

Produce Safety University Trainer Guide *Prototype*

2023



Tips to Consider for Adult Learning

We know it's not easy to conduct training with your colleagues- that's why we have a few tips for adult learning.

Tips and Tricks

1. **Be flexible.** We know you and your staff are extremely busy dealing with the day to day of your jobs, so it's important to be as adaptable as possible to convey important information within the constraints of your schedules.
2. **Be practical.** If there are ways to teach the topics in ways that clearly relate to the work you all do, use them. Adult learners tend to appreciate and absorb information when it applies to their job's roles and responsibilities.
3. **Be observant.** If your colleagues don't seem engaged and attentive, try a new strategy, or take a short break.
4. **Be lively.** Keeping your training entertaining and dynamic is a good way to keep your colleagues interested and engaged.
5. **Be helpful.** Provide numerous opportunities for your colleagues to ask questions and encourage them to share their experiences that relate to the topic.
6. **Be approachable.** You may have colleagues who don't feel comfortable asking questions in front of others or sharing their experiences. Allow time after the training for one-on-one questions, and consider sharing your contact information, if your colleagues don't already have it.

If you'd like to learn more effective strategies for training and adult learning, consider:

- [Foundations for Training Excellence](#), a face-to-face training offered by the Institute of Child Nutrition (ICN), and
- Adult Learning, a supplemental online course to the Foundations for Training Excellence, also offered by the ICN.



Where does your produce come from?

Key Points

What do you need to know?

- Farms grow and harvest crops, raise animals, pack/hold commodities, and may have additional processing activities.
- Growing methods may also vary from traditional farming practices, and can include hydroponic, vertical growing, aquaponic and urban farming.
- Processing mainly occurs at secondary facilities, and then these products are distributed.
- Produce can be sold at auctions, terminal markets, farmer's markets, or retail, and can be used in school foodservice operations.
- Diverse production systems and geographic differences can influence the food safety considerations of fresh produce.

Why should you care?

- Knowledge of where and how produce is grown and handled helps anticipate and mitigate potential food safety concerns across varied production and purchasing systems.

Sample Training Plan

Suggested Time	Topic	Training Resources
5-10 mins	Introduce the topic.	Ask participants: <ol style="list-style-type: none"> 1. What are some of the different growing, harvesting, processing, and distribution practices you've seen your producers and suppliers use? 2. Why do you think understanding the impacts of different growing and distribution practices are important for the safety of produce you serve?
Objective 1: Identify different growing areas and types, harvesting, processing and distribution of fresh produce.		
20-30 mins	Discuss different systems associated with the growing, harvesting, processing, and distribution of fruits and vegetables. Talk about how geography may impact which systems are used for these processes.	<ol style="list-style-type: none"> 1. Vegetable Production Resources 2. Commercial Tomato Production Handbook 3. Harvesting Methods of Fruits and Vegetables 4. Hydroponics 5. Indoor Vegetable Production: An Alternative Approach to Increasing Cultivation 6. Processing 7. USDA Releases New Maps Identifying Major Crop Producing Areas in the United States and Abroad
Objective 2: Explain the complexities and challenges of food safety in the global food supply.		
15 mins	Identify components of the produce supply chain that make it complex and may create supply challenges.	<ol style="list-style-type: none"> 1. Major Issues in Supply Chain of Fruits and Vegetables 2. Innovation in fruit and vegetable supply
Brining it all together.		
Optional discussion: ask participants: <ol style="list-style-type: none"> 1. Have you experienced supply challenges when procuring produce in your operations? 2. What were some strategies you used to overcome these challenges? 		

Food Safety Overview

Key Points

What do you need to know?

- Food safety hazards can be biological (bacteria, viruses, parasites), chemical (i.e. allergens, pesticides, non-food grade additives) or physical (foreign materials causing choking or other injury) attributes that may make food unsafe for consumption.
- Fresh produce is often consumed raw without a cook-kill step, which can present additional food safety risks.
- Produce that is received pre-cut, pre-washed, or processed and modified from its original raw state, including raw seed sprouts, cut melons, cut leafy greens, and cut tomatoes, are time/temperature control (TCS) foods per the [FDA Food Code](#). This means time/temperature control are required to limit pathogen growth or toxin formation.

