



# HIDOE GARDEN TO CAFETERIA PLAN 2019-2020



A comprehensive plan for growing, harvesting and delivering fresh, school grown produce to Hawai'i Department of Education public school kitchens.

## Garden to Cafeteria Binder for:

School Name



## HAWAI'I GARDEN TO CAFETERIA PLAN 2019-2020

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## PART 1: Hawai'i Garden to Cafeteria Program Overview

### Section 1A: Introduction and Purpose

Farm to school programs enhance the wellbeing of students, families, schools, and community food systems and are comprised of three core elements: 1) school gardens; 2) nutrition, agriculture, culinary, and food systems education; and 3) school food improvement through the procurement of local foods for school meals. The 'Aina Pono Program encompasses farm to school and was launched in 2015 to improve childhood health, support local agriculture, and increase Hawaii's food security by increasing the amount of nutritious, fresh, local food served in school meals statewide. The Hawai'i Farm to School Hui (HFSH) is a statewide network formed in 2010 to strengthen Hawaii's farm to school movement through extensive public-private partnerships on behalf of Hawaii's *keiki* (children). HFSH is a program of the Hawai'i Public Health Institute.

The Hawai'i Garden to Cafeteria Program (hereafter designated "Garden to Cafeteria") is an important element within 'Aina Pono in which students grow, harvest, and deliver fresh fruits and vegetables from a school garden or school agriculture program to the cafeteria of that same school—a culmination of all three core elements of farm to school. The purpose of this document is to provide guidance to school staff, volunteers, and students who are participating in the Hawai'i Garden to Cafeteria Program so that food is grown, harvested, transported, and prepared in a way that meets Hawai'i Department of Education (HIDOE), Hawai'i Department of Health (HDOH) and United States Department of Agriculture (USDA) standards, minimizes garden and food safety risks, and provides a successful experiential learning program for the school community.

This document provides guidelines to only those foods grown in a school garden participating in the Hawai'i Garden to Cafeteria Program and used in [USDA Child Nutrition Programs](#) including but not limited to the National School Lunch Program (NSLP) and Fresh Fruit and Vegetable Program (FFVP) by the identified garden and cafeteria facility. The document is not required nor is the HIDOE School Food Services Branch (SFSB) responsible for the harvest and use of garden-grown foods in the school classroom, distributed to students to take home, sold at a farmers' market or provided elsewhere on campus outside the cafeteria facility.

**No transfer to, or use of, garden-grown food in any school food facility other than the facility identified herein, is allowed under this approval. Food grown on site must be processed and used at that school site in the identified cafeteria.**

This conditional approval is intended to ensure that the school garden identified herein is a safe source of food for the school cafeteria facility participating in the Hawai'i Garden to Cafeteria Program. The practices and standards required under this agreement are consistent with applicable standards for approved food sources, are in conformity with current public health principles and practices, and generally recognized industry standards that protect public health.

**'Aina Pono Program Farm to School Coordinator and Hawai'i Garden to Cafeteria Program**

**Administrator:** Dexter Kishida, (808) 733-8400, [dexter.kishida@k12.hi.us](mailto:dexter.kishida@k12.hi.us)

**Hawai'i Farm to School Hui Coordinator:** Lydi Bernal, [lydi@hiphi.org](mailto:lydi@hiphi.org), [www.farmtoschoolhui.org](http://www.farmtoschoolhui.org)





## Section 1B: State-Level Roles and Responsibilities

	Responsible Agency, Organization, or Position				
Responsibility or Task	HIDOE	HIDOH	HIDOA	HFSH	G2C Program Administrator
Creates Hawai'i Garden to Cafeteria (G2C) Plan	X	X	X	X	X
Approves G2C Plan	X	X	X	X	X
Administers G2C Program (intake, application support, ongoing consultation as-needed)					X
Reviews G2C applications (Part 2)					X
Develops and administers G2C Training					Designated Trainer
Approves school participation on an as-needed basis	X				
Develops and administers G2C Purchasing/Reimbursement Program					X
Inspects G2C participating schools on an as-needed basis					Designated Inspector
Evaluates G2C program annually (e.g., survey participants, gather metrics from schools, etc.)					X
Proposes changes to G2C Plan	X	X	X	X	X
<b>HIDOE</b> - Hawai'i Department of Education <b>HIDOH</b> - Hawai'i Department of Health <b>HIDOA</b> - Hawai'i Department of Agriculture <b>HFSH</b> - Hawai'i Farm to School Hui <b>G2C</b> - Garden to Cafeteria					



## Section 1C: Hawai'i Garden to Cafeteria Plan Signature Page

The following individuals have reviewed the Hawai'i Garden to Cafeteria Plan for use in the Hawai'i Garden to Cafeteria Program 2019-2020:

### **Hawai'i Department of Education, School Food Services Branch**

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Albert Scales, Administrator

### **Hawai'i Department of Education, Hawai'i Child Nutrition Programs**

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Sharlene Wong, Program Administrator

### **Hawai'i Department of Health**

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Peter Oshiro, Environmental Health Program Manager, Sanitation/Food and Drug Branch

### **Hawai'i Department of Agriculture**

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Luisa Castro, Agriculture Food Safety Program Manager, Farm Food Safety Program

### **University of Hawai'i at Mānoa College of Tropical Agriculture and Human Resources**

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Lynn Nakamura-Tengan, Extension Educator, Cooperative Extension



## PART 2: Hawai'i Garden to Cafeteria Program Application

### Section 2A: Instructions

How to apply a school garden or agricultural program to participate in the Hawai'i Garden to Cafeteria Program (designated as "Garden to Cafeteria" or "G2C"):

- ☐ STEP 1, REVIEW: Review the Garden to Cafeteria Guidance Document to see if your school is ready.
- ☐ STEP 2, APPLY: Contact your G2C Regional Coordinator for an application and complete the form with your G2C Project Team.
  - ☐ Complete and submit **Sections 2B and 2D** to the G2C Program Administrator. The application must be completed and signed by the school's G2C Project Leader, G2C Garden Leader(s), School Principal, and Cafeteria Manager. NOTE: This agreement must be reviewed and re-signed whenever a garden leader or garden co-leader is replaced.
  - ☐ Complete and submit **Section 2E**.
  - ☐ Review and ensure compliance with all protocols listed in **PART 3**.
- ☐ STEP 3, ATTEND TRAINING: The G2C Project Leader is required to attend the G2C training. Additional individuals including those who will be harvesting with students may, but are not required to, attend to learn about the protocols for harvesting with students. G2C Project Leader must provide approved training to all G2C harvesters (including volunteers and students per the G2C Food Safety Plan- **PART 3**).
- ☐ STEP 4, IMPLEMENT: Utilize the G2C Food Safety Plan- **PART 3** to implement the program. Additional information on best management practices for school gardens is also available in the [Hawai'i School Garden Safety Manual](#).

