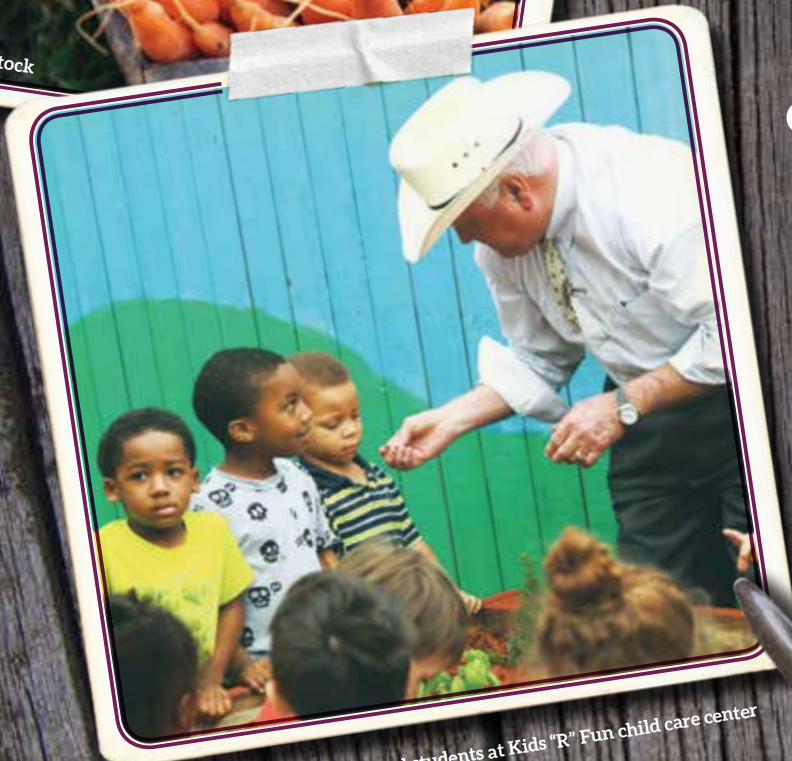


# Let's get growing

## HARVEST

Growing Garden Produce for Child Nutrition Programs



Commissioner Sid Miller and students at Kids "R" Fun child care center



**TEXAS FARM FRESH INITIATIVE**

TEXAS DEPARTMENT OF AGRICULTURE | COMMISSIONER SID MILLER



Gardens and garden-grown produce are great sources of fresh food and experiential learning in schools and child care centers. Research has shown that when children help grow it, they will eat it, but success in the garden doesn't just happen – it's planned and planted well.

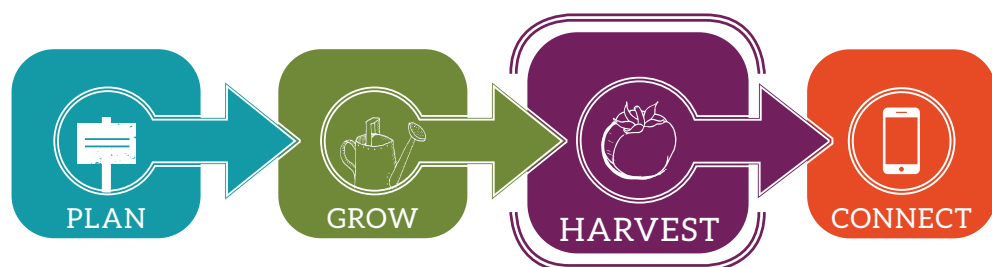
Let's <sup>get</sup> growing



HARVEST is the third tool in TDA's *Let's Get Growing* series. HARVEST was developed to help garden coordinators work with child nutrition professionals to identify the best use for produce grown in school and child care center gardens. Included in this resource are tips on the following topics:



1. Identifying funding
2. Models for using garden harvest, including
  - Supporting the cafeteria program with harvest items and introducing children to the fresh produce
  - Donating produce to organizations fighting food insecurity
  - Hosting a farm stand or participating in a local farmers market
  - Nutrition education and enrichment
  - Using produce for a special event or fundraiser to support the garden
3. Food-safe harvesting practices



