

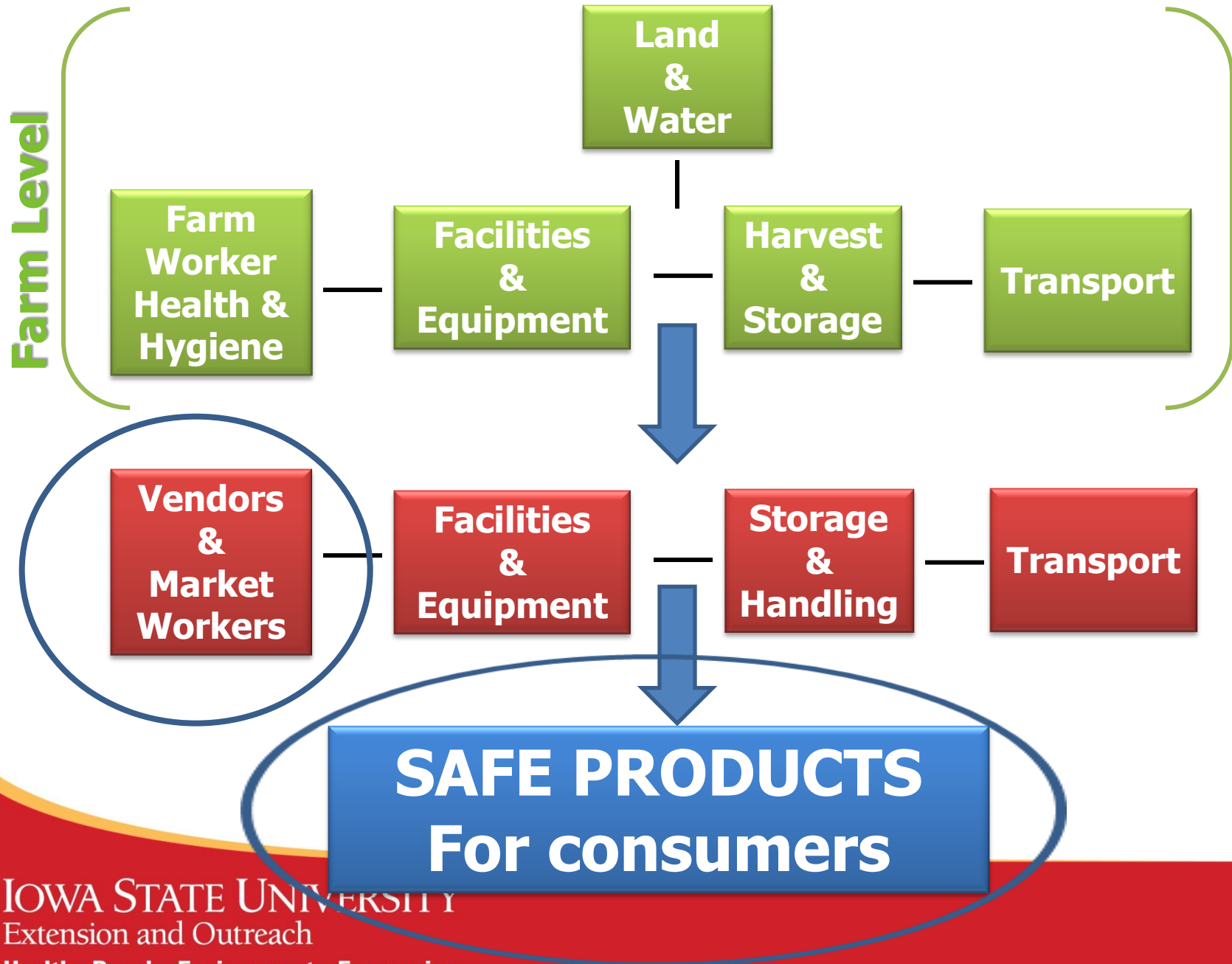
Food Safety:

