Denver Public School’s Garden to Cafeteria Program: School Gardens

Denver Public School’s (DPS) Food and Nutrition Services Department strives to “provide healthy food and nutrition education so all students will have the opportunity for success” in the classroom, in their daily lives and to set the foundation for healthy lifestyles as they grow and mature. For over a decade, Slow Food Denver (SFD), Denver Urban Gardens (DUG) and Learning Landscapes (LL) have been collaborating on the grounds of DPS to establish school/community gardens and associated education programs. This Denver School Garden Coalition has manifested itself at dozens of DPS elementary schools, and seeks to serve the unique set of needs and circumstances within each school community, with the primary focus on student education and enrichment.

The Garden to Cafeteria (GTC) program is an opportunity for DPS students to grow fresh fruits and vegetables in their school gardens with the aim of supplying some of their harvest to the school cafeterias to be used at lunch service. Beginning in 2010 with 14 school gardens participating, the program is now expanding to involve more schools as well as use produce from community gardens that are located on school grounds.

The following protocols have been put in place to assure the food safety of the vegetables harvested from the school gardens by students. Items in *italics* in the following paragraphs are safety protocols that have been adapted from Federal and State guidelines for Good Agricultural Practices (GAP) and Good Handling Practices (GHP):

1. US Food and Drug Administration—
   http://www.fda.gov/Food/GuidanceComplianceRegulatoryInformation/GuidanceDocuments/ProduceandPlanProducts/ucm064574.htm#iii
2. Colorado Department of Agriculture—
3. United States Department of Agriculture—
The following protocols are divided into several major headings:

1. How to sign-up a school garden to participate in the GTC Program
2. Produce items that are eligible for the GTC program
3. Preparation by a GTC Leader for a harvest with students
4. How to harvest produce with students from a school garden
5. How to clean the produce and store it in the school kitchen
6. How to compost the produce scraps from the harvest
7. Guidelines for DUG community gardeners to participate in the GTC program

How to sign-up a school garden to participate in the Garden To Cafeteria (GTC) Program:

Please note, there are several procedures necessary in order to sign-up your school garden to participate in the GTC Program.

1. Visit the DPS Food and Nutrition Services website (http://enterprisemanagement.dpsk12.org/food-services/garden/) and download the “Denver Public Schools Garden to Cafeteria Registration” form. Fill out the required contact information and return the form to Anne_Wilson@dpsk12.org. Register as soon as possible to start the process. Registration is rolling but registration forms must be submitted to the Farm to School Coordinator (currently Anne Wilson).

2. Your registration information will go to DPS Food and Nutrition Services, SFD, and DUG, who provide training. DPS Food and Nutrition Services will contact GTC Leaders about the upcoming schedule of trainings. DPS Food and Nutrition Services will also verify the school’s participation in GTC with the principal.

3. A representative of your school garden, preferably the school GTC Leader or the individual who will be harvesting with students, must attend one training to learn about the protocols for harvesting with students. There will be several training sessions in August (schedule to be determined).

4. Per DPS policy, any GTC Leader participating in the GTC program must have filled out the necessary DPS Volunteer paperwork, including a background check form.

5. DPS Food and Nutrition Services will supply the name and contact information of the Kitchen Manager and the Area Supervisor at your school. The school GTC Leader needs to make introductions and discuss the GTC Program with the Kitchen Manager and the Area Supervisor.

6. The school GTC Leader obtains from SFD/DUG the necessary gear for the program at the GTC training. The gear includes harvest baskets and a recording form. These materials are on loan from SFD for the harvest season.

7. The school GTC Leader recruits a group of students for the GTC Program. The students can be from one class, from a school club or some other group representing the school community. The GTC Leader should talk to the students’ teacher(s) to get permission to take the students to the garden on harvest day.

