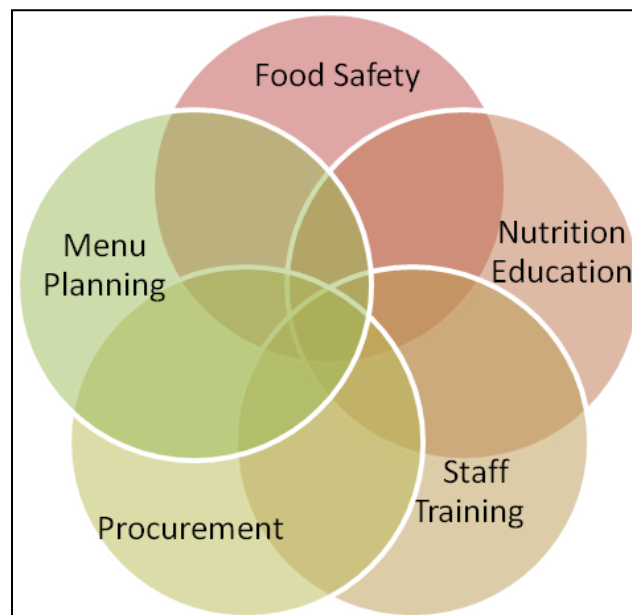




FARM TO SCHOOL FOOD SAFETY GUIDELINES

HOW TO SAFELY HANDLE FRESH PRODUCE FROM FARM TO FORK

There are many important and overlapping aspects to increasing the availability of locally grown fresh fruits and vegetables in schools, including nutrition education, staff training, procurement, menu planning, and food safety. This document provides a general overview of farm to school food safety considerations.



These farm to school food safety guidelines are meant to provide a baseline awareness of the different food safety issues that might arise when procuring fruits and vegetables directly from a farm. They can be used by school food service authorities when writing specifications, talking with or visiting a farm, or using produce grown in a school garden. County Health Departments can also be valuable resources for providing more detailed guidance.

Begin your journey to understand food safety...from farm to fork!

The California Office of Farm to Fork Office, located within the California Department of Food and Agriculture, is committed to helping all Californians access healthy and nutritious California-grown food. The California Office of Farm to Fork Office connects individual consumers, school districts, and others directly with California's farmers and ranchers and provides information and other resources.

This report was developed by the California Department of Food and Agriculture's Office of Farm to Fork, in conjunction with the California Department of Education and the California Department of Public Health. The Office of Farm to Fork was tasked with developing a food safety toolkit to increase the availability of locally grown fresh fruits and vegetables in schools while helping to ensure food safety in production and preparation.

This report was developed with funding from the California Department of Public Health, the California Department of Education, and the California Department of Food and Agriculture, and the United States Department of Agriculture.



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For more information on USDA and/or the California Department of Food and Agriculture's Office of Farm to Fork, please visit the Office of Farm to Forks website at <http://cafarmtofork.com> or USDA's website at <http://www.usda.gov>.

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Questions? Contact cafarmtofork@cdfa.ca.gov

FOOD SAFETY FROM FARM TO FORK

Follow these food safety best practices for school food service professionals, farmers, and produce distributors.

- ♦ **FARMS: DEVELOP ON-FARM FOOD SAFETY PLAN4**
These guidelines contain food safety recommendations that farmers should consider implementing during crop production, harvest, processing, and transport of fruits and vegetables
- ♦ **SCHOOLS: VERIFY ON-FARM FOOD SAFETY.....6**
Prior to purchasing produce from a local farm, school nutrition staff should follow these guidelines to ensure that on-farm food safety procedures during production, harvest, and transport are safe and healthy
- ♦ **SCHOOLS AND FARMS: ENSURE FRESH PRODUCE TRACEABILITY8**
Follow these tips on how to keep proper traceability documentation of fresh produce purchased for a school nutrition program to minimize the impact of a foodborne illness outbreak or in response to a food recall
- ♦ **SCHOOLS: PROMOTE SAFE PRACTICES IN SCHOOL GARDENS.....10**
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Whether you are serving fresh produce in salad bars, in food service operations, or in the classroom, follow these food safety basics to reduce the chances of foodborne illness
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FARMS: DEVELOP ON-FARM FOOD SAFETY PLAN

