

Make Food Safety a Priority in Your School Garden

School Gardens Are Great for Kids

Research shows that a nutritious diet helps children learn better, and that kids are more likely to try and enjoy fresh vegetables and fruits if they helped grow them. School garden programs provide a unique opportunity for students to grow fresh vegetables, eat healthy food, and share their harvest with the rest of their school district by donating or selling it to the school cafeteria.

The 2015 USDA Farm to School Census counted more than 7,000 school gardens across the nation. More than 400 Iowa schools reported some sort of farm-to-school program in that census. Evidence shows that when students play an active role in growing fresh produce that is served to their peers, it gives them a sense of accomplishment and pride.

Schools should implement food safety protocols for their school gardens, ensuring the safety of the vegetables harvested by students. This publication contains sample protocols for schools to use as they design best practices for their school gardens. These protocols are adapted from federal and state guidelines for Good Agricultural Practices (GAP) and Good Handling Practices (GHP).

Iowa State University Extension and Outreach offers a free online food safety training program targeted to elementary students. The training includes four video modules that are each 3-7 minutes long with short quizzes at the end of each module. Teachers and school garden coordinators can find activity worksheets and other resources, including answer keys to quizzes and video narrations, in the instructor manual, "On Farm Food Safety Manual: School Garden." This curriculum can be found at www.safeproduce.cals.iastate.edu/elementary-program.

Equipment List for Harvest Days

Harvest containers. Must be made of hard plastic that is not porous.

- ✓ *Acceptable:* food-grade containers, plastic bus tubs, ice cream buckets, and plastic shopping baskets.
- ✓ *Not acceptable:* wicker baskets, cloth or burlap bags, used plastic bags, garbage bags.

Scale. Use a 10-20 pound scale (dedicated for garden use) to weigh harvest quantities.



Harvest Log and Food Safety Checklist. Keep complete documents for one year. (See samples on pages 4-5.)

General Food Safety Best Practices

- ✓ Only potable water should be used to grow and rinse the garden produce that will be provided for use in school kitchens.
- ✓ No pesticides should be used to grow the garden produce used in the school kitchens.
- ✓ Only food-grade containers or harvest baskets and totes should be used for product.
- ✓ Using composted or treated manure is preferable to fresh or untreated manure because composted manure carries a lower risk of pathogen contamination. School waste composting activities should take place in an area separate from the food production area.
- ✓ All persons participating in harvest activities should wash their hands with soap and water for 20 seconds before handling product.



- ✓ Use fencing and signage to limit access from animals and non-authorized personnel.
- ✓ Work with school food service staff on receiving, handling, and storage procedures.

Preparation of a Harvest with Students

School garden activities should always be supervised by an adult garden leader. On the day of a harvest, the garden leader should follow these steps to prepare for the harvest:

1. Gather the harvest containers, scale, and harvest log. In advance, ask kitchen staff to run harvest containers through the dishwasher or wash the containers in a three-compartment sink.
2. Prepare the harvest log. (See sample on page 4.)
3. Turn on the potable water to the garden sink or to the hose.
4. If there is a garden sink, the sink should be cleaned and sanitized before use. Ask kitchen staff to prepare a bucket of sanitizer water to use.
5. Before harvesting, clean the garden sink and table surfaces with soapy water, rinse and sanitize.
6. Survey the school garden for vegetables to pick.
7. Weigh the empty harvest tub.

How to Harvest with Students

Once the adult leader or volunteer is prepared for the day's harvest, they should follow these steps with the students:

1. Gather a small group of students from classroom. Verify that none of the students are showing any signs of illness or have recently missed school because of an illness. If a student was absent for an illness at any time in the last 48 hours, they shouldn't participate in the harvest. Find other garden activities for them.

Table 1. Appropriate storage temperatures for commonly harvested vegetables. Not all vegetables and fruits should be stored below 41°F unless cut and prepared for serving.