### Section 2B: Project Team and Signatures

Name of School: \_\_\_\_\_ School Year: \_\_\_\_\_

Address: \_\_\_\_\_ Phone: \_\_\_\_\_

School Principal: \_\_\_\_\_ Email: \_\_\_\_\_

Garden to Cafeteria Project Leader: \_\_\_\_\_ Phone: \_\_\_\_\_

Cafeteria Manager: \_\_\_\_\_ Phone: \_\_\_\_\_

IPM Manager/Head Custodian: \_\_\_\_\_ Phone: \_\_\_\_\_

G2C Garden Leader: \_\_\_\_\_ Phone: \_\_\_\_\_

Garden Co-Leader (if applicable): \_\_\_\_\_ Phone: \_\_\_\_\_



Other: \_\_\_\_\_

Other: \_\_\_\_\_

A signed agreement for the current school year must be kept on file at the school.

### Signatures

The undersigned Garden to Cafeteria Project Team members agree to adhere to the requirements of the Hawai'i Garden to Cafeteria Program as outlined in the Hawai'i Garden to Cafeteria Plan, and certify that the information in this Program Application is true and correct.

\_\_\_\_\_  
Printed Name & Title  
(Garden to Cafeteria Project Leader)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name & Title  
(Garden Leader)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name & Title  
(IPM Manager, Head Custodian)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name & Title  
(Cafeteria Manager)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name & Title  
(School Principal)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

### Garden to Cafeteria Program Administrator

I certify that the Garden to Cafeteria Project Leader for this school has successfully completed the mandatory Garden to Cafeteria training and that this school is approved to participate in the Hawai'i Garden to Cafeteria Program for the school year identified herein.

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

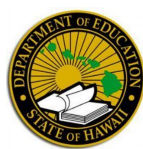
### School Food Services Branch's Conditional Approval of Food Source

HIDOE School Food Services Branch (SFSB) hereby approves the use of approved produce grown in this school's Garden to Cafeteria growing areas (Section 2C) by this school's cafeteria facility for USDA Child Nutrition Programs. The approval is conditioned upon the school's adherence to the requirements described in the Hawai'i Garden to Cafeteria Plan, and shall be null and void if those requirements are not met.

\_\_\_\_\_  
Printed Name (HIDOE SFSB Administrator)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date



## Section 2C: School-Level Roles and Responsibilities

Responsibility or Task	Responsible Person or Position					
	G2C Project Leader	School Principal	Cafeteria Manager	G2C Garden Leader	School IPM Manager	G2C Regional Coordinator
Reviews Guidance Document and assures that all G2C Project Team Members are knowledgeable of their roles	X	X	X	X	X	
Initiates communication with G2C Regional Coordinator	X					
Completes application to participate in Hawai'i Garden to Cafeteria Program	X	X	X	X	X	X
Attends G2C Program Training	X					X
Follows the Garden to Cafeteria Food Safety Plan	X	X	X	X	X	
Participates in regular G2C Project Team Meetings	X	X	X	X	X	X
Is present and actively engaged with each G2C harvest.	X			X		
Signs harvest receipt	X		X	X		
Maintains records in the designated G2C Binder	X					
Completes annual program survey	X	X	X	X	X	X
Provides training for all users of the garden	X					
<b>G2C-</b> Garden to Cafeteria; <b>HFSH-</b> Hawai'i Farm to School Hui						





## Section 2D: Traceability Form

School Name: \_\_\_\_\_ School Year: \_\_\_\_\_

School Street Address: \_\_\_\_\_

Garden Leader's Name: \_\_\_\_\_

Phone No: \_\_\_\_\_ Email: \_\_\_\_\_

**PLOT PLAN:** In the space below or on a separate page, draw a map showing the location of garden areas and fruit trees that will be used in the Garden to Cafeteria program. Designate plot numbers for growing areas and clearly indicate them on the diagram.

**PLANT/TREE INFORMATION:** Include the type of produce and approximate square footage of growing area for each. Use additional sheet(s) if more space is needed.

Produce type	Approx. square footage

Produce type	Approx. square footage



## Section 2E: HIDOE Facilities Development Branch Review Form

Please complete this form as a prerequisite to participating in the Hawai'i Garden to Cafeteria Program. The application should be completed by the Garden to Cafeteria Project Team. Please note that "Garden" or "Garden Site" refers to that area of the campus being used for the Garden to Cafeteria program.

School Name:			
School Address:			
Name of Person Completing Application:		Title or Role at School:	
Applicant Email:		Applicant Phone Number:	

### Garden Development

Please attach a **map of your garden area/proposed garden area** that will be used for Garden to Cafeteria to this document on the school's plot plan.

Your garden map must include the following

- All known utility lines and irrigation boxes in the garden area. Consult administration, custodial staff, to identify these features.
- Any proposed new structures including wash sinks, shade areas, roads, and walkways.
- Potable water source POC's that may be used for washing vegetables, student consumption, irrigation, etc.

Garden type (circle one)	Raised bed	In ground	Other
Garden Area	No. and size of raised beds:	Total Area (square foot):	Ground impacted area & dimensions:
What is the current condition of ground at Garden Site (e.g., bare soil, grass, etc.) if establishing or expanding Garden area?			
Will soil be moved, leveled, or disturbed past a total of 1 acre?			Yes    No    Not sure



Circle the source of water for the school garden.