These guidelines contain food safety recommendations that farmers should consider implementing during crop production, harvest, processing, and transport of fruits and vegetables

Develop Safe Practices Prior to Planting		Notes
1.1	Keep records of all food safety related practices	
1.2	Test irrigation water and take necessary steps to fix if contaminated	
1.3	Ensure that no raw manure comes in direct contact with seeds. If using raw manure, apply untreated raw manure to fields directly after the fallow period and keep a buffer between production fields and compost stockpiles, raw manure storage, or other potential cross contaminants ¹	
1.4	If necessary, use animal mitigation procedures to reduce animal entry into fields	
1.5	Train all employees on all aspects of food safety, especially about hygiene (handwashing, etc.)	

Use Safe Handling Practices During The Growing Season		Notes
1.6	Provide a sanitary place out of the field for workers to wash hands, eat, take breaks, use the restroom, and store personal items. Ensure that sick employees, including those with open wounds, are not directly involved in the handling of produce	
1.7	Do not allow domesticated animals to wander in fields and continue to monitor for wildlife signs. Use mitigation processes if necessary	
1.8	Reduce the risk of contamination by minimizing direct contact of raw manure to crops and clean/sanitize equipment prior to and after manure application ¹	
1.9	Continue to monitor water sources and use drip irrigation when applicable to reduce contamination risks	

Safely Handle Produce During Harvest		Notes
1.10	Ensure anyone harvesting produce is using safe hygiene practices and prevent sick employees, including those with open wounds, from handling produce	
1.11	Clean and sanitize harvesting equipment daily	
1.12	Bins should be pressure washed and sanitized to remove field soil as necessary during the harvest season to remove possible contaminants	
1.13	Discard or avoid harvesting produce potentially contaminated by animals	
1.14	Use clean, potable water at all times	

Process, Store, and Transport Produce in a Safe & Sanitary Environment		Notes
1.15	Clean facilities, equipment, food contact surfaces, and transport vehicles as necessary, making sure to sanitize when needed	
1.16	Do not wear field clothes in packinghouse	
1.17	Use potable water for processing and for making ice, and use chlorinated water or other labeled disinfectants to wash produce	
1.18	Maintain a pest control program	
1.19	Monitor refrigeration units by utilizing temperature control methods and do not load cold storage facilities beyond their cooling capabilities	
1.20	Be sure that each package is labeled with the harvest date and field identification	

1. CDPH does not recommend the use of raw, untreated manure on fields that may contain ready-to-eat commodities or in areas where there is a risk of children coming into contact with the manure or soil containing manure.

This checklist was adapted from a publication by the California Department of Food and Agriculture's Inspection and Compliance Branch. It can be found at <http://www.cdfa.ca.gov/is/i & c/sffsg.html>

SCHOOLS: VERIFY ON-FARM FOOD SAFETY²

Prior to purchasing produce from a local farm, school nutrition staff should follow these guidelines to ensure that on-farm food safety procedures during production, harvest, and transport are safe and healthy

Verify that Production Practices are Safe		Notes
2.1	Review water tests if available ³ and ask for other associated records such as hygiene training, portable toilet cleaning schedule, etc.	
2.2	If raw manure is used, verify through the application schedule that an appropriate time has passed between the application of the manure and harvest dependent upon the crop ⁴	
2.3	Ask about any previous land issues such as contamination from flooding, upstream runoff, or animal waste	
2.4	Ask for documentation to ensure that products are being transported and handled to minimize damage and risk of contamination	

Confirm that Farm Products are Safely Handled		Notes
2.5	Check to see if storage and packing facilities are enclosed, cleaned, sanitized regularly, and use pest control measures	
2.6	Determine if totes, harvest baskets, and containers are washed with potable water and sanitized prior to and after use	
2.7	When packaging products, make sure that food grade materials are used and harvesting totes have been properly cleaned prior to storage in an area protected from possible contaminants	
2.8	Use documentation to ensure potable water is used to clean food contact surfaces and that they are sanitized appropriately	
2.9	Observe food contact surfaces and find out if, prior to sanitization, they are washed and rinsed with potable water	