## ONE-STOP SHOP: GARDEN PROGRAM *support*

*Disclaimer: This guide is provided for information only and TDA does not accept any responsibility for inaccurate, missing or misleading information. Further, TDA does not accept any responsibility for any loss, damage or injury that may arise from the use of this guide. It is your personal responsibility to verify the accuracy of any information before taking any action based upon it.*

# THE ROLE OF THE Funding Source

## SECTION 1:

### Find your Funding

THERE ARE MANY WAYS TO FUND HARVEST PROJECTS  
AND THERE ARE ALWAYS RESPONSIBILITIES  
TIED TO ACCEPTING FUNDS



### FUNDING FROM A CHILD NUTRITION ACCOUNT

Funds from the National School Lunch Program and the Child and Adult Care Food Program can support gardens in schools and child care centers. [USDA Memo SP 06-2015 \(NSLP\)](#) and [CACFP 11-2015 \(CACFP\)](#) clarify how funds from the child nutrition program may be used for gardens. This includes funds to pay for seeds, tools and staff support. This funding source requires that produce grown in the garden must first be used to support the nutrition programs. Anything that cannot be used or is left over from this effort may be sold or donated and proceeds are to be returned to the child nutrition program. Advanced planning and collaboration can make these projects very successful.



Before using federal child nutrition program funds for any of the suggested practices in this guide, ensure that all expenses are allowable according to program regulations. TDA provides detailed guidance for all programs on [www.SquareMeals.org](http://www.SquareMeals.org).

- National School Lunch Program participants can access Section 14 of the Administrator's Reference Manual, [Financial Information Concerning School Nutrition Funds](#).
- Child and Adult Care Food Program participants can access [Section 7000 of the Handbook, Financial Management](#).
- Summer Food Service Program participants should review all [USDA and TDA Handbooks](#) for information related to allowable costs.



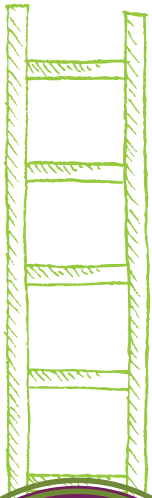
## FUNDING FROM

# Other Sources

Other sources for funding can include community organizations, small businesses and organizations offering grants. Each funding entity may have specific reporting requirements associated with providing monetary support. The garden coordination team should take this into account when deciding how to fund a project.







## Combine the Funding Sources

It is also appropriate to combine private and public funding. Child nutrition program funds and funds from other sources such as grants, donations or fundraisers may be combined to support garden projects. When a combination is used, the proportionate percentage of garden harvest and/or proceeds should be returned to the child nutrition program account, according to federal policy. For example, if a garden project is supported 75 percent by federal child nutrition funds and 25 percent by private donations from another source, at least 75 percent of the items harvested and/or income from the garden should be used by the child nutrition program. In this example, it is OK for all of the harvest to be used by the Child Nutrition program. This guide outlines several models for how to use garden harvest to support the child nutrition program.

### SECTION 2:

*Models  
for using  
Garden  
Harvest*

## SERVE GARDEN-GROWN Produce in Meals and Snacks



### SERVE GARDEN-GROWN PRODUCE FOR A SPECIAL EVENT OR FUNDRAISER

Fresh fruits and vegetables grown by children can be a successful centerpiece for a special community event or a fundraiser. The event will engage the community and raise funds for the program. The children can get involved in the event by providing simple preparation work. Fundraisers hosted at a school require that products sold during school hours meet Competitive Food Nutrition Standards or Smart Snack criteria. Fresh fruits and vegetables meet the criteria, so they can be sold during school hours or after school hours depending on what works best for the program.