Why should you care?

- Understanding food safety risks and how to reduce them helps to prevent foodborne illness among students.
- Fresh produce causes approximately 46% of foodborne illness in the US, and foodborne outbreaks which occur in schools have resulted in a higher number of illnesses than outbreaks in non-institutional settings (see [Attribution of Foodborne Illnesses, Hospitalizations, and Deaths for more information](#)).
- Norovirus was the cause of over half of the foodborne illnesses reported in schools between 2000-2010, with over 60% of the Norovirus illnesses linked to served produce (see [Analysis of Contributing Factors Associated with Foodborne Outbreaks in School Settings](#) for more information).

Sample Training Plan

Suggested Time	Topic	Training Resources
5-10 mins	Introduce the topic.	Ask participants to reflect on what fresh produce is used in their operations. 1. What types of food safety hazards are you familiar with? 2. What hazards have you observed in your operations? 3. Have you or someone you know suffered from foodborne illness?
Objective 1: Understand the food safety hazards associated with fresh produce.		
10 mins	Define food safety hazards.	1. Food Safety Overview Take-Home Training for Professional Standards 2. Food Safety Hazards 3. Hazards and Risks: What is the Difference and How to Evaluate for Your Operation, a Beginners Guide 4. Food Safety Hazards in Foodservice and Food Retail Establishments 5. Foodborne Illness-Causing Organisms in the U.S.
10 mins	Discuss the food safety hazards relevant to fresh produce and why fresh produce is of greater concern than other food types.	1. Fruit and Vegetable Safety 2. Selecting and Serving Produce Safely 3. Lettuce, Other Leafy Greens, and Food Safety
Objective 2: Identify which foodborne illnesses are typically associated with produce.		
5 mins	Share current statistics on produce and foodborne illnesses, especially those associated with produce.	1. Estimates of Foodborne Illness in the United States 2. Attribution of Foodborne Illnesses, Hospitalizations, and Deaths to Food Commodities by using Outbreak Data, United States, 1998–2008

Growing Food Safely

Key Points

What do you need to know?

- Good Agricultural Practices (GAPs) are required by the [FSMA Produce Safety rule](#) on farms that have an average annual value of produce sold during the previous three-year period of \$25,000 or less.
- All fruit, all lettuces, all melons, and most vegetables are covered by the FSMA Produce Safety rule.
- GAPs help to identify and reduce the risks of foodborne illness by promoting hygiene in on-farm facilities, production practices, transportation, and product handling.
- There are GAPs for water quality, worker health & hygiene, manure & compost, wildlife & animal management, transportation, record keeping, and traceability, which work together from farm to fork.

Why should you care?

- Understanding GAPs and their impact on food safety helps ensure safe meals for students.
- While purchasing from GAP audited farms is not a requirement for Child Nutrition programs, GAPs audits can be used as a tool for purchasing safe food. GAPs auditors use audit checklists based on the FDA's GAPs guidance document to verify a grower's food safety program.
- Cooking produce can eliminate the risk of pathogenic bacteria, but when eaten fresh, we are relying on food safety practices used on-farm and through processing to reduce risks of foodborne illness from fresh produce. This is why programs like GAPs and FSMA are so important.

Sample Training Plan

Suggested Time	Topic	Training Resources
5-10 mins	Introduce the topic.	Ask participants: <ol style="list-style-type: none"> 1. Do you know who your produce suppliers are? 2. Have you visited farms you procure from? 3. Do you know where your produce is grown?
Objective: Identify on the farm best growing practices for fresh produce to reduce the risk of foodborne illness.		
10 mins	Facilitate a general discussion about practices that producers can use to reduce food safety hazards.	Ask participants: <ol style="list-style-type: none"> 1. What do you think farmers could do to prevent food safety risks? 2. Have you talked with your suppliers about what they're doing to enhance produce safety? Keeping Produce Fresh: Best Practices for Producers
Objective: Recognize growing practices and Good Agricultural Practices required by FSMA		
5 mins	Identify key requirements in FSMA for produce.	FSMA Final Rule on Produce Safety
20 mins	Explain what GAPs are required under FSMA for fresh produce.	<ol style="list-style-type: none"> 1. Growing Food Safely Take-Home Training for Professional Standards 2. Understanding FSMA: The Produce Safety Rule
5 mins	Highlight important questions for consideration in each area of GAPs that may be especially relevant in your area/operations.	Checklist for Retail Purchasing of Local Produce
Optional activity: Read through the scenario (page 57-62) and give each group 10 minutes to answer the questions/ Have each group (5) share their answers to the group for further discussion.		