Municipal

Stream

Catchment

Other: \_\_\_\_\_

How is potable water delivered to the garden for irrigation and sanitation uses?

(Eg, hose, PVC Piping)

How will animal intrusion be managed in the garden area?

List any structures (shade areas, washing stations, etc.), roads, and walkways that will be built for your garden area.

### **Collateral Requirements**

*Please note that the following items are less typical, answer to the best of your knowledge.*

Has soil at the Garden Site been tested for contamination? Please list contaminants tested for and include test results in this application.

How will mobility challenged persons participate in the Garden program?

What percentage of growing areas are accessible?

How can emergency responders access the Garden?



## PART 3: Protocol for Use of School Garden-Grown Produce in School Cafeterias

### Section 3A: Requirements for Compliance

#### Garden Site

- ☐ HDOE Facilities Development Branch Review Form (**Section 2E**) has been completed and approved.

#### Water Quality

- ☐ Water used for irrigation and other potable water needs, including hand and produce washing is obtained from a public water system.
- ☐ Best management practices as identified in the [Hawai'i School Garden Safety Manual](#) are used if non-potable water sources (e.g., streams, wells, rainwater catchment, grey water) are applied to Garden to Cafeteria gardens.
- ☐ Records and documentation of water testing for non-potable water sources are maintained following **SOP 2.9 for Soil and Water Testing**.

#### Soil & Plant Health

- ☐ All composting practices must follow the Garden to Cafeteria Food Safety Plan (**Section 3B; SOP 2.1, pg 28**).
- ☐ Vermicompost may be applied to culinary gardens at the soil level. Use of vermicompost foliar sprays or “worm teas” are not permitted in Garden to Cafeteria Program gardens (**Section 3B; SOP 23., pg 30**).
- ☐ Minimize use of synthetic pesticides and fertilizers by building healthy soil through best soil management practices ([Hawai'i School Garden Safety Manual](#)).
- ☐ Consider the use of OMRI listed products when pesticides are needed.
- ☐ Efforts are made to exclude animals, including domestic animals, from the growing area.
- ☐ G2C Project Leader and/or G2C Garden Leader must communicate with the school's Integrated Pest Management (IPM) Manager or Head Custodian to ensure awareness of edible growing areas.
- ☐ IPM is actively implemented to include, but not be limited to, management of slug and snail populations and rodent vector control in and around the growing area.

#### Harvesting Practices

- ☐ The G2C Project Leader has provided approved training to all Garden to Cafeteria harvesters (including volunteers and students) prior to the first harvest (**Section 3B; SOP 1.4, pg. 20**).
- ☐ Unwell or potentially ill persons do not participate in the harvesting, washing or transporting of produce for use by Garden to Cafeteria Program.
- ☐ Proper hand washing is followed before handling harvest equipment and harvesting produce. Participants follow proper hand washing procedures as outlined in the [Hawai'i School Garden Safety Manual](#). Use of hand sanitizers is not a permissible method of hand cleaning.



- ☐ Restroom facilities with potable water and liquid pump soap are in close proximity and accessible at all times for anyone working in a Garden to Cafeteria Program garden.
- ☐ A Garden to Cafeteria-trained team member is present and actively engaged with each Garden to Cafeteria harvest process.
- ☐ Harvest equipment is clearly labeled and dedicated for use solely for Garden to Cafeteria harvesting activities. Harvest equipment is not used for any other purpose and is maintained in a designated, clean space.
- ☐ Any produce coming in contact with environmental contaminants such as bird or gecko droppings, storm run-off water, the ground or an unclean surface, or exhibiting signs of insect damage should be composted and must not be used for the Garden to Cafeteria Program.
- ☐ Harvested produce must be collected and transported in clean, sanitized, covered, non-porous, food grade containers.
- ☐ Visible dirt on produce is removed using potable water in the garden area prior to delivery to the cafeteria.
- ☐ Produce without visible dirt should not be washed before transfer to the cafeteria.
- ☐ Produce must be delivered to the school cafeteria on the same day it is harvested.
- ☐ Garden Harvest Receipt (**Section 3B; Log 3.3, pg 42**) is completed and verified by Garden Leader prior to transfer of produce to the school cafeteria.

### **In the School Cafeteria**

- ☐ Produce is washed in the school cafeteria in a clean and sanitized food preparation area by cafeteria staff according to food handling best practices.
- ☐ After each use, the harvest containers are cleaned and sanitized according to **SOP 2.11**.
- ☐ All Garden to Cafeteria Program harvest containers are stored in the school cafeteria, or an approved on-site location.
- ☐ A copy of Garden Harvest receipts are stored in the school cafeteria as well as the G2C Binder.





## Section 3B: Garden to Cafeteria Food Safety Plan

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## G2C Food Safety Policy Statement

SOP: 1.1

Revision #: 1.0

Date Revised: 07/19

\_\_\_\_\_ (School Name) is committed to growing, harvesting and safely delivering approved produce items from the school garden to the school's kitchen for use in the school's food service program using good agricultural and handling practices. These best practices focus on food safety and quality, modeled after small farm requirements and protocols as well as the Food Safety Modernization Act (FSMA).

The G2C Project Leader will communicate this policy during all training sessions with employees, students and volunteers participating in the processes contained in the ***Food Safety Plan*** and reinforce it as needed.

The ***Food Safety Plan*** identifies products, materials and equipment used to grow produce in a safe and sanitary manner in the Hawai'i G2C program.