Farmers' Market CSA

Great Plains Growers' Conference
January 9, 2016

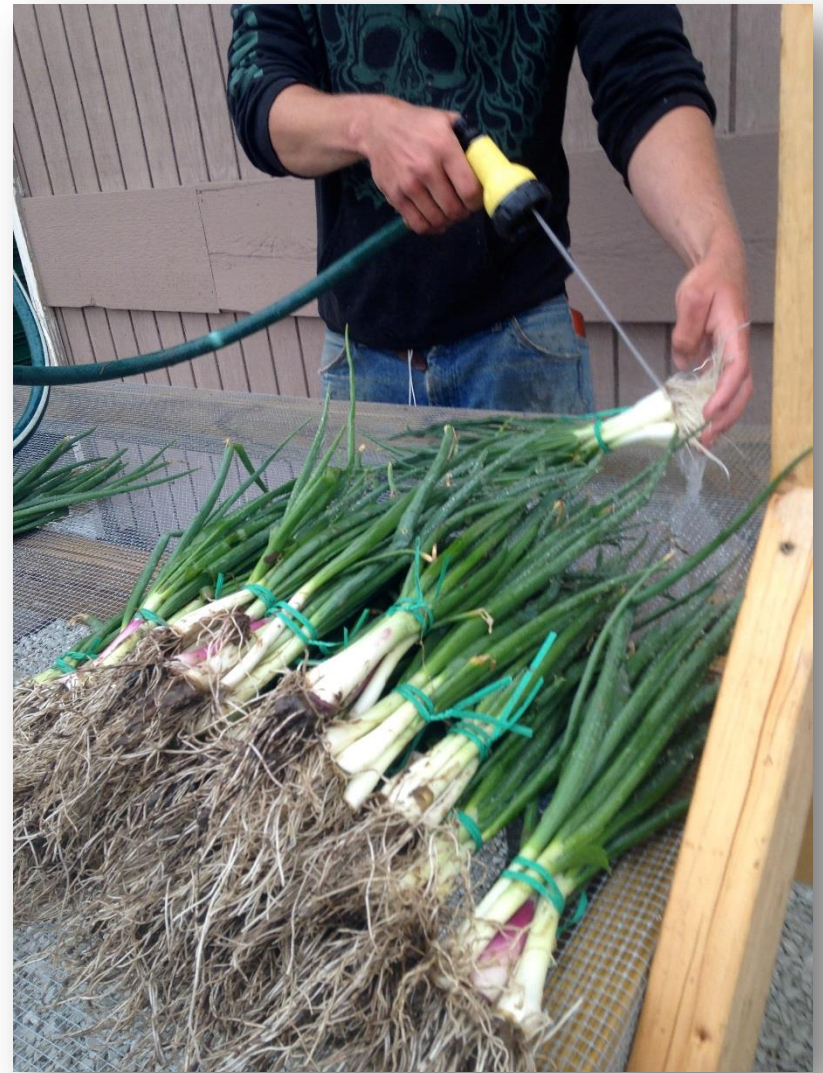
Linda Naeve
ISU Extension Program Specialist
Value Added Agriculture Program







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Customer Attitudes



*Locally grown
+
Know the farmer
+
organic
= safer than
store bought*



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Farmers' Market Food Safety





Cleaning

Cleaning Steps:

1. Rinse
2. Wash using a detergent or soap solution
3. Rinse



Sanitizing Containers and Surfaces

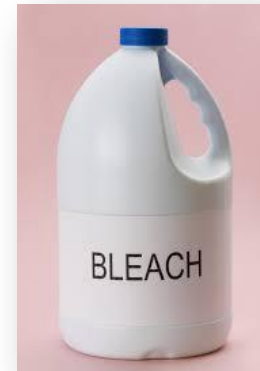
- Sanitize all food-contact surface
- Check Concentration
- Do not assume that “more is better”



Chlorine Bleach Concentrations

Food Contact Surfaces:

- Typically 50 – 100 PPM
(1 Tablespoon/gal or
2 - 3 teaspoons per gallon)
- Spray on packing and display table,
containers & other contact surfaces
- Air dry to avoid recontamination



Sanitizers

- Sanitizers exposed to air lose concentration over time
- Spray bottles hold concentration for extended periods
- Store chemicals away from food





Good Agricultural Practices (GAPs) can improve produce quality and safety and protect your business. Producers also use standard cleaning and sanitizing practices to reduce sources of microbial contamination on their products.