Buy Smart, Save Smart

Key Points

What do you need to know?

- Produce purchased for Federally funded child nutrition meals must meet Federal, State, and Local regulations, including the [Buy American Provision](#), which requires nutrition operators purchase domestic commodities or product that is processed domestically using 51% U.S. grown foods by weight or volume.
- Produce distributors must adhere to the rules outlined in [FSMA: current Good Manufacturing Practices](#) (cGMPs), food traceability, intentional adulteration, and sanitary transportation. Buyers should require documentation from vendors demonstrating they are following FSMA or additional food safety programs.
- Food safety practices that address shelf-life, yield, and quality can save program operators money. This includes inspecting produce during receiving, using correct tools and equipment, and using appropriate preparation techniques.
- Insurance against economic loss from foodborne illness helps growers safeguard their business operations. It's important to know your school district's requirements for farm liability insurance coverage for any products purchased from the farm.

Why should you care?

- Purchasing produce from a reputable supplier is important to ensure foods are safe at the point of receiving and can ensure adherence to FSMA rules.
- Maximizing produce yields can help school nutrition operations by reducing waste and controlling portion costs.

Sample Training Plan

Suggested Time	Topic	Training Resources
5-10 mins	Introduce the topic.	Ask participants: 1. What regulations are you familiar with in procuring produce for your operations? 2. What are some steps that you currently take to make sure your vendors adhere to these regulations?
Objective 1: Know which FSMA rules are followed by reputable vendors.		
20 mins	Discuss best practices and regulations that can be used to ensure the safety of the produce you procure.	1. Buy Smart, Save Smart Take-Home Training for Professional Standards 2. Verifying On-Farm Food Safety
Objective 2: Describe the Buy American Provision procurement requirements and exceptions.		
5 mins	Highlight the Buy American Provision and its implications in school nutrition programs.	1. Buy American Fact Sheet 2. California Cling Peaches
Objective 3: Apply fresh produce cost saving measures in school meal operations.		
5 mins	Talk about strategies to reduce costs through effective procurement and minimizing waste.	1. Best Practices for Handling Fresh Produce in Schools 2. Storing Produce
<i>Optional activity: Using the As Purchased to Edible Portion worksheet in your binder, watch Chef Cyndie's recorded demonstration and record the answers for questions 1-4. After viewing the demo, answer question number 5 by calculating the yield using the formula provided.</i>		
Bringing it all together.		
<i>Optional activity: Ask for volunteers to use their district as reference and complete the two roadmaps to tie together information from all three objectives. Facilitate a discussion and questions from the group to the presenter.</i>		

Sourcing Local Produce

Key Points

What do you need to know?

- There is no standard definition for 'local' and it can be defined in various ways; it can be based on a geographic radius, county, state, or region.
- You can find and procure local foods through many entities, including distributors, individual producers, food processors, school gardens, co-ops, and more.
- Obtaining food from local sources can be a great way to support local agriculture, however due to their size some small farms or foods sold at farmers markets may be exempt from certain food safety regulations. Asking whether those local sources are following GAPs or other food safety programs can provide assurance that farmers or vendors follow good food safety practices.
- Good Agricultural Practices (GAPs) are on-farm food safety best practices, and while voluntary for any farm, orchard, or garden which have average annual produce sales below \$25,000, growers are encouraged to utilize those practices as much as possible.
- Know the difference between dirty and rotting produce, expect some dirt, and wash your produce in a cleaned and sanitized sink or wash basin.
- Specifications can express preferences for local (based on your definition), freshness, farm size, and more.

Why should you care?

- Buying locally satisfies the Buy American requirement and supports your local economy.
- Descriptive specifications will help you get exactly what you want.