35 – 41°F	42 – 45°F	50 – 55°F	No refrigeration
Asparagus	Snap beans	Cucumbers	Dry onions
Broccoli		Eggplant	Dry garlic
Cabbage		Peppers	Tomatoes
Carrots		Summer squash	Potatoes
Cantaloupe			Pumpkins
Beets			Sweet potatoes
Cauliflower			Watermelon
Lettuce & leafy greens			Winter squash
Green onions			
Peas			
Radishes			
Strawberries			
Sweet corn			

2. Students and leaders wash their hands with soap and water in classroom sink or bathroom.
3. Take students out to the garden and show them what vegetables are ready to be picked.
4. Distribute containers and the students start to pick.
5. Wash vegetables in the harvest containers, under potable running water in the sanitized garden sink or under a hose, and then place in a clean harvest tub. The purpose of this first wash is to remove the large visible signs of dirt. Allow vegetables to drain.
6. Weigh the washed vegetables. Calculate the weight of the produce by subtracting the tub weight.
7. Ask a student to record the following information in the harvest log:
 - a. Weight of the vegetables,
 - b. Names of leader and students involved in the harvest,
 - c. Date and time of harvest.
8. Take vegetables to the kitchen. Kitchen staff should recheck weight and verify accurate quality and quantity.
9. If school food service is purchasing the food from the school garden, an invoice or other internal document should be prepared and submitted.



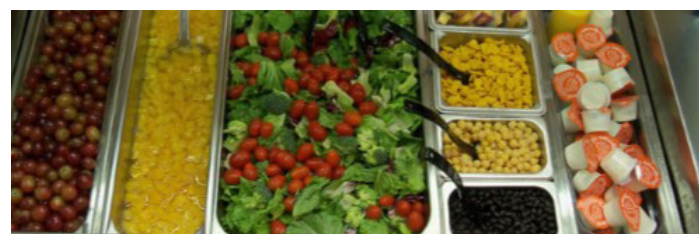
How to Compost Vegetable Scraps from the Harvest

If the school garden has a compost system, these procedures can be followed with the vegetable scraps:

1. At the end of the lunch period, one or two students can retrieve the compost bucket from the kitchen with any vegetable scraps saved during preparation.
2. Add the fruit and vegetable scraps to the compost pile and rinse out the bucket.
3. Return the bucket to the kitchen for cleaning in the dishwasher or three-compartment sink. Let it air dry.

Acknowledgments

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SCHOOL GARDEN HARVEST LOG

Date of harvest: _____ Time: _____

Food service employee accepting produce: _____

School garden representative selling produce: _____

All individuals assisting in harvest: _____

	Item harvested	Field ID	Quantity	Unit of measure	Price	Due
	<i>Example: Beets</i>	<i>West garden</i>	<i>3</i>	<i>Pounds</i>	<i>\$1.00</i>	<i>\$3.00</i>
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
	TOTAL					

Signature of Garden Representative: _____

Signature of Food Service Representative: _____

SCHOOL GARDEN FOOD SAFETY CHECKLIST

Date of Harvest: _____ **School:** _____

School Garden Representative: _____

Requirement	Yes	No	N/A
PLANTING AND CARING FOR GARDEN PRODUCTS			
1. No pesticides are used on school garden products.			
2. Only properly composted soil amendments are used in the food production areas.			
HARVESTING GARDEN PRODUCTS			
3. All harvest containers are cleaned, sanitized and air-dried prior to use.			
4. None of the garden helpers are showing signs of illness or have recently be absent because of illness.			
5. There is no evidence of animal damage, animal manure or vandalism in the area to be harvested.			
6. All garden helpers have thoroughly washed hands with soap and clean water.			
7. Any garden helpers who have a cut or injury on their hands, have disposable gloves to wear while harvesting.			
8. If a garden sink is available, it has been cleaned and properly sanitized before use.			
9. Harvested produce is washed in the garden sink or in harvest baskets, under potable running water, to wash away any visible signs of dirt.			
10. Washed produce is drained and weighed in a clean harvest tub.			
11. All garden produce is recorded on harvest log along with names of volunteers involved in harvest, date, and time of harvest.			
12. After washing, produce is taken to the school kitchen for further cleaning and storage.			
13. A food service staff member signs harvest log as a receipt of garden produce.			
14. Harvest logs are filed and kept for one year.			

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