

Understanding and Implementing Food Safety on the Farm

Jennifer Sowerwine, Asst. Cooperative Extension
Specialist, UC Berkeley

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Overview

- What is food safety and why its important
- How to develop a food safety program for your farm
 - Assess risks
 - Develop plan
- Worker health & hygiene

WHAT IS FOOD SAFETY AND WHY IS IT IMPORTANT?

Food safety is a scientific discipline describing handling, preparation, and storage of **food** in ways that prevent foodborne illness. This includes a number of routines that should be followed to avoid potentially severe health hazards.



Source: Shutterstock





What causes people to get sick?

Three Types of On-Farm Contamination

Biological, chemical, physical



Foodborne Illness Outbreaks

- About 48 million people (1 in 6 Americans) get sick each year, 128,000 are hospitalized, and 3,000 die from foodborne diseases, (CDC).



Food Safety News

Breaking news for everyone's consumption

Home Outbreaks Food Recalls Food Politics Calendar Subscribe Directory Media Kit

One dead in E. coli outbreak; source of romaine still a mystery

BY CORAL BEACH | MAY 2, 2018

One person has died in the E. coli outbreak linked to romaine lettuce. There are now 121 confirmed cases across 25 states. Investigators continue to look for the source of the implicated romaine, as well as how it became contaminated.

HEALTH

E. Coli Outbreak Turns Deadly With a Fatal Case in California

By MAGGIE ASTOR | MAY 2, 2018



SMART HOME

Ditch all romaine lettuce and check your eggs — a bad week for food recalls

Women, millennials make up large percentage of those sickened by bad lettuce

By Bruce Brown — Posted on April 23, 2018 - 2:13AM

CDC – E. Coli outbreak

121 people

25 states

52 hospitalized

14 kidney failure

1 death

SECTIONS HOME SEARCH The New York Times READ THE GUIDE jstoverl

WELL EAT

When Is It Safe to Eat Salad Again?

By TARA PARKER-POPE | APRIL 19, 2018

232

RELATED COVERAGE

E. Coli Outbreak Tied to Romaine Lettuce Expands to 16 States | APRIL 19, 2018

RECENT COMMENTS

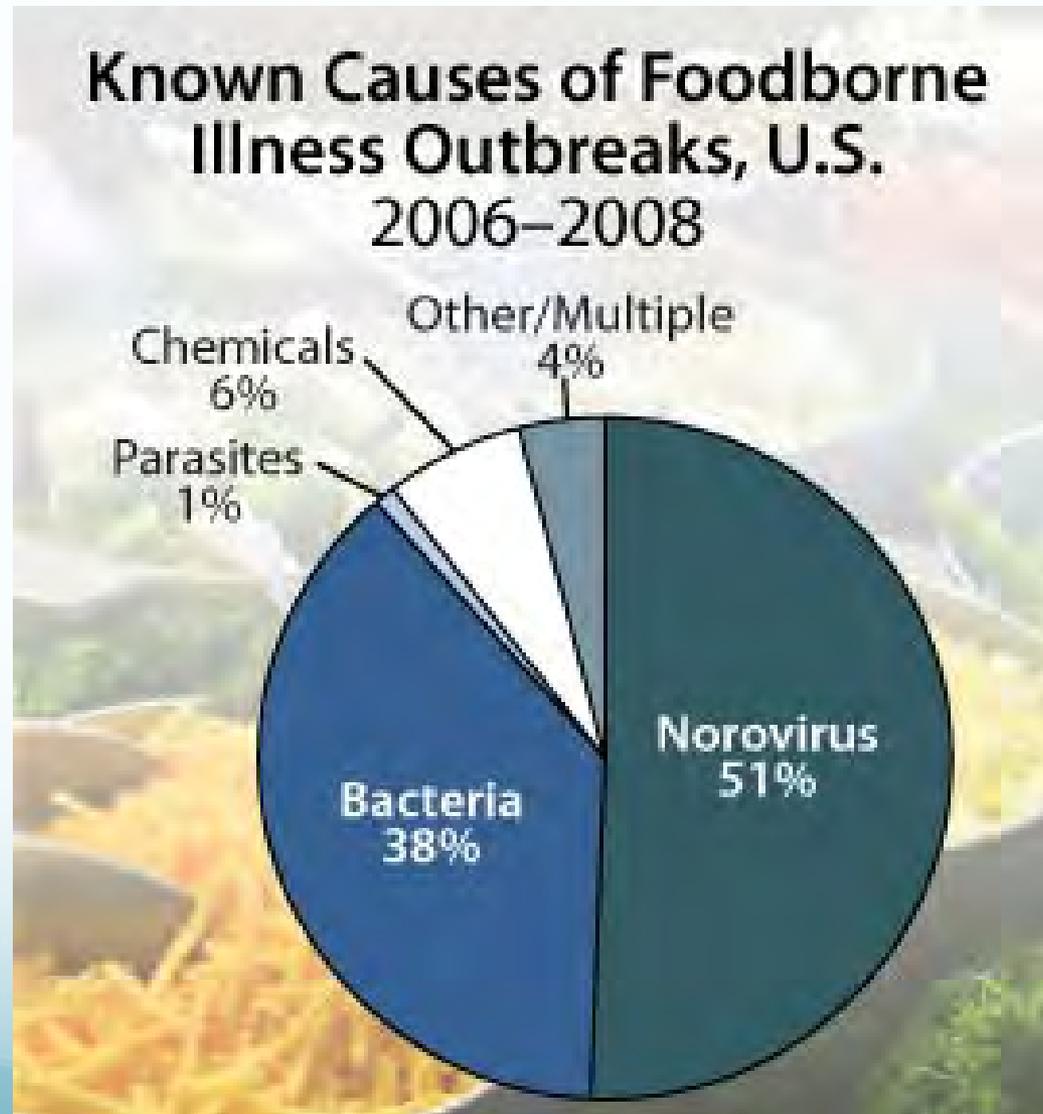
JW 1 hour ago
The CDC is suggesting that cows, deer or wild pigs have caused this E.Coli outbreak?? How many animals would it require to...