Sample Training Plan

Suggested Time	Topic	Training Resources
5-10 mins	Introduce the topic.	Ask participants: 1. Do you buy local produce for your school food operations? 2. If so, where is it from? 3. How do you define local?
Objective 1: Understand the farm to school and relevant food safety practices.		
15 mins	Present important food safety practices to consider and observe for farm to school food safety.	1. Farm to School: Sourcing Local Take-Home Training for Professional Standards 2. Implementing Farm to School Activities 3. Verifying On-Farm Food Safety
Objective 2: Understand how farm to school programs can mitigate supply chain disruptions.		
15 mins	Discuss school gardens, relevant food safety considerations, and their role in supply chain resilience.	1. Food Safety Tips for School Gardens 2. School Garden Safety Checklist 3. Understanding Supply Chain Disruptions in School Food 4. Bridging Supply Chain Gap With School Gardens 5. State Looks to Farmers to Fill Supply Chain Gaps in School Cafeterias

Quality and Condition

Key Points

What do you need to know?

- Quality can be thought of as the relative degree of excellence of something, and it is a distinctive attribute or characteristic that is measured against other similar things.
- Quality standards allow you to communicate directly with industry using common language that is “standard” throughout the produce life cycle.
- Quality defects (or “grade defects”) are permanent factors that affect produce that will not change. Some examples include scars, mis-shaped, and under-sized.
- Condition describes the relative soundness or preservation of a product.
- Condition defects may appear as bruising, discoloration, decay, firmness, shriveling, and ripeness.
- Fruits, vegetables, nuts, and specialty crop grades play an important role in making sure specifications are appropriate and accurate for your needs.

Why should you care?

- Properly identifying and verifying quality will ensure the freshest and safest produce will reach your school nutrition programs.
- Differentiating between quality and condition defects may help reduce waste in your operations.

Sample Training Plan

Suggested Time	Topic	Training Resources
5-10 mins	Introduce the topic.	Engage with the class by asking for volunteers to give examples of how they inspect their produce when received and or purchased and what they are looking for to guarantee quality.
Objective 1: Define and explain the difference between quality and condition defects.		
15 mins	Communicate, show, and demonstrate quality and condition defects.	<ol style="list-style-type: none"> 1. Quality and Condition Take-Home Training for Professional Standards 2. Produce Safety Information Sheets that illustrate desirable characteristics and product defects on commodities like: apples, bananas, lettuce, tomatoes, and broccoli.
<i>Optional activity: Use images of produce defects from the Produce Safety Information Sheets you didn't present and have the participants identify quality and condition defects. Discuss what participants would do if they received these items, and how they could avoid receiving products with these defects.</i>		
Objective 2: Understand the relationship, and cost implications, for defects/grade.		
15 mins	Discuss how the grade and quality and condition defects of produce affect its cost.	<ol style="list-style-type: none"> 1. Grades and Standards for Produce 2. Specifications & U.S. Grade Standards for USDA Foods 3. Market News - Fruit and Vegetable
Objective 3: Differentiation between cosmetic defects, defects that impact taste, and defects that may create food safety hazards.		
10 mins	Examine images or real produce for cosmetic defects, defects that impact taste, and discuss defects that may cause food safety hazards.	Produce Safety Information Sheets
<i>Optional activity: Pick items commonly procured by your participants, or fresh produce you have that could be examined by participants, from the AMS Grades and Standards web page and talk about the difference between grades, tolerances, and definitions. Identify any specific food safety concerns associated with these grades and standards.</i>		

Market News

Key Points

What do you need to know?

- The [Market News portal](#) includes shipping points, wholesale or terminal markets, and retail venues for fruit and vegetables.
- You can generate custom reports based on your location, commodity, package type, date, and grade. For example, the cost of non-organic strawberries in New York on 11/16/2021 was \$30 to \$54 for 8 1lb containers.

Why should you care?

- You can use Market News to compare current market prices and verify bid price, vendor adherence to bid terms and conditions, and justify exemptions to Buy American.
- You can save money in your operations by knowing the most cost-efficient option for different commodities based on package size, seasonality, and more.