The ***Food Safety Plan*** describes physical, chemical, and biological hazards that could occur, and procedures and best practices for managing them, including monitoring, verification, corrective actions and recordkeeping, for the following areas:

- G2C Project Team
- Personal hygiene
- Cleaning and sanitation
- Food safety training
- Maintenance and cleaning of equipment
- Identifying and monitoring key areas of possible contamination
- Incident reports and corrective actions
- Exclusion of pests and pest management
- Maintenance and retention of logs and other records

Written records showing that the garden is following the ***Food Safety Plan*** including the plan protocols, Standard Operating Procedures (SOPs), logs, checklists, forms and SOP corrective actions will be maintained in the **G2C Binder** which is kept in \_\_\_\_\_ (identify location of binder). All records are also scanned and filed digitally in the G2C program GoogleFolder and retained for 2 additional program years.

The ***Food Safety Plan*** is reviewed and, if needed, revised, at least once every year before the growing season begins. Your G2C Regional Coordinator will be able to assist you in preparing revised documents.

The G2C Project Leader works with the G2C Project Team to ensure high quality and safe produce by:

- Communicating regularly with all members of the G2C Project Team including conducting regular meetings to facilitate consistent and ongoing communication with all members of the team.
- Monitoring all procedures to ensure that **garden participants** follow the ***Food Safety Plan***
- Maintaining logs to ensure that important steps of cleaning, disinfecting and monitoring are followed.



- Providing Corrective Action plans for responding to incidents in a timely and appropriate manner.
- Implementing trainings for **garden participants** to ensure that they have the knowledge, skills and resources to effectively follow and implement the **Food Safety Plan**.
- Reviewing and updating the **Food Safety Plan** at least once annually, typically before the first harvest of the school year.
- Conducting an annual garden risk assessment, evaluating the garden site for continued compliance with the Hawai'i G2C **Food Safety Plan** requirements.

## G2C Project Team

SOP: 1.2

Revision #: 1.0

Date Revised: 07/19

Adherence by all **garden participants** to the **Food Safety Plan** outlined in this document is a requirement of continued participation in the **Hawai'i G2C** program. The **G2C Project Team**, led by the **G2C Project Leader** who is essentially the food safety manager works to ensure the policies, best practices and standard operating procedures (SOP's) provided here are followed and reviewed with garden participants upon introduction to the program, and on an ongoing basis.

The **G2C Project Team** ensures safe handling practices by updating and implementing Standard Operating Procedures (SOPs), Logs and records, and **corrective actions**.

The **G2C Project Team** consists of at least the following members:

**G2C Project Leader**

**G2C Garden Leader(s)**

**Cafeteria Manager**

**School IPM Manager**

**School Administrator** (Principal or Vice Principal)

**G2C Regional Coordinator**

### G2C Project Leader

The **G2C Project Leader** oversees adherence to the **Food Safety Plan** and ensures all **garden participants** are properly trained, the plan is properly implemented and policies and protocols are followed and has the following responsibilities:

- Attends the Hawai'i G2C food safety training and renews annually.
- Delegates and documents those responsible for each food safety risk area covered.
- Ensures **G2C Garden Leaders** are thoroughly trained in food safety best practices.
- Oversees **G2C Garden Leaders** to ensure food safety best practices are implemented.
- Can serve as a **G2C Garden Leader** and actively direct a garden harvest.
- Communicates with the **Cafeteria Manager** ensuring the food safety plan is properly implemented.
- Manages all garden related food safety documents and tracks any necessary updates.
- Ensures garden staff and garden participants are familiar with food safety protocols.



### G2C Garden Leader (s)

The primary role of the **G2C Garden Leader (s)** is to oversee the growing of G2C produce and related work in the garden that directly support adherence to the **Food Safety Plan** and its policies and standard operating procedures. **G2C Garden leader(s)** who are trained on food safety best practices may actively lead students in harvests. Below is a list of **G2C Garden Leader** responsibilities:

- Attends the Hawai'i G2C food safety training and renews annually.
- Ensures all Garden Participants are following food safety best practices.
- Completes any necessary food safety documentation, required logs incident reports and corrective actions.
- Communicates regularly with **G2C Project Leader** and **Cafeteria Manager**.

### Cafeteria Manager

The **Cafeteria Manager** must be trained in all foodservice safety protocols, including how to properly handle intake and processing of fresh produce. Below is a list of **Cafeteria Manager** G2C program responsibilities:

- Ensures all foodservice staff implement food safety best practices.
- Communicates with the **G2C Project Leader** and **garden leader(s)**.
- Completes all necessary food safety documentation.
- Manages all foodservice related food safety documents and tracks any necessary updates.

### School IPM Manager

The **School IPM Manager** coordinates with the **G2C Project Team** to address issues of pest management and best practices for safe growing of fruits and vegetables on a school campus.

### G2C Regional Coordinator

The **G2C Regional Coordinator** is determined by the **G2C Program Administrator** and will be actively present on each island. The Regional coordinator will work with interested schools on their island, provide resources as needed, conduct site visits, and share the G2C application with schools that are ready to participate. communicate with schools on their island

### **G2C Project Team Member List**

Name	Team Role	Contact Info	Comments

### **Records:-**

**G2C Project Team** Member List and Meeting Log



G2C Project Team Meeting Log		LOG: 1.3 Revision #: 1.0 Date Revised: 07/19
Meeting Topic:		
Meeting Details: (include link to meeting notes if available)		
Name	Role	Signature





## G2C Participant Training

**SOP: 1.4**

**Revision #: 1.0**

**Date Revised: 07/19**

**Policy:** Garden Leader must attend a training to lead the Garden to Cafeteria (G2C) program. Garden Leader must then provide sufficient trainings to all teachers, volunteers, students and visitors that are involved in the program. Garden Leader must post provided or comparable visitor signs within the Garden area that are clear and visible.

### **Purpose:**

Scope: The participating G2C School Garden Leader trains all new teachers, volunteers, students, and visitors in GAP, GMP, personal hygiene, and sanitary practices in any areas of the garden used for the G2C program.

### **Topics covered in Training:**

#### **1. Handwashing:**

- a. Hand washing is done by washing with soap for 20 seconds and then rinsing with clean warm water.
- b. Must be done before starting harvesting, after breaks and after using the bathroom is mandatory.
- c. Everyone must wash their hands after they: when they arrive to the garden, before they harvest, after a break, after going to the bathroom, after sneezing, coughing, touching your face, touching your phone, after harvesting food, and after handling contaminated materials.