Contamination in the Field: Small Strawberry Farm

- Locally grown berries in NW Oregon, 2011
- Strawberries tainted with E. coli O157:H7 Sicken 14, One Dies
- Sold at U-pick, farm stands, farmers markets
- High concentration of deer feces

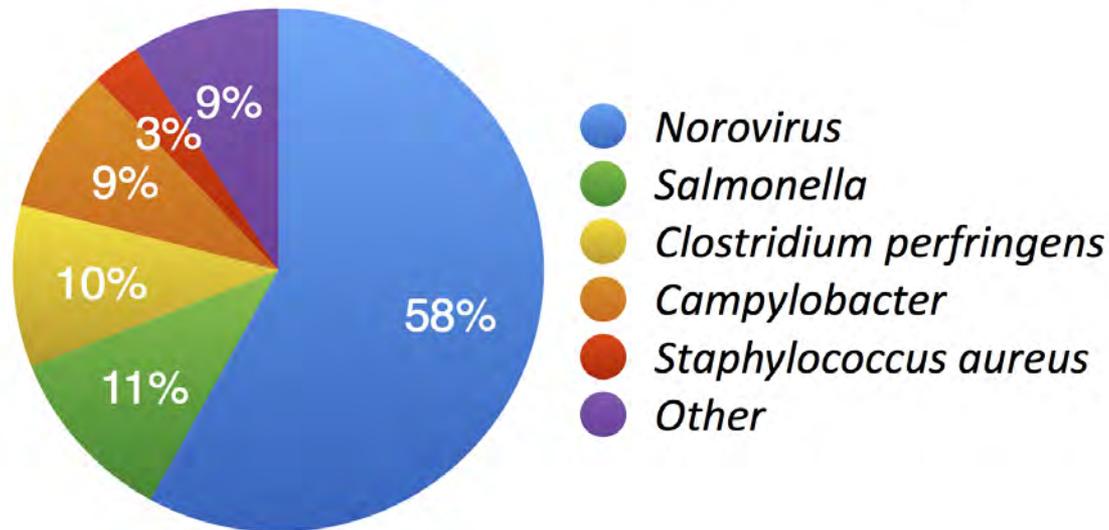


Primary Causes of Illness - CDC



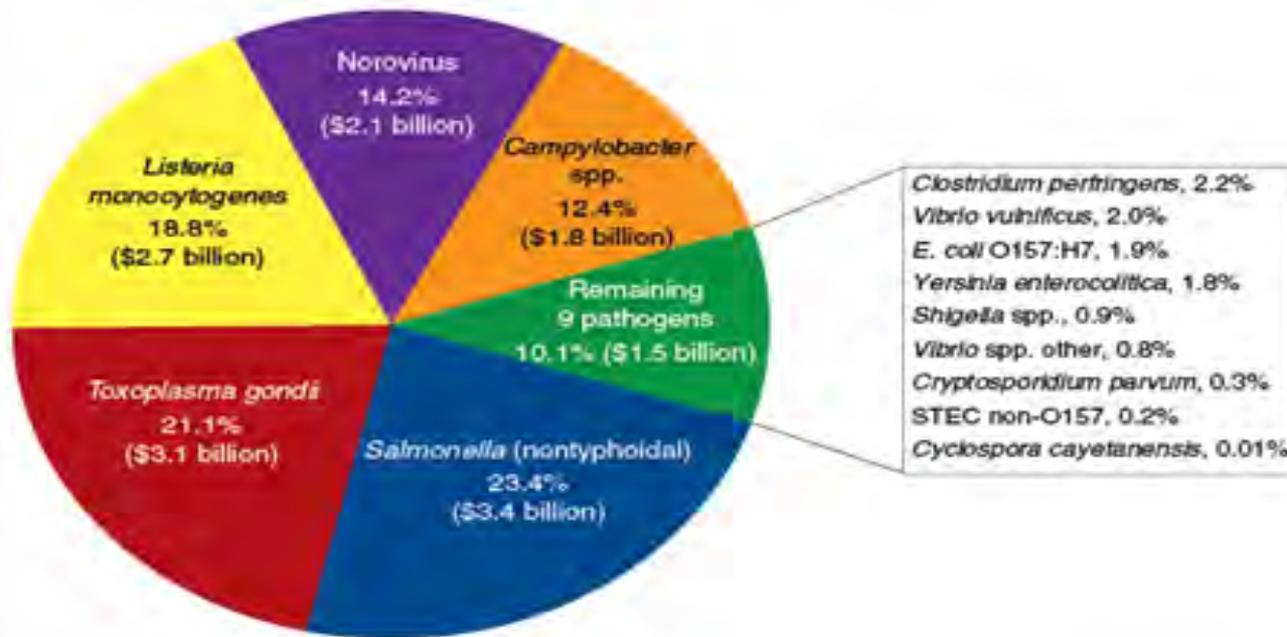
Norovirus sickens the most people

Foodborne Illness in the U.S., by Pathogen



Salmonella poses greatest cost (hospitalization, death)

Salmonella imposes the greatest cost of the 14 major foodborne pathogens



Note: Annual cost estimates are in 2010 dollars based on disease incidence estimates published in 2011.

Source: USDA, Economic Research Service.