## SPOTLIGHT STORY:

### *The Independence Garden Group of Lewisville ISD*

hosts an annual farm-to-table dinner highlighting produce grown in their campus gardens. Parents and community members were invited to spend an evening at the Independence Elementary campus garden to enjoy a six-course meal created by both school chefs and local chefs. Profits from the event help to fund Lewisville Independent School District's (LISD) garden program.

# TEACHING CHILDREN

## *Value through Gardening*



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## PLANTING THE Seeds



In addition to teaching children about where their food comes from and how to grow something from a seed, more programs across Texas are using gardens to teach **valuable life and career skills** such as the following:

- ✓ Sales
- ✓ Entrepreneurship
- ✓ Healthy eating
- ✓ Science, technology, Engineering and math (STEM) learning activities
- ✓ Fundraising
- ✓ Customer service
- ✓ Philanthropy
- ✓ Local food systems

### SELL PRODUCE AT A FARM STAND OR FARMERS MARKET

Children can learn about the economics behind a local food system while developing marketing and entrepreneurial skills by selling garden harvest at a farm stand or farmers market. This could be done at an existing market in the community, or at a special school event. Revenue generated from sales should be used to further support the garden.

### SPOTLIGHT STORY:

#### *The students at Rapoport Academy in Waco, Texas*

said their experience selling the produce they grew in their garden helped bring their experience full circle. They gained life skills and learned sales strategies and participated in all steps of the process: planting, growing, harvesting and selling. Proceeds from sales of garden produce are deposited in the child nutrition account and used to purchase supplies for the garden.



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## DONATE GARDEN-GROWN PRODUCE

Donating produce to organizations feeding people in need can be a valuable experience for children and a unique way to give back to the community. If a food pantry or charitable organization will accept the garden produce, work with them to establish the following parameters:

- Delivery schedule
- Preferred produce
- Delivery location

### DOWNLOAD THE GARDEN HARVEST RECEIPT TEMPLATE

Use the garden harvest receipt template to track products and quantities delivered.

# GARDEN HARVEST Receipt Template



## SPOTLIGHT STORY:

### *Elementary students at Graham Elementary School,*

an elementary campus in the Austin ISD, planted a garden that flourished all year long, especially during the summer. Summer volunteers donated 40 pounds of fresh produce grown in the garden including squash, okra and herbs to the neighborhood food pantry, Serving Center.





## Picked for your Tummy

### USE TASTE TESTING FOR NUTRITION EDUCATION

When a child is involved in the garden from start to finish, they are more willing to try the harvested fruit or vegetable. Taste testing offers a low risk situation for a child to try a new food. It also offers experiential learning that can be tied to healthy eating priorities.

## SPOTLIGHT STORIES:

### *Students in Corpus Christi ISD,*

home to more than 55 gardens, report loving the taste of tomatoes right from the vine. Offering an opportunity to taste produce in the garden setting is a great way to support the child nutrition team. Children need multiple exposures to a new food before they will start to accept and like the food. Make the first exposure a very positive one by providing tasting opportunities directly from the garden!

### *Preschool students at Mainsprings Schools in Austin*

joined Texas Agricultural Commissioner Sid Miller to plant a salsa garden. Children helped to plant tomatoes and peppers while learning about the importance of healthy eating. Once the tomatoes and peppers ripened, they were used in a snack that supported an important learning opportunity about why it is important to make healthy choices.



Angela Olige  
and student at  
Smithville ISD



## SECTION 3:

## Build-your-own Protocol for Food Safety

# FOOD SAFETY BEST PRACTICES for the Garden



There are several food safety best practices for planting, tending, and handling fresh produce harvested from a garden. Developing a policy or protocol specific for your garden and how you intend to use the harvest, and sharing the information with everyone working with the garden will help minimize the risk of foodborne illness. The following topics: Safe Soil, Safe Water and Safe Tools, will guide discussions between you and other local leaders about what constitutes food safety in the garden. Every garden across the state is unique and, therefore, each protocol will be different. Many of these conversation topics and discussions occur between the garden coordinator and the child nutrition team members, but occasionally you may need to consult with your local health inspector.