#### **2. Health and Hygiene:**

- a. Teachers and helpers are required to report for work in clean clothing. It is mandatory to wear clean clothes while harvesting, cleaning, and delivering produce.
- b. Closed toed shoes are required when harvesting with tools.
- c. Fingernails shall be trimmed and clean. It is advised to keep fingernail clippers in the first aid kit.
- d. It is not allowed to wear jewelry while handling produce. (wedding bands with no stones or medical alert tags are exempt)
- e. All loose or exposed hair must be contained by a hair band while harvesting or handling produce.
- f. If anyone has a wound on their hand or a band-aid, they must clean their hands and wear a latex glove while in the garden.
- g. Everyone must be in a healthy condition if they are to harvest or handel produce. If anyone is suffering from or known to be carriers of a disease transferable through food, they cannot participate in harvesting or food handling.

#### **3. Visitors:**

- a. All visitors and volunteers must agree to the food safety rules and the Health and Hygiene policy above if participating in the G2C program.
- b. All visitors of the garden must:



- i. Wash their hands if they will be in direct contact with food contact surfaces or produce.
  - ii. Not bring glass into the produce or processing areas.
- c. While not mandatory, it is good practice to have visitors sign in, especially if your garden area is visited or used regularly by multiple persons. The Visitor Log 1.6 is included for this use.
- 4. Harvest Tools:**
  - a. All harvest tools must be kept in good repair, be cleaned before and after harvest and must be put away dry. They must be stored in a designated area and clearly labeled. They are not to be used for anything else besides harvest use.
- 5. Food and Water Consumption:**
  - a. Consumption of food is not permitted anywhere in the garden, except in designated break areas.
  - b. Water bottles that are not glass are allowed in the garden and produce handling areas.
  - c. All glass containers are prohibited in garden and produce handling areas.
- 6. Harvesting and Food Handling:**
  - a. Harvest bins and food processing areas must be washed, rinsed, and sanitized before used for harvest or food processing.
  - b. Produce that falls on the floor must be discarded.
  - c. You must dispose of any produce that has been exposed to blood or bodily fluids.
- 7. Logs:**
  - a. It is the G2C Garden Leader's responsibility to keep all assigned logs and perform the duties stated on these logs.



<b>G2C Training Log</b>		<b>LOG 1.5</b> <b>Revision #: 1.0</b> <b>Date Revised: 07/19</b>
<b>Training Topic:</b>		
<b>Instructor:</b>		
<b>Date/Time:</b>		
<b>Name</b>	<b>Role</b>	<b>Signature</b>

[illegible]



Corrective Action Examples SOPs		SOP: 1.7 Revision #: 1.0 Date Revised: 07/19
Pre-Harvest Checklist	If Yes:	If No:
Potable water available for drinking and handwashing	Proceed with harvest	Handwashing station and/or drinking water refilled with potable water.
All toilets and field sanitation facilities are clean	Proceed with harvest	Ensure all toilets are properly located, stocked, and cleaned according to SOPs. Ensure all field sanitation and handwashing sinks are clean, in accordance with SOPs. Record any corrective actions taken before proceeding with harvest.
Evidence of unauthorized entry in crop area	Fill out corrective action log	Proceed with harvest.
Evidence of crop damage by animals	Inspect and isolate any areas of contamination due to signs of eating, peeing, or feces until remediated according to Pest/Intrusion SOP (refer also to Best Practices for Hawai'i School Gardens - UH CTAHR, pgs 11-14). Implement a "No Harvest Buffer Zone" as needed. Record any pest intrusion and/or damage by animals and any corrective actions taken. Remove any pests such as rats or slugs.	Proceed with harvest.
Evidence of physical contamination	Inspect and isolate areas of contamination according to SOPs (refer to Best Practices documents). Implement a "No Harvest Buffer Zone" or suspend harvesting as necessary. Record any physical contamination and any corrective actions taken before continuing with harvest.	Proceed with harvest.





Any necessary corrective actions taken and recorded	Issues resolved; proceed with harvest.	Take necessary corrective action (and record) until issue(s) resolved. Proceed with harvest accordingly.
Harvest Checklist	If Yes:	If No:
Harvesting containers are cleaned and sanitized	Proceed with harvest.	Wash, rinse, and sanitize all harvest containers according to Cleaning and Sanitizing SOP.
Harvesting equipment is clean and in good condition	Proceed with harvest.	Wash, rinse, and sanitize all harvest equipment according to Cleaning and Sanitizing SOP. Do not use equipment that is broken, or in poor condition.
Everyone who is harvesting is healthy	Proceed with harvest.	Remove the sick person from the harvest / production area and record in the Incident Log according to SOP.
Everyone has washed their hands (at least 20 seconds) before and after harvest or handling	Proceed with harvest.	Ensure everyone has washed their hands, re-training as necessary according to SOPs.
Visible dirt on produce removed in the garden, produce or prep washing station prior to delivery to the cafeteria.	Proceed with delivery.	Follow SOP for washing produce. Record any needed corrective actions.
Post-Harvest Checklist	If Yes:	If No:
Harvesting containers are cleaned and sanitized and returned to their designated location.	Proceed with harvest clean up.	Wash, rinse, and sanitize all harvest containers according to Cleaning and Sanitizing SOP and return to their designated location.
Harvesting equipment is cleaned, dry and stored in their designated location.	Proceed with harvest clean up.	Wash, rinse, and sanitize all harvest equipment according to Cleaning and Sanitizing SOP, returning to designated locations Discard any equipment that is broken, or in poor condition.