Human Salmonella outbreaks linked to contact with live poultry have increased in recent years as more people keep backyard flocks. In 2016, a record number of illnesses were linked to contact with backyard poultry (895 infected, 209 hospitalized, 4 deaths) - CDC

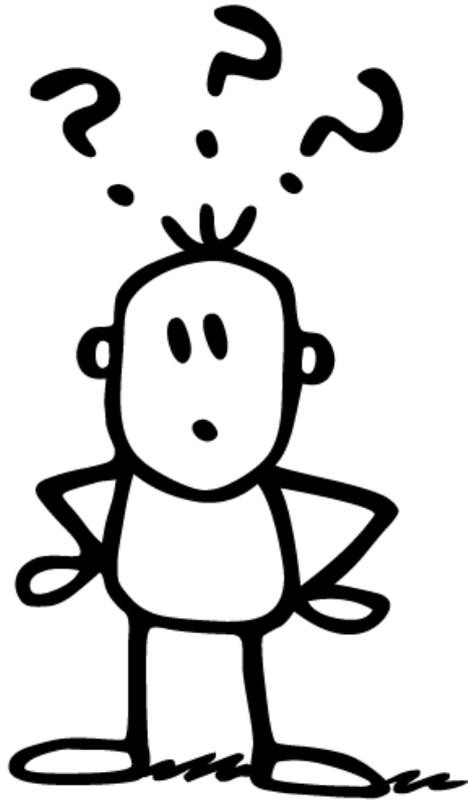
**So, Why is Food Safety
Important?**

- Fresh fruit and vegetable consumption has grown significantly
- Rise of foodborne illness (*Salmonella*, *E. coli* O157:H7; *Shigella*, *Listeria*)
- We do not want our customers to get sick.
- Protect reputation of urban farms
- Many buyers (schools, packing houses, grocery stores) are requiring farmers to have food safety programs.
- CDFA Small Farm Food Safety guidelines requiring food safety assurances



DEVELOPING YOUR FOOD SAFETY PROGRAM

Where do I start?



Attend a Training!
Learn about GAPS/GHPS

Good Agricultural Practices

Good Handling Practices

Methods farmers follow to prevent or minimize the risk of on-farm contamination of fruits and vegetables.

Take it one step at a time

1. Talk to your buyer: what do they require?
2. Assess food safety risks on your farm
3. Implement Corrective Actions
4. Develop your Food Safety Plan/Program
 1. Food safety policies
 2. SOPs
 3. GAPs
 4. Worker Training
 5. Record keeping
5. Follow your plan, implement corrective actions

Step 1: Talk to your Buyer(s)

- What kind of food safety program/certificate do they require if any?
 - Self-certification?
 - Third party certification?
 - Any particular 3rd party certifier? (Primus, CDFA)
 - Organic certification sufficient?
 - CDFA Small Farm Food Safety guidelines

Step 2: Assess risks on your farm

What are potential sources of contamination?



WASSH!

Water

Runoff/flooding



Contaminated irrigation and produce wash water



Contaminated water source for handwashing



Animal contamination

Domestic



Wild



In the field



In the packing shed: Rodents and Pests



Soil contamination



Soil contamination



Surfaces

Dirty Harvest buckets



Dirty packing tables



Cross-contamination in transportation





Dirty Boxes

Clean boxes?



Dirty Hose



Health & Hygiene

Handling product with dirty hands



Not washing hands after using toilet



Dirty Toilets



Sick workers



Some outbreaks associated with infected workers

Date	Produce	Pathogen	# of cases	Produce origin
1987	raspberries	Hepatitis A virus	92	United Kingdom
1990	strawberries	Hepatitis A virus	53	United States
1994	green onions	Shigella	72	CA
1996	leaf lettuce	E. coli 0157:H7	49	United States
1997	strawberries	Hepatitis A virus	250	CA
1997	green onions	Cryptosporidium	55	United States
1997	basil	Cyclospora	341	United States
1998	green onions	Hepatitis A virus	43	United States/CA
1999	parsley	Shigella	486	United States
2003	parsley	enterohemorrhagic E. coli	77	United States

What are 5 sources of food safety risk on the farm?

- Water
- Animals
- Soils
- Surfaces
- Hygiene
(WASSH!)



How do I assess risks on *my* farm? Conduct a Farm Assessment/Self-Audit

On-Farm Food Safety Assessment for California Urban Farms

Prepared by Jennifer Sowerwine, UC Cooperative Extension/UC Berkeley

2018

This form is designed to help urban farmers assess and record any food safety risks on their farm, and identify and monitor what corrective actions, if necessary, should be taken to ensure the farm is following good agricultural practices, good animal husbandry practices, and good handling practices to minimize the risk of on-farm contamination. The materials herein are adapted from the USDA Good Agricultural Practices and Good Handling Practices Audit Verification Checklist and User's Guide¹ and the CDFA Food Safety Guidelines, which focus on fresh produce safety². For more detailed information on how to assess good husbandry practices for small ruminants and poultry, please refer to section five of this guidebook and the resource section.

Instructions for how to use this form

1. Review the document in advance. Determine when and how to do an on-farm risk assessment. For example, choose a time immediately after the rains to evaluate any risk of water runoff onto your crops. To evaluate whether workers are following good health and hygiene practices and implementing standard operating procedures, be sure to assess the farm during harvest season.
2. For each question – record Yes (if it is already being done), No (if it still needs to be done), or N/A if it's not applicable to your farm operation. Record any notes or corrective actions that may be needed, in the notes section.
3. In the column labeled "Doc", this indicates the type of documentation that may be required to show conformance to that question. For example, it might include documented standard operating procedures (SOPs) posted on the wall for workers to follow, or outlined in your food safety manual (FSM). Or it might include a record-keeping sheet (R) showing an action was taken. A "P" indicates that a policy or standard operating procedure is included in the Food Safety Manual to show conformance with the question.
4. As noted above, in some instances, observation of the practice is necessary to assess conformance with the question. This may involve making observations at the farm during harvest season to observe behavior of volunteers, workers and helpers.