8. School gardens participating in the Garden to Cafeteria program should have the DPS required soil testing done on the garden site.
Produce items that are eligible for the GTC Program:

1. Produce items that are eligible for the GTC program include any fruit or vegetable that can be used as a raw item on a salad bar. Produce items that have proved successful in the program include:
   a. Vegetables- tomatoes, cucumbers, lettuce, spinach, radishes, summer squash, bell peppers, jalapenos, celery, carrots, broccoli, cabbage, cauliflower, basil, onions
   b. Fruits- melons, berries, apples, plums, peaches
2. Produce items that the school kitchens can not use as readily tend to be the vegetables that require some cooking to be served, such as eggplant, asparagus, and tomatillos. Work with your Kitchen Manager to ensure that the produce you grow can be effectively used.
3. All produce must be grown on schools grounds, either in the school or community garden.
4. Only potable water will be used to grow and rinse the garden produce used in the school kitchens.
5. No pesticides will be used to grow the garden produce used in the school kitchens.
6. No pets are allowed in the garden. Please discourage any animal from visiting your garden. If animals (wild or domestic) are present in or near the garden, including chickens, contact DPS Food and Nutrition Services for further instructions (Anne Wilson, phone: 720-423-5608, e-mail: Anne_Wilson@dpsk12.org). If chickens are present near the garden, you may not be permitted to participate in the Garden to Cafeteria program.

It is ideal for the GTC Leader and Kitchen Manager to work together in the spring to plan what to grow for the GTC harvest.

Equipment list for harvest days:

1. Harvest basket- must be made of hard plastic that is easily cleanable, with smooth surfaces and not porous. Items that are acceptable are food-grade Lexan containers, plastic bus tubs, and plastic shopping baskets; all must have smooth surfaces that are easily cleanable. Wicker baskets, cloth, plastic or burlap bags are not acceptable.
2. Scale- most DPS kitchens have a 20 lb scale. Please work with the Kitchen Manager to use the scale on Harvest Days.
3. Recording Sheet- this can be downloaded from the GTC website (http://foodservices.dpsk12.org/menus.html, TBD). The Recording sheet can be kept with the Kitchen Manager or the GTC Leader.

Preparation for a harvest with students

The GTC Program will start the last week in August 2017, though spring harvests are also welcome through mid- May. Each school can participate as often as they wish. The GTC Leader should share the harvest schedule with the Kitchen Manager so there are no surprises. The GTC Leader should also set up a schedule with the student group and their teacher(s), and participating community gardeners, so as not to have a large impact on the academics of the day.

On the day of a harvest, the GTC Leader follows these steps to prepare for the harvest:

1. GTC Leader or volunteer checks in with the Kitchen Manager.
2. GTC Leader gets the harvest baskets, scale and Record Sheet from the kitchen. (Equipment for the harvest is kept in the school kitchen between harvests.)
3. If available, the harvest baskets are run through a dishwasher in the kitchen by the kitchen staff. If no dishwasher is available, then ask the kitchen staff to wash the baskets in the kitchen three-compartment sink.
4. If there is a garden sink, the GTC Leader will pick up a wash bucket, a sanitizer bucket (tested at 200ppm), and clean cloths from the kitchen staff with which to wash, rinse then sanitize the garden sink.
5. The GTC Leader surveys the school garden for fruits and vegetables to pick.
6. If there is a garden sink, the GTC Leader washes with the soap water bucket, rinses with a clean damp cloth, and then sanitizes the sink with the provided sanitizer bucket.
7. The GTC Leader turns on the potable water to the garden sink or to the hose. The GTC Leader prepares the Record Sheet for the harvest.

How to harvest with students from a school garden

Once the GTC Leader is prepared for the day’s harvest, he/she follows these steps with the students:

1. GTC Leader or other volunteer gets a small group of students from the school. Be sure to verify that none of the students are showing any signs of illness or have missed school in the past two weeks because of an illness. If a student was absent for an illness at any time in the previous two weeks, he/she can’t participate in the harvest.
2. Students and the GTC Leader wash their hands with soap and water in the classroom sink or bathroom.
3. GTC Leader takes students out to the garden.
4. GTC Leader shows the students what fruits and vegetables are ready to pick.
5. The harvest baskets are passed out and the students start to pick.
6. The vegetables are washed in the harvest baskets, under potable running water in the washed, rinsed, and sanitized garden sink or under a hose. The purpose of this first wash is to remove the large visible signs of dirt.
7. Once all vegetables are washed, the produce is weighed on the scale.
8. A student records the following information on the Record Sheet:
   a. Weight of the vegetables
   b. Names of GTC Leader and students involved in the harvest
   c. Date and time of harvest
9. Students and GTC Leader take produce to the Kitchen Manager. The Kitchen Manager signs the Record Sheet to acknowledge the receipt of the vegetables.
10. GTC Leaders rinse any soil from the baskets with the garden hose or in the garden sink. Then the baskets are returned to the school kitchen and run through the dishwasher or three-compartment sink. The Kitchen Manager stores the baskets in a clean, dry place inside the school while not in use.

Hydroponic Considerations

Hydroponic operations should be following the same standards as in the DPS Garden Manual. All Garden to Cafeteria protocols still apply to hydroponic (indoor) growing systems, including
Kitchen cleaning guidelines and harvesting practices. However, there are additional considerations for hydroponic operations that do not apply to outdoor growing that must be addressed. For hydroponic (indoor) growing systems please follow the guidelines below and fill in the blanks to indicate how you will handle the following (this information is subject to review by the district or outside experts upon request):

1. Potable water will be used as the medium.
2. All nutrients/amendments added to the growing medium shall be approved for growing edible vegetables (OMRI approval is preferred but not required) and Material Safety Data Sheets (MSDS) will be kept on file for each amendment used. Commercial nutrient solutions approved for use with vegetable growing in hydroponic operations are acceptable but still must be shared with Anne Wilson before use. Nutrients/amendments will be applied by a trained adult following instructions provided. The following nutrients/amendments will be used:_________________________________________________________
   ___________________________________________________________________
   ___________________________________________________________________
Information about the nutrients/amendments or any other treatments applied to the plants must be kept on file.
3. Pesticides will not be permitted in hydroponic grow operations, though insecticidal soaps are allowed. MSDS for the soap, also with dates applied, must be kept on file.
4. After all plants are harvested for the growing cycle, all hydroponic growing surfaces, including the water reservoir, tubes and other components of the water delivery system, etc., will be washed with soap and warm water, rinsed with warm water, immersed/exposed to sanitizer for 2 minutes, air-dried and the water in the reservoir will be changed at this time. Approved sanitizers include quaternary ammonia (200-400ppm at 75°F), a bleach solution (100-200ppm at 55-75°F), and Sanidate (test using periacetic acid test strips). Describe the sanitizer that will be used and how it will be tested: ______________________________________________________________
   All cleaners and sanitizers used must be documented on a log (see attached for what must be included). Attached is a sanitizer reference for organic production from Colorado State University Extension.
5. Before and after harvesting, harvest tools (if applicable) will be washed, rinsed and sanitized in a clean sink or series of 3 containers/tubs and this will be documented on the log. Harvest tools will be stored in a clean, dry area between harvests.
6. Access to the growing areas will be restricted to students who have not been ill in the previous 2 weeks and to those who have washed hands. To minimize hygiene issues from unsupervised use or eating or drinking near the growing areas, access to hydroponic areas will be restricted, as follows:________________________________________
   Crowd barriers that can be used around the growing areas include: a crowd gate, produce crates or a picket fence for a more eye-appealing barrier; all should be used in combination with signage.

Steps for handling the garden vegetables in the cafeteria

When the Kitchen Manager receives the garden vegetables, he/she needs to wash them and refrigerate the vegetables to below 41°F prior to serving:
1. Kitchen Manager or foodservice worker should rinse the produce under cold running tap water in a clean and sanitized colander and prep sink. Thick skinned produce (such as potatoes and carrots) should be scrubbed with a brush to remove all visible dirt. If a kitchen does not have a vegetable prep sink, the manager will contact their supervisor for instructions on the appropriate air gap sink to use.

2. The vegetables are removed from the sink, rinsed again and drained in a colander.

3. The vegetables are placed in a separate clean and sanitized storage container (kitchen staff can use any of their existing food grade storage containers) that is labeled “School Garden Produce” and the date of harvest.