Everyone has washed their hands (at least 20 seconds).	Proceed with harvest clean up.	Ensure everyone has washed their hands, re-training as necessary according to SOPs.
<b>Pre-Packing Checklist</b>	<b>If Yes:</b>	<b>If No:</b>
All surfaces washed and sanitized	Proceed with washing and packing.	Wash, rinse, and sanitize all food contact surfaces, following SOPs. Record any necessary corrective actions taken.
Packaging containers are clean and stored off the ground	Proceed with washing and packing.	Wash, rinse, and sanitize all packing containers according to Cleaning and Sanitizing SOP, returning to designated locations Discard any equipment that is broken, or in poor condition. Record any necessary corrective actions taken.
Produce handlers have washed their hands	Proceed with washing and packing	Ensure everyone has washed their hands, re-training as necessary according to SOPs.
<b>Produce Prep/Wash Station Cleaning</b>	<b>If Yes:</b>	<b>If No:</b>
All surfaces washed and sanitized (if applicable)	Proceed with clean up.	As applicable, wash, rinse, and sanitize all food contact surfaces, following SOPs. Record any necessary corrective actions taken.
Floors cleaned (if applicable) and no standing water	Proceed with clean up.	Sweep and mop floors, removing any food debris, following best practices and SOPs.
Trash and cull bins are emptied	Proceed with clean up.	Empty trash and cull bins, following best practices and SOPs.
Washing and cleaning supplies are stocked	Proceed with clean up.	Stock available supplies. Record and report any needed supplies.

[illegible]



## Green Waste Composting

SOP: 2.1

Revision #: 1.0

Date Revised: 07/19

**Policy:** The G2C School Garden is committed to providing the safest green waste compost to be used as a soil amendment in the G2C garden.

**Purpose:** This SOP outlines best practices for hot composting in school gardens.

**Responsibility:** The G2C Project Team is responsible for SOP development. The harvest team and the garden teacher are responsible for implementation.

### Procedure:

- Record weight and/or volume of materials prior to adding to compost pile and record on **Compost Materials and Temperature Log**.
- Monitor temperature regularly and record on Compost Materials and Temperature Log.
- Proper compost production requires that a temperature of between 131°F and 170°F be maintained for a period of at least 3 days. Piling turning is usually required to ensure appropriate temperature is reached for all materials within the compost.
- Maintain a separate log for each compost pile.

### Records:

- Compost Materials and Temperature Log



Compost Materials and Temperature Log Compost # _____					LOG: 2.2 Revision #: 1.0 Date Revised: 07/19
Date	Materials Added (type and volume/weight)	Temperature	Date Turned	Harvest Date	Name



## Vermicomposting

SOP: 2.3

Revision #: 1.0

Date Revised: 07/19

**Policy:** The G2C School Garden is committed to following best practices to provide the safest vermicomposted soil amendment possible.

**Purpose:** Using manure that has not been composted completely and properly is a safety hazard, as raw manure often contains harmful pathogens.

**Responsibility:** The G2C Project Team is responsible for implementation of proper best practices for use of vermicomposting systems and is responsible for recording any changes to this SOP.

### Procedure:

- Worm bins should not be in direct sunlight. Additionally, they must be covered to be protected from the rain and pest intrusion.
- Weight and/or volume and type of materials used should be recorded on the Vermicomposting and Temperature Log.
  - Appropriate materials include only those that are pre-consumer and plant-based.
  - Do not add infected plant materials to worm bins.
  - Food should be covered at all times to avoid attracting pests.
- **Worm Bin Temperature.** Use a thermometer to check **the temperature of the bedding in your worm bin**. Red wiggler **worms** thrive in **temperatures** between 55° and 75° Fahrenheit (12° to 24° Celsius). They **will** slow down reproduction and feeding in extreme heat or cold, and **can** even die if **the temperatures** get too extreme.
- Regular watering is essential for proper vermicast production.
  - Water using a spray nozzle until bedding and top covering is damp, but not saturated.
- **Worm Tea and Worm Leachate.** Worm tea is an amendment that is made by adding worm castings to water and allowing the microbes to multiply over a 24-hour period. The resulting worm tea can be used to add nutrients and microbes to soil but should never be used as a foliar spray nor come into contact with any edible portion of the plant. Worm leachate is the liquid that drains directly from a worm bin. The leachate may be diluted and added to soil but may not be used as a foliar spray.
- Maintain a separate log for each worm bin.

### Records:

- Vermicompost Materials and Temperature Log



[illegible]



## Soil Amendment

**SOP: 2.5**  
**Revision #: 1.0**  
**Date Revised: 07/19**

**Policy:** The G2C School Garden is committed to following best practices to provide the safest vermicomposted soil amendment possible.

**Purpose:** To provide effective and safe application of soil amendments while minimizing microbial hazards.

**Responsibility:** Animal manures and other soil amendments are a potential source of human pathogens, which can contaminate the soil and persist for many years.

**Procedure:** Soil amendments are defined as substances being added to soil to enhance the health and life of the soil. For use in the G2C Program, all soil amendments must be either a purchased amendment or if produced on site must be produced and handled in ways consistent with best management practices for reducing the risk of contamination to crop production areas and water sources. All soil amendments regardless of their origin, must be entered into the Soil Amendment Log including information on the type of amendment, dosage and the location of the garden where it is being added. Logs and proper documentation for all amendments must be retained in the **G2C Binder**.

- **Purchased Materials Documentation:**

- Specification analysis reports and other information from the supplier must be kept for each lot or shipment, indicating that the proper procedures were followed in its production, if applicable. The documentation must be included in the **G2C Binder**.
- Documentation on proper application and hazard and safety procedures must also be kept in the **G2C Binder** this includes but is not limited to MSDS for each item.

- **Soil amendments** should be stored in a site away from water sources, pesticide handling sites, or in a way that could contaminate production areas.
- All soil amendment applications must be recorded, with date, type of soil amendment, dosage, type of plant & location on the **Soil Amendment Log**.
- **Cross Contamination:** To avoid cross contamination of applied soil amendments, all equipment and/or tools should be cleaned after using and labeled properly.

**Records:**

- Fertilizer and Amendment Log
- Documentation for Purchased Amendment Materials

[illegible]



## Pesticide Application

SOP: 2.7

Revision #: 1.0

Date Revised: 07/19

### Regulated (or Restricted Use Pesticides)

Only people with a pesticide applicator license or under the supervision of someone holding a pesticide applicator license may apply restricted use products. If applicable, pesticide training certificates and other records must be maintained in the **G2C Binder**.