GENERAL FARM INFORMATION

¹ https://www.ams.usda.gov/sites/default/files/media/GAPGHP_Audit_Program_User%27s_Guide%5B1%5D.pdf

² https://www.cdffa.ca.gov/is4_&_c/pdfs/SFFSGbooklet-English.pdf

WATER QUALITY

What is the source of irrigation water? (well -capped or uncapped-, municipal) please specify:

How are crops irrigated? (Flood, drip, sprinkler, other) please specify:

Question	Yes	No	N/A	Doc	Notes
11 An annual water quality test was conducted & record is kept on file. (Municipal Water District report OK)				D-water test	
12 Water quality is known to be safe for the crop irrigation method and crop being irrigated.				D-water test	
13 Potable water is used for all chemical applications and produce washing if applicable.				D-water test	
14 If necessary, steps are taken to protect irrigation water from potential direct and non-point source contamination (backflow).				Observe	
15 Water used in washing and packing operation is potable and sufficiently treated to reduce microbial contamination.				D-FSM	
16 Farm sewage treatment system/septic is functioning properly with no evidence of leaking/runoff				Observe	
17 There is no municipal/commercial sewage treatment facility or waste material landfill adjacent to the farm that may cause groundwater contamination or runoff to the farm.				Observe	

If risks are identified, then
what?

Step 3: Implement Corrective Actions

Risks

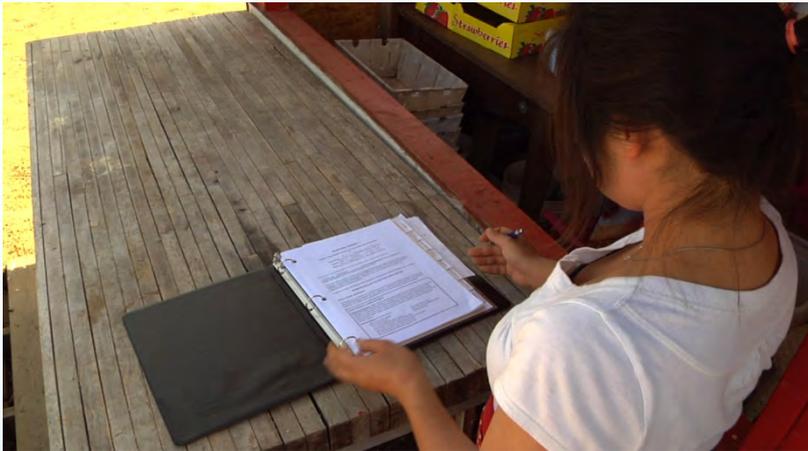
- Water
- Land & Soils
- Animals (intrusion)
- Surfaces & Equipment
- Worker Health & Hygiene
- Chemicals
- Transportation

Corrective Actions

- Water test & treatment
- Soil test, manure records, land use history
- Fencing, avoid harvest, traps
- Clean & sanitize
- Worker Training, toilets & handwashing facilities
- Proper use & storage
- Covered, traceback

Step 4: Develop your Food Safety Plan

- Food safety policies for your farm
- SOPs - GAPs/GHPs
 - WASSH
- Worker training guidelines
- Record keeping sheets
- Signage, toilet and handwashing facilities.



“Say what you do, do what you say”

What Does a Food Safety Plan Look Like?

Basic components of a food safety plan

- F.S. Contact Person
- Farm Description & Map
- Worker Health & Hygiene Policy and Training procedures
- Illness and accident policy and procedures
- Water test results and water use procedures (eg. produce wash water)
- Land and soil assessment results
- Animal/wildlife monitoring & pest control program (if necessary)
- Manure and compost use policy
- General sanitation policy and procedures for toilets and handwashing stations.
- Chemical handling and storage policy
- SOP for cleaning/sanitizing storage and transportation
- Record Keeping Sheets
- Visitor sign in sheet
- Signage
- Traceability

Food Safety Plan Guide

California Small Farm Food Safety Plan Guide: Standard Operating Procedures for Good Agricultural Practices*

**Jennifer Sowerwine
Mary Vincent
Richard Molinar
Chuck Ingels
Christy Getz
Erica Chernoh
Jenny Broome
Debbie Thompson**

**University of California
Division of Agriculture and Natural Resources**

**Jan 2010
Updated Jan 2013**

*This Food Safety Plan Guide provides a comprehensive yet concise description of Standard Operating Procedures for Good Agricultural Practices on Small Farms and associated worker training and documentation. The content aligns with requirements outlined in the USDA Good Agricultural Practices (GAPs) and Good Handling Practices (GHPs) Audit Verification Program yet is tailored to the small farm. Please contact Jennifer Sowerwine jsowerwi@berkeley.edu or Christy Getz cgetz@berkeley.edu for more information.

Note: Standard Operating Procedures (SOP)

D. GENERAL SANITATION

Hand Washing Facilities: Good sanitation and proper use of hand washing facilities includes the following:

SOP: Hand Washing Facilities

- Handwashing facility is located in close proximity of toilet.
- All handwashing facilities are clean and water source is covered. They are supplied with single use towels, hand soap and potable water for hand washing. Trash can with lid is located in vicinity and emptied regularly.
- Disposal of waste water from hand washing does not cause unsanitary conditions, nuisance or contamination.
- Hand washing container is thoroughly cleaned and sanitized on a weekly basis by scrubbing with a clearly labeled brush that is stored separately.
- Cleaning and resupply records are maintained.

Documentation: No. 3 Toilet & Handwashing Maintenance Record

Restroom Facilities: Good sanitation and proper use of toilet facilities includes the following:

SOP Restrooms Facilities

- Toilet facilities are located within ¼ mile or 5 min walk of workers.
- Field toilets are properly screened to keep animals and insects out. They are ventilated and provided with self-closing doors, lockable from the inside.
- Daily spot checks for cleanliness & spot cleaning/trash pick up.
- Weekly thorough cleaning (toilet, walls, floors) with Green Power (20 parts water to 1 part Green Power) or equivalent & rinse with hose.
- Sanitize toilets and urinals with a separate, labeled brush.
- Sanitize doorknobs, and any other surface inside unit with separate brush.
- Fill paper products and soap dispensers.
- Provide covered trash receptacle & remove trash to dumpster as needed.
- Record initials and date of cleaning on record sheet # 2 when unit is serviced. Keep records for 2 years.
- Materials required & labeled "Restroom Use Only": broom & dustpan, brush for wall & floor, brush for toilet & urinal, single use wipe for door knob, labeled bucket, trigger sprayer (for spot cleaning), hose (for rinsing).
- Cleaning and resupply records are maintained.