Determine if Facility and Transportation Sanitation Procedures Follow Food Safety Best Practices		Notes
2.10	Verify that potable and well water is tested at least once per year ³	
2.11	Look for documentation that sanitary hand washing stations and toilets are regularly serviced, fully supplied, and accessible to workers	
2.12	Observe transportation vehicles to see if they are well maintained and cleaned, kept cool during transit, and food products are separated from non-food items during transit	
2.13	Verify that pest control programs are in place	

Confirm that Workers Are Trained in Food Safety Procedures		Notes
2.14	Review worker food safety training materials for components that educate workers on hygiene and sanitation and provide support materials (such as posters and signs) to reinforce messages	
2.15	Watch workers and visitors to make sure they are not wounded or ill and are following good hygiene and sanitation practices when handling produce	

2. See Additional Tools for a printer friendly-version of the On-Farm Food Safety Checklist.

3. Many groups use the U.S. EPA recreational water standard as a basis—the results of which show generic E. coli presence or absence of pathogens. Knowing water quality overtime provides a benchmark.

4. CDPH does not recommend the use of raw, untreated manure on fields that may contain ready-to-eat commodities or in areas where there is a risk of children coming into contact with the manure or soil containing manure.



These guidelines were adapted from Iowa State University's *Checklist for Retail Purchasing of Local Produce*. It can be found at <https://store.extension.iastate.edu/Product/Checklist-for-Retail-Purchasing-of-Local-Produce>

SCHOOLS AND FARMS: ENSURE FRESH PRODUCE TRACEABILITY

Follow these tips on how to keep proper traceability documentation of fresh produce purchased for a school nutrition program to minimize the impact of a foodborne illness outbreak or in response to a food recall

Responsibilities of Farmers		Notes
3.1	Make sure that records are kept to allow trace back to the specific field where produce was grown	
3.2	Make sure that all produce boxes are labeled in accordance with all applicable statutes and regulations	
3.3	If you participate in a growers' collaborative or cooperative, ensure record keeping allows for trace back to each individual grower	
3.4	Records should include harvest date, field identification, harvesting personnel, packing date, shipping date, and customer information	

Responsibilities of Distributors		Notes
3.5	Ensure that any supplier can trace back produce to growers in case of a food recall	
3.6	Maintain documentation of certification (e.g. Good Agricultural Practices, Good Handling Practices, etc.) from growers or farms	
3.7	Keep written records for each produce item that contains supplier and customer identity and contact information as well as shipment dates for arrival of produce from farms and to customers	

Responsibilities of School Nutrition Services		Notes
3.8	Write language in bid or procurement documents that include criteria to ensure the safety and traceability of fresh produce purchased by your school district	
3.9	Maintain purchasing records (such as invoices) for all produce (from school gardens, farms, or distributors) that include source information, contact details from producers, and other identifiers such as pack date, variety, and harvest details	
3.10	Identify produce from different sources—a distributor, farm, or school garden—and appropriately label repackaged fresh produce containers when distributing to schools in quantities less than a full case and maintain a distribution log.	



These guidelines were adapted from the National Food Service Management Institute and the University of Mississippi's *Produce Safety University* Training Materials. Resources can be found at <http://www.fns.usda.gov/food-safety/produce-safety-resources>

SCHOOLS: PROMOTE SAFE PRACTICES IN SCHOOL GARDENS

Follow these guidelines to make sure that produce grown in school gardens is safe for consumption in after school programs, taste testings, and school food service operations

Prior to Starting Your School Garden		Notes
4.1	Check with your local health department and agricultural commissioner's office about policies or regulations on serving food grown in school gardens in school meals	
4.2	Choose a garden site that is away from potential contamination sources such as garbage or septic systems, animals, water runoff, and flooding	
4.3	Have soil and water tested for contaminants and contact your local Cooperative Extension Office for associated services	
4.4	Contact your utility company prior to digging to avoid gas or electric lines	

Developing Your School Garden Site		Notes
4.5	Cover and protect your crops as necessary from animals	
4.6	Purchase soil that is traceable and labeled for growing food crops	
4.7	Use non-toxic, non-leaching materials for garden structures such as raised beds and trellises, and avoid using pressure-treated wood, tires, and other materials that leak contaminants into soil	
4.8	Use a food-grade container that has been properly sanitized and maintained in a manner to prevent contamination to transport water.	