### Non-regulated (or General Use)

All non-regulated materials must be applied following label instructions for quantity, application timing, mixing, application, storage, and disposal and recorded on the **Pesticide and Chemical Usage Log**. All instruction labels and MSDS must be kept in the **G2C Binder**.

### Herbicides

Herbicides are not allowed for use on Hawai'i DOE public school campuses.

### **Records:**

- Pesticide and Chemical Usage Log

[illegible]



## Soil and Water Testing

**SOP: 2.9**  
**Revision #: 1.0**  
**Date Revised: 07/19**

**Policy:** The G2C School Garden is committed to providing the safest growing conditions on school campuses beginning with soil and water that is free of potential contaminants. All G2C growing areas must be tested for lead and arsenic contaminants in soil and lead contaminants in irrigation water. In addition, an annual test must be conducted to identify coliform bacteria in irrigation water. Additional testing for organochlorine pesticides (OCPs) may be required depending on the location of the school campus and history of the soil.

**Purpose:** Unintentional ingestion of contaminated soil is the primary source of exposure to lead, arsenic, and OCPs in soil. Dirt on hands from working in a garden, or consuming produce grown in gardens with contaminated soil can also result in exposure to harmful contaminants. Young children are most at risk as their brains and bodies are developing and most affected by exposure to lead, arsenic and OCPs. Lead contamination generally stems from its use in paints and gasoline and are more likely to be found in areas close to buildings. Arsenic in soils likely stems from the use of arsenic-based pesticides including insecticides and rodenticides and because of its chemical stability can be found in soils many years later. Organochlorine pesticides are a group of pesticides commonly used from the mid-1940s to late 1980s for insect control around wooden structures and agriculture fields and include DDT. Depending on the history of the school garden soil, OCPs should be tested if the use of this group of pesticides is suspected.

**Responsibility:** The G2C Project Team is responsible for the proper collection of soil and water samples according to this SOP and delivery of samples to a proper testing facility. The test results must be indicated on the Soil & Water Testing Log and a copy must be maintained with G2C records and be made available upon request.

### **Procedure:**

**SOIL TESTING:** To collect soil, first create a map of the school garden area to be tested. If the area is smaller than 2 acres, proceed by identifying between 5 and 10 subsites in the area and mark them on your map. At each location collect the soil subsample according to the following method.

The sampling method (from <https://www.ctahr.hawaii.edu/oc/freepubs/pdf/scm-9.pdf>):

1. Clear surface litter and plant growth from the sample spot. Dig a hole about as wide as your spade and as deep as the layer you are sampling.
2. With the spade tip placed one inch outside the edge of the hole, cut down to remove a slice of one side of the hole wall.
3. Keeping that slice on the blade of the spade, use a trowel, knife, or machete to cut away the sides of the slice, leaving a center section about 1 inch wide. This 1 x 1 inch vertical section of the soil is your subsample.
4. Place the subsamples in the plastic container, mix them together well, and remove about 2 cups (1 pint) of this mixture. This is your composite sample, to send to the laboratory for analysis.
4. Soil samples may be tested at any appropriate testing facility.

Soil Testing Facilities:





- University of Hawai'i at Manoa - Department of Tropical Plant and Soil Sciences, Agricultural Diagnostic Service Center
  - Instructions: <https://www.ctahr.hawaii.edu/oc/freepubs/pdf/SCM-9.pdf>
- Environmental Laboratories in Hawai'i or on Mainland
  - Call to confirm, not all labs test soil samples
- Hazard Evaluation and Emergency Response Office (HEER)
  - Call for advice on sampling, hiring a contractor, or choosing a laboratory: 808- 586-4249

#### WATER TESTING:

Water testing labs in Hawai'i: <https://manoa.hawaii.edu/ctahr/farmfoodsafety/food-water-testing-laboratories/>  
Follow the directions provided by the testing facility. Water to be tested should be acquired from the end point of irrigation sites, e.g., from a hose used for irrigation. Water samples should be collected after 8 hours of disuse (usually done in the morning) and not used prior for irrigation. Appropriate water collection containers provided by the testing laboratory should be used.

HARC currently has funding to provide water testing on Oahu, Kauai and Hawaii Island and have different points of contact. Not sure how you want to include that information.

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#### Records:

- Soil & Water Testing Log



Soil and Water Testing Log				LOG: 2.10 Revision #: 1.0 Date Revised: 07/19
Date	Soil or Water	Contaminants Tested	Testing Facility	Results (attach printout of results)



## Sanitation SOP for Harvest Tool, Equipment and Harvest Preparation Areas

**SOP: 2.11**  
**Revision #: 1.0**  
**Date Revised: 07/19**

**Policy:** All harvest tools, equipment, including equipment used for transporting, and harvest preparation areas must be clean and sanitized prior to beginning a harvest.

**Purpose:** This SOP outlines the procedure for cleaning and sanitizing harvest tools, harvesting equipment such as bins or totes, harvesting transport equipment or vehicles and any folding tables and/or counter tops used for sorting the harvest before transport to the kitchen. This SOP does NOT cover sanitation of equipment used in the school kitchen.

### Procedure:

1. On completion of harvest, tools and equipment are collected by **G2C Garden Leader** to be washed and sanitized.
  2. Harvest tools, equipment and work surfaces are washed with unscented dish soap until visibly clean.
  3. Harvest tools, equipment and work surfaces are sanitized after each use using a vinegar spray.
  4. After disinfection with the vinegar solution the tools are set out to air dry on a clean towel. Other harvest equipment and surfaces area also allowed to air dry before storage.
  5. After cleaning, dried harvest tools and other harvest equipment are stored in a designated, sanitized, tightly closed container or bin.
  6. Harvest tools must be checked for rust, chipping and other signs of wear and tear. All damaged harvest tools must be removed from use and replaced.
- **Equipment and Chemicals:** Harvest bins, towels for drying equipment, unscented dish soap, vinegar or other appropriate food grade sanitizers, spray bottle.
  - MSDS must be kept in the G2C binder for all chemicals used. Tools used for digging up root crops are not considered 'harvest tools' as they are not cutting into produce but should be visibly clean and in good repair at the start of the harvest session.
  - **Required Safety Equipment:** Eye and skin protection is required when handling vinegar.
  - **Frequency:** The sanitation procedure should be followed before and after every use of all harvest equipment and work surfaces.