Following these recommendations can help achieve your goals related to serving garden produce to students, parents and community members.

### FIND YOUR LOCAL HEALTH INSPECTOR

Health inspections and policies are determined at a local or regional level. There are 11 Texas Health Service Regions. This map can be used to identify the school or child care center's Health Service district. Contact information for all Texas Public Health Organizations can be found in this [database](#) maintained by The Texas Department of State Health Services.



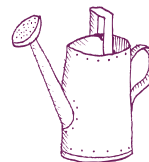
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## 3 FOOD SAFETY TOPICS in the Garden



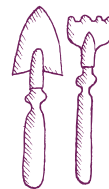
### SAFE SOIL

Protecting plants at all stages of growing and harvesting is an important consideration, and it starts with the soil.



### SAFE WATER

A general rule of thumb: if you would not drink the water, do not use it for your edible plants.



### SAFE TOOLS

Remember that the food you are growing is meant to be eaten so good hygiene is very important and clean tools are integral to food safety.

Garden Harvest Discussion Questions		
Question	Local Answer	Other Considerations (state, county, or local)
<b>Safe Soil</b>		
How do you ensure that the soil is safe for growing and harvesting?		
Do you have a list of approved vendors for soil? How do you ensure the soil is safe for growing and harvesting?		
How do you ensure that the soil is safe for growing and harvesting?		
How do you ensure that the soil is safe for growing and harvesting?		
How do you ensure that the soil is safe for growing and harvesting?		
<b>Safe Water</b>		
How do you ensure that the water is safe for growing and harvesting?		
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How do you ensure that the water is safe for growing and harvesting?		
<b>Safe Tools</b>		
How do you ensure that the tools are safe for growing and harvesting?		
How do you ensure that the tools are safe for growing and harvesting?		
How do you ensure that the tools are safe for growing and harvesting?		
How do you ensure that the tools are safe for growing and harvesting?		

## BUILD-YOUR-OWN Garden Harvest Protocol

Use this template to guide conversations at the local level. Track questions and considerations that will impact your local operation.







# Safe Soil

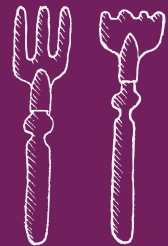
Soil is defined as the upper layer of earth in which plants grow and is one of the primary sources for plant nutrients. Protecting plants at all stages of growing and harvesting is an important consideration, and it starts with the soil.

If you are unsure about the composition of the garden's soil, testing can determine the levels of chemicals, pesticides, lead and other additives that may be present. Soil testing is recommended for all school and child care center gardens, but it is especially important if the garden site is located near busy streets where pollution from roads and cars can have an impact. Contact your local [Texas A&M AgriLife Extension](#) for information on [soil testing services](#) available in your area.

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## Mitigating Contamination

Although unintended contamination can happen, there are known sources of contamination that can be mitigated. The following list can help you identify some of the sources of risk in your garden:



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Quality of building materials for raised garden beds

Access for animals or pests to wander into the garden

The usage history of where the garden now sits





# BEYOND THE SOIL:

## Soil Amendments



### PESTICIDES, HERBICIDES AND FERTILIZERS

Pesticides can help control weed and pest problems, but application must be done correctly to avoid creating health risks. TDA and the Environmental Protection Agency (EPA) recommend that schools and child care centers use integrated pest management (IPM) to reduce pesticide risk and exposure to children. IPM relies on a combination of common-sense practices, with pesticide application as a last resort.

All school districts in Texas are required to have an IPM coordinator on staff. You can find your school district IPM coordinator on TDA's list of [School IPM Coordinators](#).

A [Texas A&M AgriLife Extension](#) agent can also provide guidance on the best methods to control local pest problems. If your goal is for the garden produce to be served in the cafeteria, talk to the IPM coordinator about approved IPM methods.