Documentation: No. 3 Toilet and Handwashing Maintenance Record

E. CHEMICALS AND PESTICIDES

Safe Pesticide Use

Before applying any pesticide, a grower must first obtain an "Operator Identification Number". To use a restricted pesticide, a grower must obtain a "Restricted Material Permit" and become a Private Certified Applicator" by passing a test. (If a grower is hiring a licensed pest control

- **SOP: BOXES**
- Standard Operating Procedures—A set of procedures or steps farmers follow the same way every time to ensure food is clean and safe.
- All SOPs have record keeping sheets.

Note: Worker Training Guidelines

Worker Training 3: Pesticide Handler Training

- The training shall cover, for each pesticide or chemically similar group of pesticides to be used:
- How to read and understand the content of pesticide product labeling, Pesticide Safety Information Series leaflets, Material Safety Data Sheets, etc.
 - The meaning of information contained in product label (such as precautionary statements about human health hazards, signal word, proper chemical handling including mixing and applying, application rate and how it can be achieved, PHI, REI, PPE) and other precautions of the chemical.
 - Routes by which pesticides can enter the body; signs and symptoms of overexposure, emergency first aid for pesticide overexposure and how to obtain emergency medical care
 - Routine and emergency decontamination procedures including spill clean up and the need to thoroughly shower with soap and warm water after exposure.
 - Appropriate use and sanitation of required personal protective equipment.
 - Safety requirements and procedures for handling, transporting, storing and disposing of pesticides (stored in locked area, transported separate from produce,)
 - Environmental concerns such as drift, runoff, wildlife hazards.
 - Warnings about taking pesticides or pesticide containers home.
 - Proper disposal of left-over chemicals and chemical containers. Spray out remaining mixture and rinse sprayer with water; never store left-over mixture for later use. Never re-use containers. Triple rinse, empty, remove lid and puncture container—dispose of containers at approved hazardous material disposal site.

Documentation: No. 5 Worker Training Record

Worker Training 4: Pesticide Worker Safety

All employees who work in a field treated with pesticides has been trained within the last 5 years, in a manner the employee understands, before beginning work in the treated field. The training will include:

- The importance of routine decontamination and washing thoroughly after the exposure period.
- Restricted entry intervals and what posting means (both California and federal posting sign formats)
- Where pesticides are encountered, including treated surfaces in the field, residue on clothing, chemigation and drift.
- Routes of exposure
- Hazards of pesticides including acute effects, chronic and delayed effects, and sensitization effects.
- Common signs and symptoms of overexposure
- First aid including decontamination, eye flushing, and obtaining emergency medical care
- Warnings about taking pesticides or pesticide containers home
- The hazard communication program requirements of section 6761
- Employee rights as outlined in section 6764 of the California code of regulations

Documentation: No. 5 Worker Training Record

- **WORKER TRAINING BOXES**
- ALL helpers and workers are trained, understand, and implement GAPs.
- Worker trainings are recorded.

Food Safety Plan Template

[Change, delete, or fill-in parts in yellow, remove highlights. This template will help for either self certifying or 3rd party GAPs audit. It is usable for a "Farm Review audit" and/or Field Harvesting/Packing audit". You may have add/revise for a Harmonized or Global GAPs audit.]

ABC Farm

street
city, State, zip
phone, email

Good Agricultural Practices (GAPs)

Checked boxes indicate I have read documentation to support this

Table of Contents

General Conditions

Farm Description	2
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Field Harvest and Packing

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Basic Gaps Checklist

WASSH!

General

- **Map of farm** (fields, structures (toilets, buildings, storage sheds), water source, chemical storage site, adjacent land & use).
- **Documentation:** See checklists.

Water

- **Drinking water:** Clean, potable drinking water available at all times.
- **Irrigation water:** Water test results available (total coliform for well water, E. coli for surface) to measure presence of fecal coliform. Treatment as needed.
- **Hand washing water, and produce wash water:** Must be potable.

Animals

- **Wildlife:** Monitor and record presence.
- **Rodents:** Develop pest control program as needed.
- **Domestic animals:** Exclude domestic animals during growing and harvest season.

Surfaces

- **Clean and Sanitize:** Develop SOPs for cleaning and sanitizing all surfaces (buckets, harvest equipment, wash tubs, packing area, transportation vehicles). Packing containers are protected from contamination.

Soils

- **Land Use History:** no known risk of prior contamination.
- **Manure:** Analysis reports available

Health & Hygiene

- **Signage:** (handwashing, designated lunch/smoking area, non-potable water on handwashing station).
- **Field Sanitation units** (toilet & handwashing facilities available for every 20 workers; 1 male & 1 female or if <5 workers, only 1 lockable unit required).
- **Worker Hygiene Training:** Train all workers in (handwashing, hygiene, illness & accident response procedures).
- **Chemical Storage:** in locked, separate shed.

around the facility

ge or suspicious activity and/or chemicals in or

What are some SOPs you might develop for your farm?

