saving leftovers and minimizing waste

Keep time and temperature logs for all foods on any type of salad bar. All PHF foods from a non-mechanically cooled salad bar and cold foods that have been out of the refrigerator or the mechanically cooled salad bar for four hours **must** be discarded. You must also discard food that has been mixed with other foods, or touched with bare hands.

You **may** choose to save leftover food from a mechanically cooled salad bar to reuse the next day if the proper temperature has been maintained and has been recorded on the time and temperature log.

However, given the high potential for contamination of food items on a salad bar, the Minnesota Department of Health strongly recommends that leftovers only be saved to be used in a cooked product the next day.

If you choose to save leftovers for any purpose, cover and store them immediately. Mark containers with the date they were prepared. The food can be held for seven days, including the day it was prepared, provided the PHF has been maintained at 41 °F or below. Minnesota Food Code (4626.0400)

Never combine leftovers with a new batch of the same food. Leftover food must be put out alone and used up before any new product is introduced.

To avoid waste, monitor portion size, particularly with smaller children. Use half-size or half-full containers of less popular items and food items typically selected in smaller portions. Half-fill containers near the end of service.

For more information

Minnesota Department of Health, *Let's Move Salad Bars to School* website and resource page, www.health.state.mn.us/divs/hpcd/chp/cdrr/nutrition/FTS/saladbars-schools.html

National Food Service Management Institute's (NSFMI) *Best Practices: Handling Fresh Produce in Schools*, www.fns.usda.gov/cnd/ffvp/bestpractices.pdf

USDA and NSFMI Fact Sheet on *Handling Fresh Produce on Salad Bars*, <http://nfsmi.org/documentlibraryfiles/PDF/20110822025744.pdf>

"Tricks of the Trade: Serving Options for Fresh Fruits and Vegetables": http://www.fns.usda.gov/tn/resources/tricks_trade.pdf

Centers for Disease Control *Norovirus: Facts for Food Handlers* <http://www.cdc.gov/ncidod/dvrd/revb/gastro/downloads/norovirus-foodhandlers.pdf>

NSFMI *Produce Safety* resources, including videos, factsheets and PowerPoint presentations <http://nfsmi.org/ResourceOverview.aspx?ID=394>

www.mda.state.mn.us/food
651-201-6027 1-800-697-AGRI

www.health.state.mn.us/foodsafety
651-201-5000 1-800-657-3908

www.extension.umn.edu/foodsafety
612-624-1222

www.health.state.mn.us/fts



MINNESOTA DEPARTMENT
OF AGRICULTURE





Memo Code: SP 32-2009

Date: July 29, 2009

Subject: School Garden Q&As

- 1. 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 that 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.
- 2. 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.
- 3. Q:** Can a school sell food grown in their 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 a la carte, to parents, to PTA members, at a roadside stand, etc.
- 4. Q:** Are there health/safety issues involved with school gardens?

A: Yes. SFAs need to familiarize themselves with the Federal, State, and local requirements regarding health and sanitation issues.
- 5. Q:** Can the school food service purchase produce from another school organization that is maintaining and managing the garden, such as Future Farmers of America (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.
- 6. 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.
- 7. Q:** What if there is excess produce from the garden left over 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.



Farm to School: A Garden Survey

In the fall of 2012, Olmstead County SHIP conducted a survey regarding their schools' gardens; the responses were as you say, plentiful! Below are the responses by teachers, school administrators, school nutrition service staff, and school garden managers.

- "This program has exceeded all of our expectations!"

What do you consider to be the greatest benefits of the garden program?

- Student participation
- Teaching healthy eating that is easy and to promote this with families
- Learning about nutritional benefits of a garden and the vegetables that could be raised in Minnesota
- Students pride as they got involved and took care of their own food
- Gardening reminding students of their birth countries
- The sense of community within the school
- Hands-on activity for students
- Ability to see, touch and taste what they have grown
- See the garden bring students closer as classmates

What do you think is the biggest 'take-away' message the students get from the farm-to-school/school garden lessons and activities?

- Food can be grown at school
- Experience of growing their own food
- The importance of healthy eating
- Students enjoy the freshness of the product
- Work related experience
- Students are proud to be supporting the community
- It's easy to do at home as well as school and the best part is it's healthy

What feedback have you received from students or parents about the program?

- Great learning experience!
- Students enjoy ability to work in the garden and take produce home to share
- Positive support and feedback. Students loved getting outside and learning
- Students enjoy working in the garden and selling produce at the farmer's market.

Is there anything else you would like to share about the program?

- I hope the program can continue and the farm to school would be able to showcase the products grown
- I encourage any school to start a farm to school or school garden
- It takes creative thinking to have a school garden in MN during a typical school year

"Initially, we wondered if school gardens would work, because the growing season doesn't follow the school calendar. But creative school staff has found so many ways to make gardens work by planting orchards or late harvest crops, or partnering with summer school programs and volunteers. The learning opportunities are endless as the garden lessons are incorporated into the curriculum in science, Ag, FACS classes, even math, business and art! It is remarkable to see how students, staff and parents gravitate toward the garden and the rich experiences they offer! And the best part - everyone is learning how great it tastes to eat real food!"

-Jo Anne Judge-Dietz

SHIP Grant Coordinator



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