This publication focuses on the best cleaning and sanitizing practices for food products and food contact surfaces. It includes a resource list plus a sample form for monitoring sanitizer effectiveness and a sample cleaning schedule.

Washing, rinsing, and sanitizing may appear to increase costs, but they enhance product quality and offer these benefits:

- Soil and particles that can cause decay or spoilage are removed.
- Microorganisms that cause foodborne illness can be eliminated or reduced to a safe level.
- Clean produce is more visually appealing to customers.
- Product shelf life increases when spoilage organisms are removed.

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On-farm Food Safety: Cleaning and Sanitizing Guide

Using good sanitation practices during production, harvesting, and packaging can help reduce the risk of microbial contamination of fresh produce. Soil, fertilizers, harvesting equipment, water, workers, or animals such as livestock, pets, and pests can be sources of harmful microorganisms that cause foodborne illness. Surfaces that come in contact with produce must be washed, rinsed, and sanitized regularly. Employees need to understand and use appropriate food handling practices.

Food Contact Surfaces

Any surface that comes in contact with food, either directly or indirectly, is a food contact surface. Examples include preparation tables, spinners, food bags, and cartons for transporting produce. Food contact surfaces should be smooth and nonporous to allow for easy and effective cleaning. Rough surfaces, such as wood, can harbor dirt and microorganisms. Stainless steel tables and counters are commonly used in foodservice and processing facilities due to durability and ease of cleaning.

Other surfaces that can come into contact with product include containers for harvesting and transportation, tables in packing areas, bags and other packaging materials, conveyors, processing equipment, employee aprons, outerwear, and gloves. Hands also may come into contact with the food. For more information about food handling practices, see "On-farm Food Safety: Food Handling Guide" (PM 1974b).

Cleaning

Cleaning means removing soil and residues. For product (fruits and vegetables) the cleaning steps vary with how dirty the product is, and the tenderness and perishable nature of the food. For example, root vegetables often require initial rinsing, scrubbing, followed by one or two additional rinses to remove soil residue, while only rinsing can be safely used on leafy green vegetables. Fruits and vegetables that grow well above the ground may be brushed or wiped when

soil and other residue are minimal. Other tender or highly perishable products such as strawberries or raspberries should not be washed with water until just prior to use, as should all fruits and vegetables. When water is used for cleaning, it should be potable (safe to drink). New research shows that for certain vegetables, such as tomatoes, bacteria can be pulled into openings if the wash water temperature is colder than that of the produce item.

Cleaning of food contact surfaces means removing soil and residues. This involves a three-step process of rinsing away surface debris, washing and scrubbing with soap or detergent, followed by rinsing with clean potable water. Rinsing surfaces thoroughly is important so that any detergent residue is removed.

Under certain conditions, microorganisms (bacteria, yeasts, and molds) can form invisible films (biofilms) on surfaces. Biofilms can be difficult to remove and usually require cleaners (for physical removal) as well as sanitizers (for killing of biofilm microbes.)

Sanitizing

Sanitizing is the process of treating a food contact surface with a sanitizing solution that will kill most microorganisms or reduce them to a non-harmful level. For sanitizers to be effective, surfaces must first be cleaned, because soil and soap residues can make the sanitizing solution less effective.

• **Sanitizing** is a process that reduces the contamination level of a product or food contact surface surface by 99,999 (5-log reduction) percent in 30 seconds.

• **Sanitizer** is a chemical compound designed to kill microorganisms. Chlorine bleach (sodium hypochlorite concentrations 5.25 to 6.3 % in liquid form) and quaternary ammonium compounds (quats) are commonly used sanitizers for food contact surfaces. Chlorine and hydrogen peroxide, at proper concentrations, can be used for food products.

PM 1974C. Revised March 2012

Worker Health

- **Sick?? - STAY HOME!**
 - Diarrhea, vomiting, GI upset-wait until symptoms free at least 24 hours
 - Some illnesses require a doctor release
- **Sore throat, etc?**
 - reassign to non-food handling, non-container handling duties



Open Wounds

- Bring a First Aid Kit
- Do not handle food if you have a sore that contains pus or that is infected.
- Cover affected area with a bandage, a finger cot, and then a single-use glove.