Examples of SOPs

- Cleaning and Sanitizing food contact surfaces
- Maintaining clean restrooms
- Pre-harvest food safety assessment
- Treating compost
- Treating processing (wash) water
- Policy and SOP for cleaning field harvest containers
- Pest control program (traps, monitoring, etc.)
- First aid policy and SOP for cuts and injuries

How to Develop an SOP

Well written standard operating procedures provide direction, improve communication, reduce training time and improve work consistency. How to write an SOP:

1. Watch someone do the task
2. Write down everything they do, breaking it into 10 steps or less. Long steps should be broken into sub-steps. This becomes your first draft.
3. Ask employees or co-workers to review and suggest changes
4. Have someone test the SOP by following all of the steps exactly as written – make any changes as needed.
5. Post the SOP where workers can see it
6. Keep another copy in your Food Safety Plan
7. Train all workers to follow the SOP and explain why it is important to follow

SOP on how to handle product and surfaces that come in contact with bodily fluids

1. Put on nitrile gloves
2. If large enough, isolate contaminated area by marking off with tape or string
3. Notify food safety coordinator _____
4. Dispose of any contaminated product in a covered trash bin
5. Wash and sanitize surfaces first with soap and water and then with 10% bleach solution
6. Remove and wash any affected clothing

On-Farm Food Safety Assessment

Daily Check List

Pre-Harvest:

1. Are toilet and wash facilities properly located, clean and stocked with toilet paper, wash water, soap, and paper towels?
2. Is drinking water and shade available to all workers?
3. Are harvest containers available, clean, well located and protected?
4. Is harvest, washing and packing equipment and area clean, sanitized and in good condition?
5. Are shade or other pre-cool measures in place?
6. Is there evidence of animal feces, dead animals, animal crop damage or other physical contamination in the crop area that needs to be isolated for “no-harvest”?
7. Are there other notable sources of contamination such as dump sites, fuels or chemicals, manure, burning debris, or water runoff that may affect food safety?
8. Is transportation equipment clean and available with protective covering?
9. Are all signs posted to a) instruct workers and visitors to wash hands before and after handling food, harvesting, eating and smoking, and b) indicating that wash water is not potable?
10. Have all new workers and visitors been trained in proper hygiene practices and their training been recorded?
11. Have all traps or pest control measures been checked and any animals disposed?

End of Day:

1. Are harvest buckets and washing bins cleaned and sanitized?
2. Has the drinking water container been cleaned and sanitized?
3. Is the packing area cleaned, sanitized and free of debris?
4. Is all packaging stored in a safe, secure location.
5. Are all chemicals stored in a safe, locked storage cabinet away from the packing area?
6. Have all Personal Protective Equipment been cleaned?
7. Have all garbage cans been emptied?
8. Do any supplies need to be updated (hand gloves, cleansers, sanitizers, toilet or hand-washing supplies, first aid kit, record keeping sheets, signage)
9. **Have all activities been recorded in the food safety record keeping sheets?**

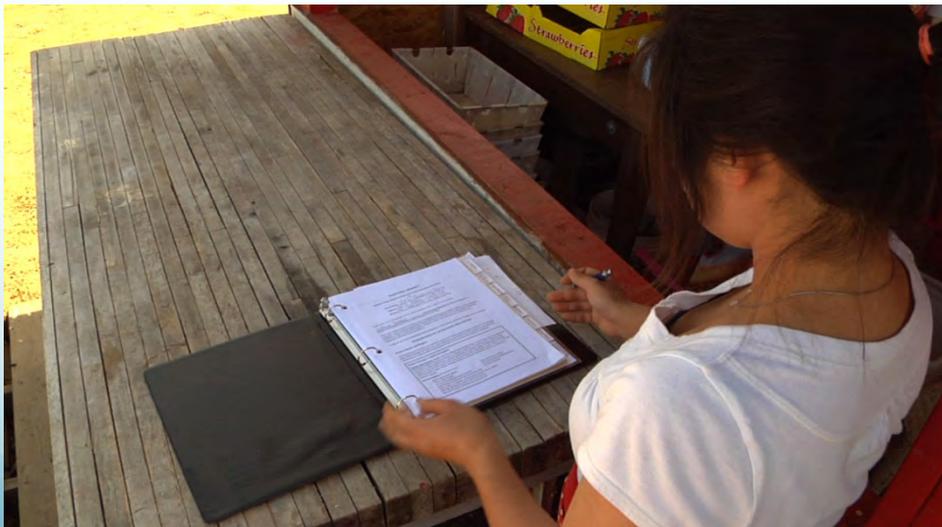
Documentation/Record Keeping

UC Berkeley/UCCE Food Safety For Small Farms Program

3. Toilet & Handwashing Maintenance Record

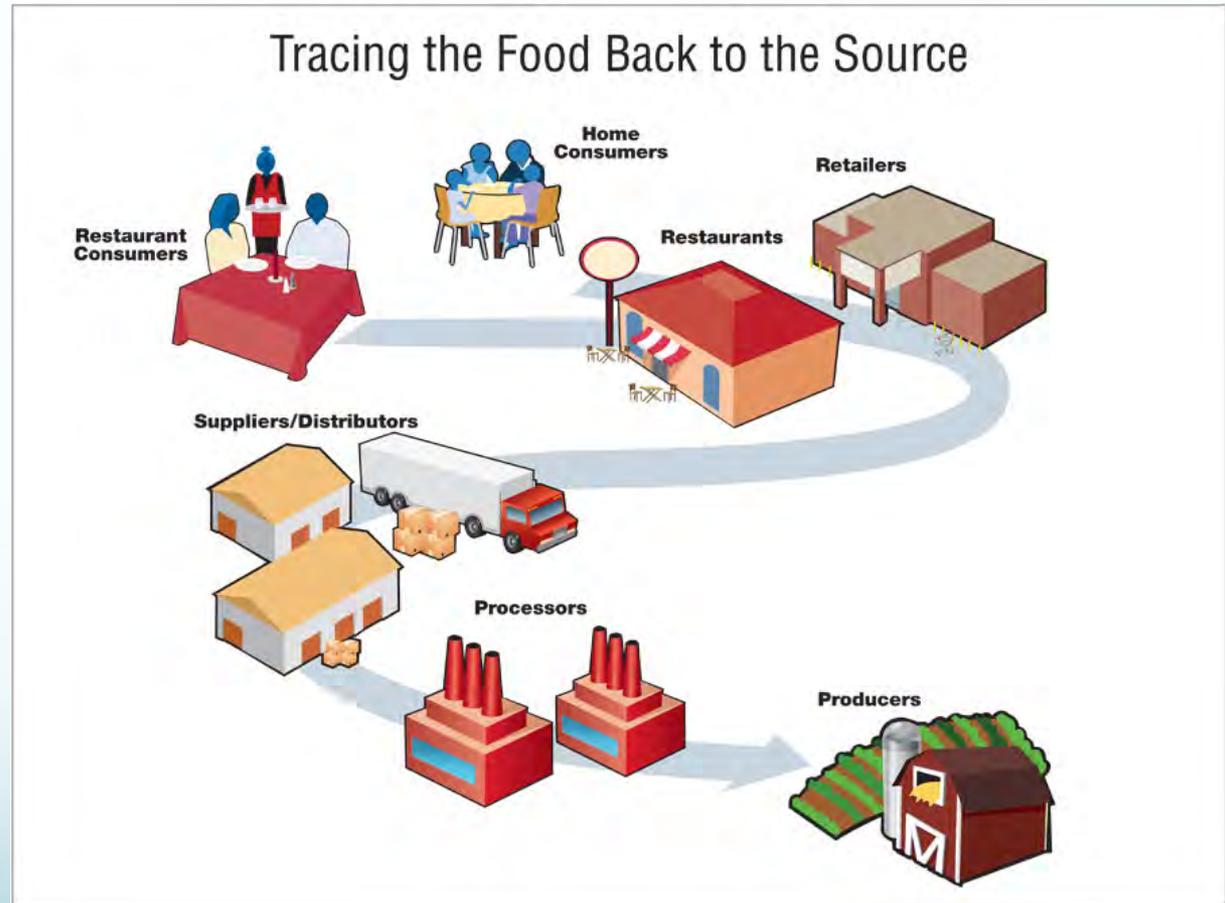
Record your actions.