### COMPOST AND MANURE

Composting uses heat and chemical reactions to break down organic inputs and form a nutrient-rich plant fertilizer. Work with your [Texas A&M AgriLife Extension](#) agent for expert assistance in learning the risks and rewards of composting. USDA also recommends vermiculture, or worm composting, as a way to use fruits, vegetables and waste paper to make your own fertilizers. Composting and vermiculture can be great for the garden as well as educational for all garden participants and can help reduce food waste!

## SPOTLIGHT STORY:

### Eastside Memorial

became the first high school in Austin ISD to introduce a composting program. The effort prevented 10,250 pounds of waste from going to the landfill. As a result of the school's zero waste efforts and other environmental initiatives, Eastside Memorial High School became the first National Wildlife Federation Certified Green Flag High School in Texas.

## CAUTION

Tomato Hornworm



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Rabbit



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1st  
Green Flag  
High School







# ESTABLISH A Garden Protocol

The following questions and recommendations provide a starting point for establishing your garden protocol. The information in this chart is also available as a template for download. Collaborate with local leaders like a [health inspector](#), or the [IPM coordinator](#), and the child nutrition team members to identify and determine best practices for your edible gardens.

Launch the Conversation at the Local Level!



## Best practices for edible gardens

DISCUSSION TOPICS	FARM FRESH TIPS
<b>HERBICIDE &amp; PESTICIDE CONSIDERATIONS</b>	<p>Maintain a list of acceptable herbicides and pesticides that can be applied to a garden. Decide what to put on the list at the local level. TDA does not maintain a list of approved herbicides or pesticides but prefers that schools use green category products on edible school gardens. TDA defines green category products in <a href="#">administrative rule 7.204</a>. A best practice according to TDA is to coordinate all pesticide and herbicide applications with the <a href="#">IPM coordinator</a>.</p> <p>Confer with <a href="#">Texas A&amp;M AgriLife Extension</a>, your <a href="#">IPM Coordinator</a> or other appropriate departments for a list of approved herbicides, pesticides and fertilizers for produce harvested for consumption.</p>
<b>COMPOST CONSIDERATIONS</b>	<p><a href="#">USDA's Food Safety Tips for School Gardens</a> provides best practices for the use of compost in edible gardens. Aggie Horticulture's <a href="#">Easy Gardening Guide</a> provides steps to get started composting.</p>
<b>GARDEN LOCATION CONSIDERATIONS</b>	<p>Edible gardens should not be planted over septic systems or leach fields. If the historical usage is unknown, consider getting the soil tested. Contact your local Texas A&amp;M <a href="#">AgriLife Extension</a> for information on <a href="#">soil testing services</a> available in your area.</p>





# SAFE WATER *is Key*

In addition to safe soil, safe water is key to ensuring a healthy harvest. The garden coordination team can meet with a local health inspector to learn tips for keeping gardens safe and find out what local regulations exist for using water catchment or recycled water on edible gardens.

*A general rule of thumb:*  
if you would not drink the water, do not use it for your edible plants.

**Launch the Conversation at the Local Level!**  
Use these discussion topics to identify the best questions for your local health inspector.



## Safe water ensures a healthy harvest

DISCUSSION TOPICS	FARM FRESH TIPS
APPROVED WATER SOURCES FOR USE ON EDIBLE GARDEN	Work in coordination with your local health inspector to identify whether to include or exclude gray water (gently used water from your bathroom sinks, showers, or tubs) or recycled water. Health department rules and regulations vary by county.
CONTROL OF WATER RUNOFF NOT INTENDED FOR THE GARDEN	Water runoff from irrigation not related to edible gardens such as watering the lawn or other landscaping or rainwater runoff should be prevented from coming into contact with an edible garden.



## Safe Tools

Remember that the food you are growing is meant to be eaten so good hygiene is very important.