Sample Training Plan

Suggested Time	Topic	Training Resources
5-10 mins	Introduce the topic.	Ask participants: 1. How do you cut cost when purchasing produce? 2. Have you heard of AMS Market News?
Objective 1: Identify information on the AMS Market News reports to aid in child nutrition procurement decisions, including Buy American.		
10 mins	Discuss Market News, its features, how it works, and its applicability to procurement in child nutrition programs.	1. Market News Home Page 2. Infographic 3. Fact Sheet
Objective 2: Use Market News to determine the value of produce and factors impacting cost, and check for seasonal availability.		
15 mins	Manipulate the Market News portal to check the factors impacting cost (container, size, etc.) and your local seasonal availability of produce items.	Market News Portal
Optional activity: Ask volunteers to show how to compare prices using the Custom Averaging Tool (CAT) on AMS marketplace for different commodities they frequently purchase in their operations. Discuss how this information can be used to reduce costs in the procurement decisions made in their operations.		

Fresh-Cut Produce

Key Points

What do you need to know?

- Fresh cut produce can refer to those fruits and vegetables that have been minimally processed and altered in form by peeling, slicing, chopping, shredding, coring, or trimming, with or without washing, prior to being packaged for use.
- You may opt to use fresh-cut produce because it may be less expensive than obtaining whole produce and having to cut in-house, and it may be easier to handle by students or have higher student acceptance.
- Since fresh-cut produce has been cut, the natural exterior barrier is broken, which increases the risk of microbial contamination and growth. There is no fresh-cut processing step that can fully eliminate microbial hazards.
- Fresh cut produce requirements are included in the [FSMA cGMPs](#).

Why should you care?

- Fresh produce can pose risks of foodborne illness, but these risks can be mitigated using food safety best practices specific to fresh-cut produce.

Sample Training Plan

Suggested Time	Topic	Training Resources
5-10 mins	Introduce the topic	Ask participants: <ol style="list-style-type: none"> 1. Do you receive prewashed, packaged produce or whole, uncut produce? 2. How do you wash the types of produce you receive? 3. Are you aware of any foodborne illnesses related to fresh-cut produce in the news or in your district?
Objective 1: Learn about regulations and best practices of the commercial fresh-cut industry and what to look for at your processor.		
10 mins	Examine regulations and best practices for fresh-cut produce and what to expect from a fresh-cut processor.	<ol style="list-style-type: none"> 1. Food Safety Practices to Expect from Your Fresh-Cut Produce Processor 2. Guidance for Industry: Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables
Optional discussion: Discuss differences in approved methods to wash and sanitize produce (i.e. water, chlorine, chlorine derivatives (hypochlorous acid, peracetic acid)), washing equipment (i.e. colander, air Gapped Food preparation sink, and others), and when these methods should be used.		
Objective 2: Identify best practices to mitigate microbial hazards in fresh-cut produce operations.		
15 mins	Talk about safety practices you can use in your operations to reduce food safety risk of fresh produce, including washing, cleaning, sanitizing, handling, and storage practices.	<ol style="list-style-type: none"> 1. Fruit and Vegetable Safety 2. Storing Fresh Produce 3. Best Practices for Handling Fresh Produce in Schools 4. Washing Produce
Optional activity: Ask volunteers to select a commonly purchased fresh-cut produce item and talk through the steps from growing to service; ask the group to identify and discuss important practices to ensure the safety of the item, and areas likely to create produce safety hazards.		

Getting the Right Product

Key Points

What do you need to know?

- There are 4 steps to make sure you get the right product at the right price:
 1. Create the cycle menu.
 2. Determine product availability.
 3. Write product specifications and conduct competitive procurement.
 4. Receive the specified product.

Why should you care?

- Writing clear specifications allow you to get the product you want, receive the quality and condition you are paying for, and buy at a competitive price while reducing food waste, delivery delays, and food safety hazards.