Date	Cleaned by	Hand Wash Water	Soap	Paper towels	Toilet paper	Toilet cleaned Mark with x
		checked/refilled	checked/refilled	checked/refilled	checked/refilled	
		checked/refilled	checked/refilled	checked/refilled	checked/refilled	
		checked/refilled	checked/refilled	checked/refilled	checked/refilled	
		checked/refilled	checked/refilled	checked/refilled	checked/refilled	
		checked/refilled	checked/refilled	checked/refilled	checked/refilled	
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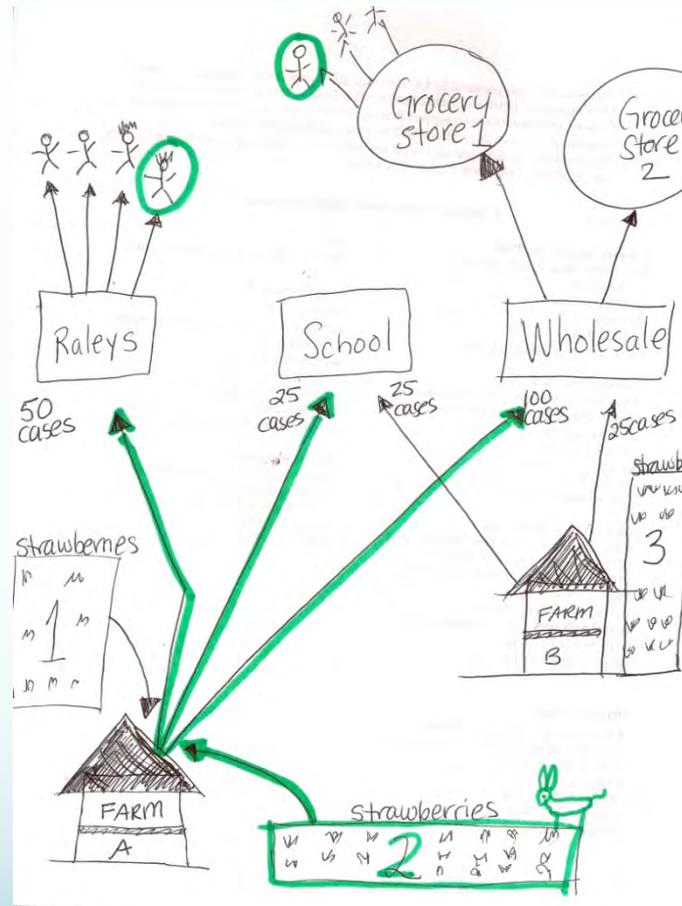


Traceability

- A traceback system allows you to know where product came from (including inputs) and where product was sent to.



Why is traceback important?



What you need for traceback

Labels



Sales records

916-312-1919 Kao Saetern 456379
 123 Berry Rd. 94310
 Sacramento, Ca.

CUSTOMER'S ORDER NO.	DEPARTMENT	DATE	
9161		1/22/10	
NAME Piranha Produce			
ADDRESS P.O. Box 123			
CITY, STATE, ZIP Selma, Ca. 91010			
SOLD BY	CASH	C.O.D.	
Nai			
CHARGE	ON ACCT.	MISC RETD	
PAID OUT			
QUANTITY	DESCRIPTION	PRICE	AMOUNT
1	10 Strawberry (12 pint box)	15#	150.00
2	5 Daikon (40 lb)	13#	65.00
3	5 Bittermelon (30 lb)	10#	50.00
4	3 Thai basil (1 lb)	4#	12.00
5			
6			
7	TOTAL		277.00
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
RECEIVED BY			

KEEP THIS SLIP FOR REFERENCE ORIGINAL

SOP IRQ/Traceback Labels



THE BASICS: Your boxes must have the following information on them:

- I=Identity: What is in the box (eg. Bok choy)
- R = Responsible party: Farm or owner name and county.
- Q=Quantity: (eg. 20lb)
- Date of harvest
- Field of harvest

Brand Name Label



Step 5: Follow your plan and make corrections as needed!



Remember: 5 Steps

1. Talk to your buyer(s)
2. Assess your food safety risks
3. Implement corrective actions
4. Develop food safety plan & record keeping
5. Implement your plan & corrective actions

WORKER HEALTH AND HYGIENE

Workers are a Food Safety Concern because they..