Good hygiene includes:

- Clean tools
- Clean hands
- Healthy garden participants

Hands are the most common tools in many gardens. U.S. Centers for Disease Control and Prevention (CDC) estimates that more than 50 percent of foodborne illnesses are linked to poor hand-washing practices. Proper hand-washing and keeping sick children and adults out of the garden are two simple ways to greatly reduce the risk of foodborne illnesses. Easy access to soap, water and single use hand towels are good ways to ensure that all participants have clean hands before and after working in the garden. The CDC provides short [videos](#) for volunteers and children to ensure that proper hand-washing techniques are learned and followed.

## PREVENTING CROSS-CONTAMINATION

Tasks that will not be completed by hand will require sanitized garden tools. Scissors and knives are common garden harvest tools that must be cleaned and sanitized between uses to prevent cross-contamination. If there was a pathogen on the fruit or vegetable being harvested one day and the tools go unwashed, it can easily be passed on to the next produce item it touches. Pathogens cannot be seen, so a visual check is not adequate assurance that your tools have been properly cleaned. Use a sanitizing solution after visible debris has been removed for effective sanitization.

## LAUNCH THE CONVERSATION AT THE LOCAL LEVEL

Good hygiene practices in the garden offer a clear cut way to reduce the risk of contamination in your edible gardens. Discuss the following topics with your garden planning team to identify how you will ensure good hygiene for all participants – including children, volunteers and educators. Include your local health inspector, nutrition team members and other local leaders for input.



## Good hygiene reduces contamination

DISCUSSION TOPICS	FARM FRESH TIPS
EXCLUSION OR INCLUSION OF SICK OR POTENTIALLY ILL CHILDREN AND ADULTS FROM CERTAIN GARDEN ACTIVITIES	Sick or potentially ill participants exhibiting symptoms should not be allowed to participate in the harvest of foods that will be consumed.
PROPER HAND-WASHING - WHO MUST DO IT AND WHEN IT MUST BE DONE	All garden participants must properly wash their hands by using liquid soap and single use paper towels before handling produce. Hands should also be free from open cuts or wounds that could come into contact with produce.
ACCESS TO HAND-WASHING FACILITIES	Restroom facilities with water and soap should be accessible to anyone working in the edible garden. If there are no facilities nearby or facilities are not accessible, you can set up a temporary hand-washing facility following <a href="#">these guidelines</a> provided by the CDC.
PREVENTION OF CROSS-CONTAMINATION FROM EQUIPMENT, GLOVES AND ANY OTHER TOOLS THAT COME INTO CONTACT WITH PRODUCE	All harvest tools and food-grade harvest containers should be sanitized between uses.
MATERIALS USED TO CONSTRUCT GARDEN STRUCTURES	Raised beds should be built using non-toxic, non-leaching materials for the frame. For example: untreated lumber or limestone blocks.
STORAGE, SANITATION AND MAINTENANCE OF GARDEN EQUIPMENT	Harvest tools should not be used for any other purposes on campus and should be stored in a secure location. Garden equipment must be cleaned and sanitized prior to being stored.



## PACKING AND STORING

When it is time to pack, store and deliver your garden harvest to its final destination, work closely with everyone involved to identify the steps needed to build and maintain a safe and successful transfer of food from garden to plate. Work with teachers or other individuals who could act as receivers for your garden harvest to establish clear action steps each time they receive a delivery.

Launch the Conversation at the Local Level!