4. The vegetables are stored in the cooler/refrigerator for one day to reduce their temperature to below 41°F.

5. The vegetables can be used in the salad bar or at lunch service the day after the harvest if the temperature of the produce is below 41°F. This temperature will be recorded on the menu production forms under the recipe the produce was used in (either the salad bar recipe, Spicy Cucumbers, Spicy Corn Salad, Veggie Patch, Garden Salad, Calabacitas, Garden Chili, or the Zesty Pasta Salad recipe).

6. The produce will not adversely effect the kitchen manager’s menu plan/ordering as the amount will be small and the produce can easily be incorporated into the salad bar or any of the following recipes that are on the menu plan: Calabacitas con Elote, Cucumber and Tomato Salad, Garden Chili, Garden Greens, Roasted Vegetables, Spicy Corn Salad, Spicy Cucumbers, Teriyaki Chicken (with onions and bell peppers), Zesty Pasta Salad or Zucchini Muffins.

7. Produce grown by a school garden will be used only in that school kitchen and not transported to other schools kitchens.

8. Kitchen Managers will post a sign to inform students which items came from the school garden.

**How to compost the vegetable scraps from the harvest**

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

1. At the end of the lunch period, one or two students can retrieve the harvest tub from the Kitchen Manager with any vegetable scraps saved during preparation.
2. The students will then add these scraps to the compost pile and rinse out the tub.
3. The tub is returned to the Kitchen Manager. The Kitchen Manager or foodservice worker will clean the harvest tub as described previously in the dishwasher or three compartment sink, let it air dry, then the kitchen staff will fill the tub with the scale and harvest baskets and place the tub in storage.
Guidelines for DUG community gardeners to participate in the GTC Program:

The goal of the GTC program is to provide fresh fruits and vegetables grown on school grounds to DPS cafeterias and to provide educational opportunities for DPS students to see where the food for their lunches comes from. These protocols have been developed to ensure the safety of the produce that is grown on school grounds and that safe handling procedures are followed as the food is taken to the school kitchens.

DPS Food and Nutrition Services manages the GTC program with support from SFD and DUG. Produce donations from community gardeners at school-based community gardens are acceptable and welcomed as a way of showing support for the school. Any community gardener that wishes to support the GTC program may donate produce from their community garden plots on school grounds.

Following the approved protocols above, students pick the produce, wash off the visible dirt, weigh and record the produce, and then deliver it to the Kitchen Manager.

Community gardeners may participate in the GTC Program in either of the following ways. In both cases, students must harvest the produce.

1. The community gardener meets the GTC Leader and the students in the garden at the time of the harvest. The community gardener shows the students what items can be harvested from his/her garden plot.
2. If the community gardener can not be present for the harvest, he/she can communicate with the GTC Leader to share what items can be harvested from his/her plot. A marking system of flags or other signage can direct the GTC Leader to the appropriate produce items to be harvested.

Participating community gardeners understand that:

1. The produce provided by a community gardener is a donation to the school cafeteria.
2. Produce grown by a community gardener will only be used at the school at which the school-based community garden is located.
3. Any community gardener or GTC Leader participating in the GTC program has filled out the necessary DPS Background Check forms.
4. The produce is grown and harvested for the GTC Program according to the rules outlined in this document.

Community gardeners who would like to donate produce should contact DPS Food and Nutrition Services (e-mail: Anne_Wilson@dpsk12.org, phone: 720-423-5608), or their GTC or School Garden Leader. If a GTC Program does not yet exist at your school-based community garden, community gardeners are invited to become GTC Leaders by participating in the GTC training. See above section, “How to sign-up a school garden to participate in the GTC Program”.

Links:
Denver Public Schools Food and Nutrition Services http://foodservices.dpsk12.org/
Slow Food Denver www.slowfooddenver.org
Denver Urban Gardens www.dug.org
Learning Landscapes
http://www.cudenver.edu/Academics/Colleges/ArchitecturePlanning/discover/centers/LearningLandscapes/Pages/index.aspx