Transportation to the Market



Reminders

- Wipe down all display items prior to displaying food
- Have cleaning supplies close
- Keep Cold Foods COLD
 - Put cooler out of direct sunlight
 - Keep cooler closed



Samples



Prepare ahead



Sample Preparation

- Clean produce
- Put into proper container
- Keep cut produce cold



Supplies Need at the Market

- Clean work surface
- Clean cutting board
- Clean knives
- Toothpicks or forks
- Packaging or covering

Utensils

- Easy to clean
- Good condition
- Stored & covered



Cutting Board

USE Polypropylene materials

DO NOT USE:

- Wood cutting boards
- Table surfaces
- Same cutting board for raw foods & ready-to-eat foods



Food Handling

- Keep samples at the appropriate temperature
- Handle samples with freshly washed hands or single use gloves
- Minimize sample preparation at the market



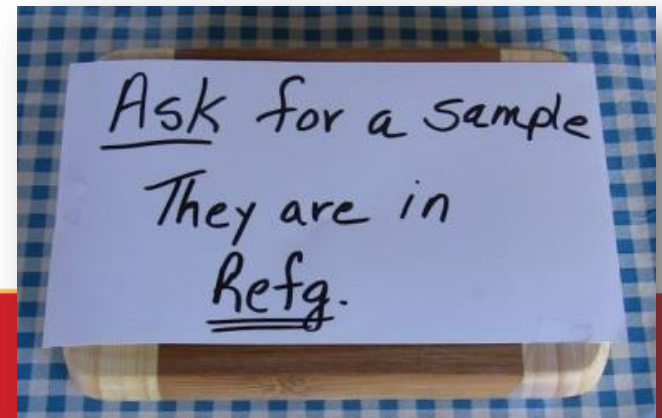
Protection

Prevent patrons from directly touching the samples



Sampling

- Cover cut samples
- Keep cut produce cold
- Label with time cut and displayed
- Discard after 2 hours or 1 hour if surroundings above 90°F



Samples

Best practice is to limit patron's touching samples as well as food products



Waste Containers

Market Managers: Provide ample covered waste containers and empty them often

Vendors: Provide your own waste receptacle when providing food samples



Handling Cash

- Not as big of a problem as expected
 - Science supported
- Patron opinion may demand otherwise



Wash Hands...

- Before starting work
- After any absence from the booth
- After smoking, eating, drinking
- After restroom breaks
- After taking out the trash
- After **any** activity that may have caused contamination

REVIEW

Effective Hand washing

- Wash hands with soap
 - Between fingers and under finger nails
- Rinse hands with running water
- Dry hands with one-use paper towel

Hand Sanitizers



Hand sanitizers are not a replacement to
hand washing

One-Use Gloves

- Gloves are capable of spreading germs
- Not a substitute for hand washing
 - Helpful for avoiding bare-hand contact with food
- Must be used for single, uninterrupted
- Non-latex gloves
 - Allergies

Personal Hygiene at the Market



Clothing Cleanliness

Clothing

- Clean, appropriate attire
- Hair restraint
- Minimize jewelry worn



Food Safety Indicators



Covered displays



Covered displays



Reduce risk from birds and small mammals

Table coverings



Table coverings



Elevated display



Market Display



Product Protection?



Preventing contamination

Bags



Clean and sanitized display containers



Hand Wash Station



Eating food at the booth



Vendors should not have their own food or beverages on or around the display

Food safety certificates On display



Pet Policy at the Market



IT'S BEST TO LEAVE YOUR DOG AT HOME

Be kind to your pets, leave them at home. The Downtown Farmers' Market is a dog-friendly market, however Market Management encourages pet owners to leave their dog at home as the environment is not conducive to dogs. If patrons do choose to bring their dogs, they are expected to act in a responsible pet-owner manner and adhere to these six rules to make everyone's Market experience a pleasant one.

- Dogs must be under control on a short leash(maximum 3 foot leash), and by the owner's side at all times.
- Dogs need to be kept away from produce, plants and prepared food products.
- Dogs need to be courteous and able to socialize with people and other dogs to earn the right to be at the Market.
- Be understanding – not everyone is a dog lover and some fear dogs.
- Be prepared to clean up after your dog and bring appropriate pick-up gear.