## Harvest delivery procedures

DISCUSSION TOPICS	FARM FRESH TIPS
HARVEST DELIVERY PROCEDURES	If your harvested produce is destined for the cafeteria or kitchen, work with your child nutrition team to determine if a leader from both the garden team and the nutrition team need to be present for harvest activities.
ACCEPTABLE FOOD STORAGE CONTAINERS	Work with nutrition team members to identify what is considered a food-grade container. Often, food-grade containers are made of non-porous materials, like a stainless steel bowl that can be easily cleaned and sanitized.
MAINTENANCE OF INTEGRITY OF FOOD-SAFE STORAGE CONTAINERS	Similar to other garden tools, food-safe storage containers should be cleaned and sanitized before storing. A sanitization protocol could include running containers through a dishwasher or sanitizing in a three compartment sink.
ACCEPTABLE/UNACCEPTABLE FOOD-SAFE STORAGE CONTAINERS	Wicker baskets, burlap sacks or any container that previously held chemicals are not appropriate food storage containers. Work with your nutrition team members to identify what is considered an appropriate food storage container.
DOCUMENTATION OF HARVEST DELIVERY AND RECEIPT	All produce should be weighed and documented on an agreed upon harvest receipt. <a href="#">Download TDA's garden harvest receipt</a> template. The contracting entity (CE) should determine whether additional information should be included for proper documentation.
LIGHT PROCESSING OF GARDEN-HARVESTED PRODUCE	This is a decision that can be made at the local level. Identify if the produce should arrive pre-washed and whole or processed in some other way. If you are discussing this topic with your nutrition team you may also want to discuss minimum/maximum delivery amounts, and how much lead time should be given prior to delivery.
SERVING GARDEN-GROWN PRODUCE IN MEALS	Work with your child nutrition team to determine how you would like to notify other children that the produce was grown in the school garden.

## CREATE YOUR OWN PROTOCOL

Create your own garden harvest protocol, using the [Garden Harvest Protocol](#) as a guide. Work within your school or child care organization, keeping the applicable federal and state policies in mind, to develop a protocol that works for you.



# GARDEN to Café

## GARDEN HARVEST PROTOCOL EXAMPLE IN TEXAS

Austin ISD implemented a “Garden to Café” protocol in 2016. This protocol outlines specific best practices that are followed in the garden, when the harvest is integrated into the cafeteria. All of the resources included in their protocol are available for download on the Austin ISD [Web page](#) [Austinisd.org](http://Austinisd.org).



## SHARE YOUR SUCCESS *today*

Inspire others with your best practices and learning opportunities. Share your garden program successes and photos with TDA by emailing [LocalProducts.SquareMeals@TexasAgriculture.gov](mailto:LocalProducts.SquareMeals@TexasAgriculture.gov).





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1400 Independence Avenue, SW

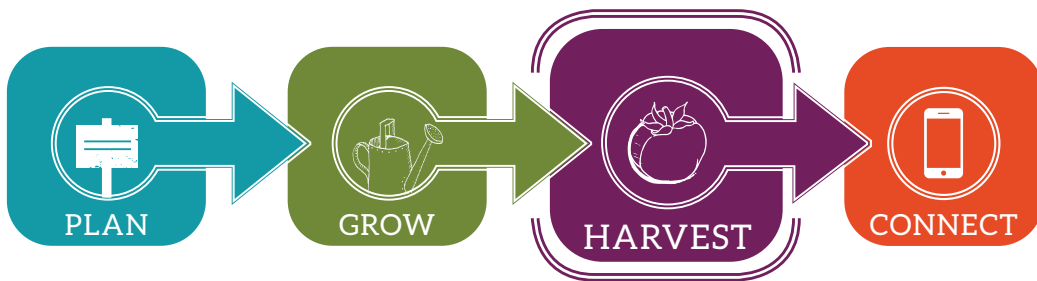
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fax: (202) 690-7442; or email: [program.intake@usda.gov](mailto:program.intake@usda.gov).

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# Let's get growing

## HARVEST TODAY!



This resource provides ideas for working in partnership with child nutrition program team members to develop a food safety protocol that meets the needs of students, volunteers and child nutrition professionals. HARVEST provides the first steps in developing a local protocol based on local regulations.

Your partners at the Texas Department of Agriculture support your efforts to increase young Texans' connections with local products and agriculture. Learn more about TDA's Farm Fresh Initiative at [SquareMeals.org/TexasFarmFresh](https://SquareMeals.org/TexasFarmFresh) and access additional resources and training materials. You may also connect with your local Education Service Center office for technical assistance.



TEXAS DEPARTMENT OF AGRICULTURE  
**COMMISSIONER SID MILLER**

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Food and Nutrition Division  
Farm Fresh Initiative

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Updated 1/11/2022  
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