### Records:

- Garden Harvest Checklist



## Pre-harvest and Active Harvest Risk Assessments

SOP: 3.1

Revision #: 1.0

Date Revised: 07/19

**Policy:** Pre-harvest assessments and active harvest observations to assess risk factors are important to adhere to the *Food Safety Policy*.

**Purpose:** This SOP outlines how produce meant for use in the G2C program is harvested and prepared for transport to the kitchen. It is important to remove soil, insects, fecal matter or other non-contaminating matter such as other plant material, from leafy greens in the garden and not to include with the harvest. Most importantly it must be ensured that no snail/slugs are present or were present on the produce as evidenced by the presence of a snail/slug or a visible slime trail.

**Responsibility:** The **G2C Project Team** is responsible for pre-harvest and active harvest SOP development. The **G2C Garden Leader** designated at the time of harvest is responsible for implementation and completion of appropriate logs indicating adherence to this SOP.

### Procedure:

- Inspect the area to be harvested and complete the Pre-Harvest Inspection Log.
- If the area is safe to harvest proceed with harvest, using clean and sanitized tools and harvest containers.
- All soil, debris and insects are to be removed from harvested greens.
- Greens should not be washed prior to transport except for when needed to remove soil or debris.
- When harvesting, if bird or insect fecal matter is identified on the harvested produce, that item should be composted and not added to the harvest.
- The produce will be packaged following the **Cafeteria Manager's** specifications and transported to the kitchen as soon as practical, preferably within 2 hours of harvest. Harvested produce **MUST** be delivered to the kitchen on the **SAME** day it is harvested. There is no extended holding or storage of garden produce permitted in the garden.

The pre-harvest risk assessment checklist is performed by conducting a self inspection prior to the start of harvesting. This risk assessment requires that the **G2C Garden Leader** verify using a checklist that there was a pre-harvest inspection of the field and perimeter, the equipment and tools, containers and packing materials, and that any conditions observed that might be a risk to contamination are documented. Any corrective actions taken are recorded. These inspections must comply with the policies and practices set forth in this document.

### Records:

- Garden Harvest Checklist
- Harvest Receipt
- Harvest Reimbursement Record



Garden Harvest Checklist			LOG: 3.2 Rev: 1.0 Date: 7/19
Pre-harvest Checklist		Harvest Checklist	
Potable water available for drinking and hand washing	Y / N	Harvesting containers are cleaned and sanitized	Y / N
Evidence of unauthorized entry in crop area	Y / N	Harvesting equipment is clean and in good condition	Y / N
Evidence of crop damage by animals	Y / N	Everyone who is harvesting is healthy	Y / N
Evidence of physical contamination	Y / N	Everyone has washed their hands	Y / N
Any necessary corrective actions taken and recorded	Y / N	Visible dirt on produce removed in the garden, produce or prep washing station prior to delivery to the cafeteria.	Y / N
Post-Harvest Checklist		Pre-Packing Checklist	
Harvesting containers are cleaned and sanitized and returned to their designated location.	Y / N	All surfaces washed and sanitized	Y / N
Harvesting equipment is cleaned, dry and stored in their designated location.	Y / N	Packaging containers are clean and stored off the ground	Y / N
Everyone has washed their hands	Y / N	Produce handlers have washed their hands	Y / N
Produce Prep/Wash Station Cleaning			
All surfaces washed and sanitized (if applicable)	Y / N		
Floors cleaned (if applicable) and no standing water	Y / N		
Trash and cull bins are emptied	Y / N		
Washing and cleaning supplies are stocked	Y / N		

Completed by (name): \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_



Harvest Receipt				LOG 3.3 Revision #: 1.0 Date Revised: 7/19
Date:		Garden Name:		Invoice Number:
Pre-harvest and post-harvest checklist completed:    YES        NO				
Produce Item	Plot #	Weight	Price Per Pound	Total
			Total:	

G2C Garden Leader Initials \_\_\_\_\_ Student Initials \_\_\_\_\_ Recipient Initials \_\_\_\_\_

Student Names: \_\_\_\_\_

- INSTRUCTIONS:**
- Student(s) fill out two copies of the Harvest Receipt as supervised by **G2C Garden Leader**.
    - Produce item Description = type (name) of each produce harvested.
    - Weight = the number of ounces or pounds of a produce item harvested.
    - Student Names = Students who harvested the produce.
  - Students and **G2C Garden Leader** sign both copies indicating the information is correct.
  - Cafeteria Manager** must initial both receipts indicating they received the garden produce as described.
  - Cafeteria Manager** maintains one copy in the school kitchen; the second copy is kept in the **G2C Binder**.



[illegible]



## PART 4: Hawai'i Garden to Cafeteria Accompanying Documents

### Section 4A: Approved Produce List

The following produce items are approved for use in the Garden to Cafeteria program and are subject to the protocols outlined in Section 2C.

Low Risk Vegetables & Herbs:	Low Risk Fruits:	The following are considered high risk and are not likely to be accepted:
basil beans (dried) bell peppers breadfruit ('ulu)* broccoli cabbage (won bok/makina, etc.) carrots cauliflower cilantro corn cucumbers eggplant garlic ginger green beans green onions kale onions oregano rosemary squash (zucchini, kabocha pumpkin, etc.) soy beans sweet potatoes Swiss chard taro (kalo or poi)* taro leaf (lu'au) thyme tomatoes ung choi watercress	banana dragon fruit guava lemon lime lychee mango orange papaya passion fruit persimmon poha berries tangelo tangerine	leaf lettuce strawberries sprouts watermelon