Choosing Garden Inputs		Notes
4.9	Select garden inputs that are non-allergenic and non-toxic (ex: certain products, such as rhubarb, are toxic when eaten raw)	
4.10	Test all water sources annually and maintain water testing records ⁵	
4.11	Do not use any pesticides or herbicides and always follow manufacturer's instructions when using fertilizer	
4.12	Avoid using raw manure. If using an animal waste compost use a traceable, commercially prepared source	
4.13	Consider vermicomposting (composting with worms), and use only fruit, vegetable, and plant products in a school compost pile (never use animal products or animal waste)	
4.15	Wear gloves and follow safety precautions when handling compost or fertilizers	
4.16	Store fertilizers in labeled containers, keep in a safe and locked location, and only allow adults to handle chemicals	
4.17	Maintain compost pile in a secure area, away from sources of contamination	

Working in the Garden

- ☐ Don't work in the garden when sick
- ☐ Wear closed-toe shoes
- ☐ Consider using disposable gloves when harvesting
- ☐ Cover cuts or open wounds
- ☐ Wash hands in warm soapy water before and after working in the garden

5. Many groups use the U.S. EPA recreational water standard as a basis—the results of which show generic E. coli presence or absence of pathogens. Knowing water quality overtime provides a benchmark.

SCHOOLS: SAFELY HANDLE PRODUCE IN SCHOOLS

Whether you are serving fresh produce in salad bars, in food service operations, or in the classroom, follow these food safety basics to reduce the chances of foodborne illness.

Growing and Harvesting Produce		Notes
4.18	Ensure that all persons (staff, students, and volunteers) receive food and gardening food safety training that meets local health regulations on hygiene, cleaning, and sanitizing of garden equipment, and safely handling produce	
4.19	Have all students sign permission slips to work in the garden and make sure that volunteers are covered by the school district insurance policy in case of an injury	
4.20	Always use potable water for cleaning produce and for cleaning harvest tools (after washing with soap)	
4.21	Store harvested food in cleaned and sanitized food grade containers only	
4.22	Remove any inedible food from garden and compost if applicable	

Using School Garden Produce in School Meals Program		Notes
4.23	Contact your local health department to make sure that food grown in gardens is permitted to be served in school meals	
4.24	Ensure that your school district will not be liable for any foodborne illness resulting from produce grown in school gardens	
4.25	Request that school garden coordinators follow and document food safety practices	
4.26	Receive, inspect, and accept (or reject) produce harvested from school gardens according to the same procedures and standards used to inspect produce from farms or food distributors	
4.27	Refrigerate harvested produce immediately when appropriate and store according to food safety best practices for that particular commodity	
4.28	Maintain traceability by storing, preparing, and serving school-grown produce separate from other sources of produce	

These guidelines were adapted from the National Food Service Management Institute and the University of Mississippi's *Produce Safety University* Training Materials. Resources can be found at <http://www.fns.usda.gov/food-safety/produce-safety-resources>

SCHOOLS: SAFELY HANDLE PRODUCE IN SCHOOLS

Whether you are serving fresh produce in salad bars, in food service operations, or in the classroom, follow these food safety basics to reduce the chances of foodborne illness



1. SERVING FRESH PRODUCE IN CLASSROOMS

Personal Hygiene		Notes
5.1	Wash hands thoroughly with soap and warm water prior to handling or serving fresh produce	
5.2	Train and allow time for students to wash their hands	
5.3	Train classroom teachers and staff on appropriate food safety procedures	