- **Can carry human pathogens**
 - *Shigella*, Hepatitis A, Norovirus, and others
- **Can spread human pathogens**
 - Harvest and pack with their hands
 - Fecal-oral route
- **Require training to reduce risks**
 - Proper handwashing
 - How to handle illnesses and injuries

Some outbreaks associated with infected workers

Date	Produce	Pathogen	# of cases	Produce origin
1987	raspberries	Hepatitis A virus	92	United Kingdom
1990	strawberries	Hepatitis A virus	53	United States
1994	green onions	Shigella	72	CA
1996	leaf lettuce	E. coli 0157:H7	49	United States
1997	strawberries	Hepatitis A virus	250	CA
1997	green onions	Cryptosporidium	55	United States
1997	basil	Cyclospora	341	United States
1998	green onions	Hepatitis A virus	43	United States/CA
1999	parsley	Shigella	486	United States
2003	parsley	enterohemorrhagic E. coli	77	United States

Poor Personal Hygiene



Dirty Hands



Dirty Finger Nails



Dirty Uniforms



Open Cuts



Being Sick at Work



Other Routes of Contamination



Dirty boots



Dirty tools



Cross contamination



Feces

Who needs to be trained?



- All employees
- Temporary workers
- Interns, Apprentices
- Relatives who help
- Wife, husband, children
- Volunteers, Student groups
- Visitors/U-Pick customers
- EVERYBODY!

How should training be done?

- Consider timing, language and literacy levels
- Consider principles of adult learning
- The training takes place at least once a year and is documented.
- Do follow up training during growing season



What they should know

- Make all workers/visitors aware of the farm's food safety policies
- Provide access to toilet and handwashing facilities
- Provide training in principles of good hygiene and other best practices
- **Other key information for visitors should include:**
 - Areas of the farm they are allowed to visit
 - The importance of not visiting the farm when ill
 - How to wash their hands
- Instructions to keep pets at home

What are some principles of good health and hygiene?

Avoid handling produce when you are sick!

Diarrhea

Runny nose, cough,
sneeze



The average sneeze travels up to 8 feet!

Assign workers other duties while they are sick or send them home

Wash or Wipe?



HANDWASHING IS BEST!

- Washing hands well and often is the most important thing you can do to prevent **germs (bacteria, viruses, fungi)** from leading to infections and sickness.
- Hand sanitizers **do not** kill some common germs such as salmonella, e. Coli, MRSA (methicillin-resistant staphylococcus aureus) and [norovirus](#). - CDC



When must hands be
washed?

Wash hands...

- Before starting or returning to work
- After using the toilet
- After handling money
- Before and after eating and smoking
- Before putting on gloves
- After touching animals or animal waste
- Any other time hands may become contaminated



Personal Hygiene Training

All workers must:

- Notify supervisor if ill
- Take shower and wear clean clothes daily
- Wear clean, un-ripped gloves (nitrile are best) – if using
- Take off gloves before using toilet & eating lunch
- Wash hands for 20 seconds after using toilet and before returning to work
- Not eat, chew gum, use tobacco, spit, urinate or defecate while in growing/processing area
- Use toilet and handwashing facilities regularly and properly.
- Keep clean, cut nails; tie long hair back.
- Not wear necklaces or rings or dangling jewelry.
- Eat and smoke away from food handling area.
- Not use product containers for personal use.
- Avoid wearing field clothes (especially shoes and boots) in packinghouse
- Avoid contact with animals

Training in Illness and Accident Prevention, Symptoms and Response



Stay healthy

Recognize symptoms of illness

- To avoid heat exhaustion, drink 2 quarts of water per person/day. Especially when hot! Use single use cups
- Shade is required. Breaks in shade.
- Monitor employees for symptoms of illness and for wounds.
- Sick workers that show signs of diarrhea, vomiting, fever, jaundice or infected wounds should not handle produce.



If someone is injured...

- If injured (including cut/nosebleed, etc), workers must treat wound immediately.
- Any contaminated product is discarded.
- All contaminated surfaces and tools disinfected.
- Clean contaminated containers
- Everyone on farm knows location of 1st aid kit.



Hand injury & gloves

- Wounds on hands must be covered with a bandage PLUS a glove.
- Gloves must be kept as clean as bare hands
- Broken gloves are not safe and should not be used.
- New gloves should be used after bathroom visits



Reinforce Good Health and Hygiene Practices

Post Signs that Reinforce Good Hygiene

- In field and packing area instructing workers when and how to wash hands



No eating/drinking in food handling areas

- Monitor compliance



Post signs!

Create Separate Area for Personal Use

- Eating
- Breaks
- Smoking
- Storage of personal items

To avoid cross contamination in field and packing area!

Provide Proper Field Sanitation Units

- Toilets & handwashing facilities are adjacent
- Fully stocked: toilet paper, single use towels and garbage can with lid.
- Post handwashing sign
- Clean and sanitize regularly
- Provide clean gloves (if used)
- Field sanitation units are accessible for servicing in the event of a spill or leak.
- Continue to monitor use



Is this a proper field sanitation unit?



What is missing?



What is correct? Missing?



What is missing?



Summary

- Food safety is important for many reasons.
- 5 steps to develop a Food Safety Plan: WASSH!
- Key elements of a food safety plan/program:
 - Policies, SOPs, worker training, record keeping
- Worker Health and Hygiene
 - Develop a written health and hygiene policy and training program
 - Keep workers healthy and send sick workers home
- Provide Training in:
 - Good health and hygiene practices
 - Handwashing
 - Accident and illness prevention
- Reinforce Good Practices
 - Put up signage for handwashing instruction
 - Provide and maintain clean restroom and handwashing stations
 - Monitor workers to ensure compliance & implement corrective actions as needed

More Resources

- **UCANR Urban Agriculture:**
<http://ucanr.edu/sites/UrbanAg/>
- **UC Small Farm Program:**
http://sfp.ucdavis.edu/food_safety/
- **UC Food Safety:** <http://ucfoodsafety.ucdavis.edu>
- **Cornell University:**
<https://producesafetyalliance.cornell.edu>