Sample Training Plan

Suggested Time	Topic	Training Resources
5-10 mins	Introduce the topic.	Ask participants: <ol style="list-style-type: none"> 1. How do you guarantee that that you get the produce you need? 2. Have you had situations where the produce receive doesn't meet your program's needs? 3. How much experience do you have writing specifications for produce?
Objective 1: Understand how to interpret and use US grade standards when writing specifications.		
25-30 mins	Discuss US grade standards and how they relate to produce specifications; note how produce specifications can help control costs and reduce waste in school nutrition programs.	<ol style="list-style-type: none"> 1. Product Specifications & Requirements 2. How to Write Product Specifications 3. Commercial Item Descriptions 4. Specifications & U.S. Grade Standards
Objective 2: Learn how to communicate with vendors to ensure seasonal availability of produce for your school.		
10 mins	Foster a discussion of effective communication methods with vendors that your participants have used.	Ask participants: <ol style="list-style-type: none"> 1. How often do you communicate with your vendors? 2. Do you have better relationships with some vendors? Why do you think these relationships are strong? 3. How do you make sure to communicate in effective ways so that both parties get what they need?
10 mins	Identify specific strategies to ensure seasonal availability of the produce you need in your operations.	<ol style="list-style-type: none"> 1. Seasonal Produce Guide 2. Seasonal Food Guide 3. Seasonal Produce
Objective 3: Understand the consequences of poorly written specifications, and how to write clear specifications that encourage competition.		
15 mins	Highlight the difference between strong specifications and those needing improvement; identify what may happen if you use poorly written specifications.	Use specifications you or your participants have written and compare them to examples to identify areas of improvement, and differences between specifications.
Bringing it all together.		
<i>Optional activity: have participants draft specifications for produce they often use in their operations, and have a few volunteers talk through the specifications they wrote. Foster discussion around areas for improvement.</i>		

Receiving and Storage

Key Points

What do you need to know?

- After the school district’s produce specifications have been written and the produce has been ordered, you need to receive and inspect deliveries to ensure they meet your program’s needs.
- When receiving produce, check for quality and safety attributes, like temperature. The produce size, quality or grade and appearance, variety or type, and quantity should be reviewed to make sure you are getting what you ordered based on your specifications.
- If you receive produce that does not meet standards identified on the specifications, send it back.
- The shelf life of fresh fruits and vegetables depends on the condition in which it was received, and how the produce is stored in your kitchen.
- Some produce, especially fruits, release ethylene gas to help ripen the fruit; you should consider ethylene gas when making a storage plan and avoid storing ethylene producers and ethylene sensitive produce in the same area.

Why should you care?

- Identifying and verifying quality will ensure the best, freshest and safest produce products are received for your school nutrition program.
- Proper receiving and storage practices can maximize the shelf life of produce and diminish food waste.

Sample Training Plan

Suggested Time	Topic	Training Resources
5-10 mins	Introduce the topic.	Ask participants: <ol style="list-style-type: none"> 1. Do you have a manager or designated person in charge (PIC) tasked with checking produce deliveries for quality? 2. What do they check for?
Objective 1: Recognize how proper storage techniques can improve shelf life.		
10 mins	Foster a discussion among participants about their observations on the relationship between storage and shelf life.	Ask participants: <ol style="list-style-type: none"> 1. How do you store different produce items? 2. How and why did you pick those storage methods for those items? 3. Have you observed different amounts of waste based on the storage technique used?
5 mins	Highlight some key reasons to store produce properly from the MSU Extension blog.	Proper produce storage
Objective 2: Understand the impact of storage conditions such as temperature, humidity, and ethylene on produce safety and freshness.		
15-20 mins	Present factors that influence storage conditions of produce items; discuss why proper storage (taking these factors into consideration) is important in school nutrition programs to minimize waste and reduce costs.	<ol style="list-style-type: none"> 1. Receiving and Storage Take-Home Training for Professional Standards 2. Storing Fresh Produce 3. Proper Storage Temperatures for USDA Foods 4. Storage Temperatures and Procedures – Food Safety, Sanitation, and Personal Hygiene 5. Fruits and Vegetables - Optimal Storage Conditions 6. Ethylene Gas
Bringing it all together.		
<i>Optional discussion: ask participants to share where they see areas of improvement of produce receiving and storage in their operations, and how these changes could increase cost savings and reduce waste.</i>		

Safe Preparation and Service

Key Points

What do you need to know?