Serving Produce		Notes
5.4	Provide wrapped, disposable utensils to students if needed	
5.5	Distribute cut produce to students in pre-packaged containers and consider serving whole produce in bags or wraps	
5.6	Provide condiments in single-serve portions	

Storing and Handling Produce		Notes
5.7	Deliver produce to classrooms immediately prior to service	
5.8	Use coolers with ice made from potable water or mobile refrigerated carts if produce needs to be stored in classrooms prior to use	
5.9	Store cut produce at 41° F or below and record produce temperature when delivering to classrooms	
5.10	Do not serve any cut produce that has been held at room temperature for more than 2 hours, or above 90° F for more than one hour	
5.11	Discard all leftover fresh-cut produce	
5.12	Wash all leftover unpackaged, whole items such as apples if serving again	

2. HANDLING FRESH PRODUCE IN SCHOOL FOOD SERVICE

Purchasing and Receiving		Notes
5.13	Use purchasing specifications that include food safety requirements	
5.14	Ensure that produce is coming from licensed and approved sources	
5.15	Check storage and handling practices of vendors to verify that they are complying with federal and state food safety laws and regulations	
5.16	Establish procedures for inspecting incoming deliveries that include checklists to ensure that produce is maintained at the proper temperature and that vehicles are sanitary and pest-free	

Washing and Preparing Produce		Notes
5.17	Inspect produce for signs of damage or soil prior to processing, and cut away any affected areas or do not use the item if it is too damaged	
5.18	Wash produce before serving or cutting using either continuous running water or chemical disinfectants	
5.19	Do not rewash packaged produce that is labeled as washed	
5.20	Prior to use, wash, rinse, sanitize, and air-dry any equipment, utensils, and surfaces that come in contact with any cut produce	

Personal Hygiene		Notes
5.21	Wash hands thoroughly with warm soapy water prior to handling or cutting produce	
5.22	Rewash hands anytime hands have become soiled or contaminated, in between tasks, before putting on disposable gloves, or when handling trash or money	
5.23	Use gloves, deli paper, or utensils when handling ready to eat produce	
5.24	Never reuse disposable gloves and change them when contaminated, changing tasks, or if they are torn or damaged	

Serving Produce		Notes
5.26	Do not store produce in direct contact with ice or water while on serving lines	
5.27	Keep cold foods at or below 41° F or below and keep a log of internal temperature, monitoring and documenting temperature every 30 minutes	
5.28	Record time when cut produce is displayed without refrigeration and discard any uneaten produce after two hours at room temperature or one hour if over 90°F	
5.29	Use clean and sanitized tongs, ladles, and spoons	
5.30	Clean spills with sanitized wiping cloths that are washed daily	
5.31	Never add freshly prepared fruits and vegetables to food already on service lines	
5.32	Wash produce just before preparation for meals, not before storage	

Storing Produce		Notes
5.33	Store produce in a covered container at least 6 inches off of the ground and above any items that may cause contamination	
5.34	Follow instructions for any pre-cut and pre-packaged fruit and vegetable items	
5.35	Label produce cut in-house to specify how long it can be used once refrigerated by marking it with the date it was prepared as well as the date it should be used by	
5.36	Keep produce at the recommended temperatures based on produce variety and ripeness level	

Food Safety Training		Notes
5.37	Train all food handlers on appropriate food safety procedures	
5.38	At all times, practice good food safety and food handling techniques	

3. HANDLING FRESH PRODUCE ON SALAD BARS

Safely Prepare and Set up Salad Bars		Notes
5.39	Place a clean and sanitized utensil in each salad bar container at the beginning of each meal period	
5.40	Label all containers and condiments in dispensers or single use packages	
5.41	Select container and portion size so that food is used within one meal period	
5.42	Set up salad bar as close to mealtime as possible	
5.43	Do not store produce in direct contact with ice or water while on display	
5.44	Serve individually wrapped utensils or store utensils in containers with handles facing upwards	
5.45	Clean spills with sanitized wiping cloths that are washed daily	