From: "Market Tips", Des Moines Farmers' Market



What can be improved?





1. Add a cover/tent



2. Use clean or lined containers



3. Use a table covering



4. Elevate produce

CSA Food Safety Tips



CSA Food Safety begins on the farm





Pre-cool and retain cool temperature

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Clean, Covered, Cooled delivery vehicle



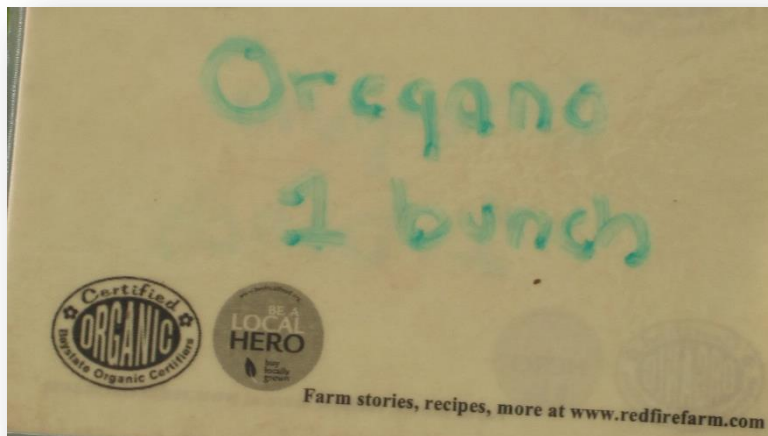
CSA Distribution Methods

"Farmers' Market"



CSA Distribution Methods

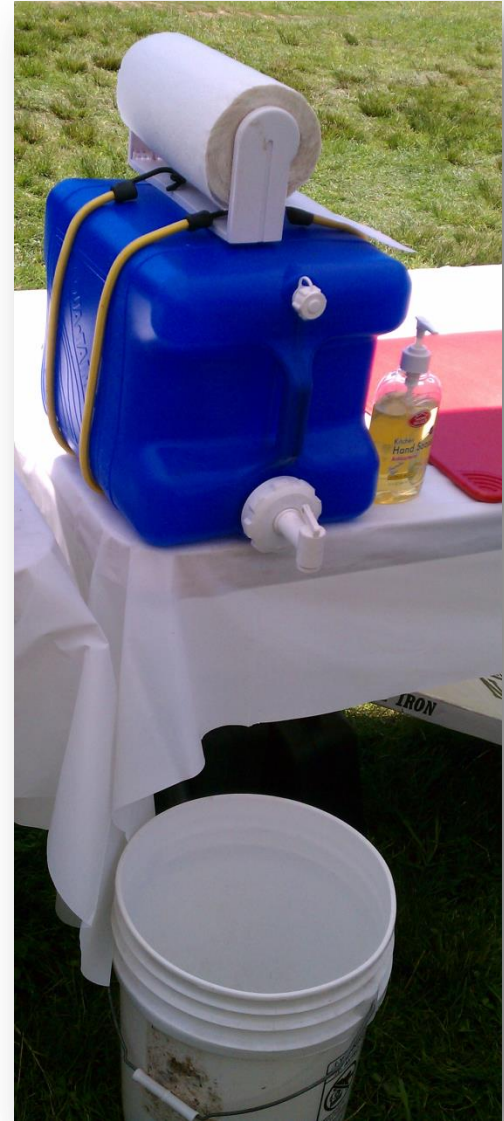
"Farmers' Market"





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Hand Wash Station



Reusable? containers



Boxes



Baskets



Bags

Crates



Tubs





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Glacier Valley
<http://www.glacierv.com>

Reusable bags

Should be able to wash and/or sanitize the bag





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Drop off/Pick up Locations



Drop off/Pick up Locations



Drop off/Pick up Locations





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Drop off/Pick up Locations



Summary

- Presentation
 - Clean, table covering, container liners
- Product samples
 - Prepared ahead
 - Time/temperature
 - Presentation/distribution
- Transportation/drop off site
- Container



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Linda Naeve

515-294-8946

lnaeve@iastate.edu