- [Hazard Analysis Critical Control Point](#) (HACCP) defines the temperature danger zone (TDZ) as 41°F to 135°F and categorizes food preparation processes by the number of trips through the TDZ.
- You can reduce food safety risks by storing produce properly, practicing hand hygiene, avoiding bare-hand contact (by using gloves), washing fresh produce when appropriate, holding and serving at appropriate times and temperatures.
- Handwashing is the number one practice to help prevent the spread of germs- wash your hands when they are soiled, in between tasks, after using the restroom, and before starting work.
- Glove usage is important to keep food safe, but using disposable gloves is not a substitute for handwashing.
- Consider strategies, like fun layouts, contrasting colors, and packaging sizes and types to make fresh produce served in your operations more attractive to students.

Why should you care?

- Incorporating practices into a HACCP plan can reduce produce safety risks and prevent foodborne illnesses amongst your students.

Sample Training Plan

Suggested Time	Topic	Training Resources
5-10 mins	Introduce the topic.	Ask participants: <ol style="list-style-type: none"> 1. Do you serve ready-to-eat (TCS or non-TCS) foods? 2. Why or why not?
Objective 1: Categorize fruit and vegetable menu items into HACCP processes.		
10-15 mins	Identify how specific fruits and vegetables used in menu items relate to HACCP principles.	<ol style="list-style-type: none"> 1. Writing, Updating, and Revising a HACCP-Based Food Safety Plan for Schools Workshop 2. Guidance for School Food Authorities: Developing a School Food Safety Program Based on the Process Approach to HACCP Principles 3. HACCP Principles & Application Guidelines
Objective 2: Identify food safety practices in the preparation and service of fresh produce in child nutrition programs.		
15-20 mins	Discuss food safety practices for handling, preparation, and storage that are important to ensure the safety of produce.	<ol style="list-style-type: none"> 1. Safe Preparation, Handling, and Storage Take-Home Training for Professional Standards 2. Handling Fresh Produce in Classrooms 3. Best Practices: Handling Fresh Produce in Schools 4. Ready to Eat
Objective 3: Apply effective culinary methods and marketing strategies to increase student consumption of fruits and vegetables.		
10-15 mins	Ask participants to share strategies they have used to increase student acceptance of fruits and vegetables, especially those that have been successful. Supplement with strategies highlighted in the training resources.	<ol style="list-style-type: none"> 1. Tools for Schools: Offering Fruits and Vegetables 2. Grow It, Try It, Like It! Nutrition Education Kit Featuring MyPlate 3. Studies Find Widespread Student Acceptance of New Healthier School Lunches

Glossary

Aquaponic: The process of growing plants in water instead of soil.

Biological hazard: Refers to the danger of food contamination by disease-causing microorganisms (bacteria, viruses, parasites, or fungi) and their toxins and by certain plants and fish that carry natural toxins.

Contamination: The unintended presence of potentially harmful substances, including microorganisms in food.

Cross-contamination: The transfer of harmful substances or disease-causing microorganisms to food by hands, food-contact surfaces, sponges, cloth towels, and utensils that touch raw food, are not cleaned, and then touch ready-to-eat foods. Cross-contamination can also occur when raw food touches or drips onto cooked or ready-to-eat foods.

Hydroponic: The process of growing plants in sand, gravel, or liquid.

Primary production: The production and keeping of primary agricultural products of plant or animal origin, including harvesting and fruit collecting.

Secondary production: Describes the process that convert fresh foods, or other products of primary production, into other food products, often in a way that substantially alters their physical form (e.g. making preserves).

Urban growing: A system of cultivation of agricultural products in urban and suburban areas.

Vertical Growing: A growing process that relies on growing plants upwards rather than outwards.

Hazard Analysis Critical Control Point (HACCP): is a management system in which food safety is addressed through the analysis and control of biological, chemical, and physical hazards from raw material production, procurement and handling, to manufacturing, distribution and consumption of the finished product.

HACCP Plan: The written document which is based upon the principles of HACCP and which delineates the procedures to be followed.

Additional resources

Growing Food Safely

- [Best Practices for Fresh Produce Food Safety](#)
- [National Good Agricultural Practices Program](#)
- [FSMA and the Produce Safety Rule: Does the rule apply to me?](#)
- [Good Agricultural Practices \(GAP\) Audits](#)
- [FSMA Training](#)

Buy Smart, Save Smart

- [Fresh Produce Manual](#)