Control Temperatures		Notes
5.46	Food should have an internal temperature of 41°F or below at all times and should be checked every two hours after it is on the salad bar	
5.47	Salad bar equipment should remain at 41°F or below before use, and ice packs should come into contact with bottom of salad bar pans for temperature control	
5.48	Record all temperature readings	

Salad Bar Handling		Notes
5.49	Consider having an employee place selected items onto student trays or plates	
5.50	Teach children salad bar etiquette	

These guidelines were adapted from the National Food Service Management Institute and the University of Mississippi's *Produce Safety University* Training Materials. Resources can be found at <http://www.fns.usda.gov/food-safety/produce-safety-resources>

REFERENCES AND ADDITIONAL TOOLS

The guidelines included in this toolkit were adapted from the following identified best practice resources

REFERENCES

1. California Department of Food and Agriculture's Inspection and Compliance Branch. *California Small Farm Food Safety Guidelines*. Available at http://www.cdfa.ca.gov/is/i_&_c/sffsg.html
2. Iowa State University. *Checklist for Retail Purchasing of Local Produce*. Available at <https://store.extension.iastate.edu/Product/Checklist-for-Retail-Purchasing-of-Local-Produce>
3. National Food Service Management Institute and the University of Mississippi. *Produce Safety University*. Available at <http://www.fns.usda.gov/food-safety/produce-safety-resources>

ADDITIONAL TOOLS

1. For help writing specifications and other tips for procuring local food locally, check out USDA's guide: *Procuring Local Foods for Child Nutrition Programs*, available at <https://fns-prod.azureedge.net/cfs/procuring-local-foods-child-nutrition-programs>
2. Check List for Retail Purchasing of Local Produce: This easy to use checklist adapted from Iowa State University's *Checklist for Retail Purchasing of Local Produce*, provides a general overview of what to discuss with a farmer or look for during an on-farm inspection. If questions arise, please consult your local environmental health department.

All photos used in this document are © Ag Natural Photography by Ed Williams



Are there acceptable substitutes available if an order cannot be filled?	YES	NO
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Produce Handling	Yes	No	N/A
Are storage and packaging facilities located away from growing areas?			
Is there risk of contamination with manure?			
Are harvesting baskets, totes, or other containers kept covered and cleaned (with potable water) and sanitized before use?			
Is harvesting equipment/machinery that comes into contact with the products kept as clean as possible?			
Are product and non-product containers available and clearly marked?			
Is dirt, mud, or other debris removed from product before packing?			
Are food grade packaging materials clean and stored in areas protected from pets, livestock, wild animals, and other contaminants?			

Transportation	Yes	No	N/A
Is product loaded and stored to minimize physical damage and risk of contamination?			
Is transport vehicle well maintained and clean?			
Are there designated areas in transport vehicle for food products and non-food items?			
Are products kept cool during transit?			

Facilities	Yes	No	N/A
Is potable water/well water tested at least once per year and results kept on file?			
Is product protected as it travels from field to packing facility?			
Is a product packing area in use with space for culling and storage?			
Are packing areas kept enclosed?			
Are food contact surfaces regularly washed and rinsed with potable water and then sanitized?			
Are food grade packaging materials used?			
Do workers have access to toilets and hand washing stations with proper supplies?			
Are toilets and hand washing stations clean and regularly serviced?			
Is a pest control program in place?			

Worker Health and Hygiene	Yes	No	N/A
Is a worker food safety training program in place?			
Are workers trained about hygiene practices and sanitation with signs posted to reinforce messages?			
Are workers and visitors following good hygiene and sanitation practices?			
Are smoking and eating confined to designated areas separate from product handling?			
Are workers instructed not to work if they exhibit signs of infection (e.g. fever, diarrhea, etc.)?			
Do workers practice good hygiene by:			
wearing clean clothes and shoes?			
changing aprons and gloves as needed?			
keeping hair covered or restrained?			
washing hands as required?			
limiting bare hand contact with fresh products?			
covering open wounds with clean bandages?			

I confirm that the information provided above is accurate to the best of my knowledge.

Signature of Seller: _____

Date _____