Good Agricultural Practices (GAP) for Fresh Fruit and Vegetable Growers
Worker Health and Hygiene

- In the field
- In the packing house/processing facility
- Pick your own operations
What is Health and Hygiene?  
(“Key” Steps to Maintain Health and Prevent the Spread of Disease)

- Good cleanliness habits including proper handwashing
- Good health habits including awareness of illness symptoms, covering coughing and sneezing
- Adequate covering of open lesions, wounds, and boils
Worker Health and Hygiene

Why?

- Many fresh fruits and vegetables are considered ready to eat
- What does this mean?
Ready To Eat or Minimally Cooked
Wash your hands before we eat.

You think they're clean. Your hands are covered with germs.

I don't see any germs!
Worker Health and Hygiene
Why?

- Humans and animals are the primary source of direct or indirect transmission of disease causing (pathogens) in the food supply

- Harvesting/packing is often a labor intensive operation with direct human contact with fresh produce

- Infected employees could increase the risk of transmitting foodborne illness
Sources of Microbes

- From respiratory tract through coughing, sneezing, spitting, or touching the mouth
- From open sores, cuts, or boils
- From intestinal tract through hands soiled with feces
Health and Hygiene

- Most cases of food borne illness can be traced to lapses in personal hygiene.
- It is the most important part of a food safety program but often the most difficult to implement.
- **Proper hand washing** is the most important way to prevent transfer of harmful microbes to food.
- Train and reinforce proper use of toilet facilities

From Penn State, 2012
Worker Health and Hygiene: What Can You Do?

- **Make handwashing facilities easily accessible.** Stock them with potable (drinkable) water, soap and paper towels.

- **Provide accessible, clean, maintained toilet facilities**

- **Emphasize worker hygiene training**
  - When/how do you wash your hands?
  - Are cuts or blisters covered?
  - No smoking in the field or packing areas?
  - Connection between hygiene and illness? Explain

- **Set an example**
EMPLOYEE TRAINING
Ranked #1 Food Safety Problem by Food Processing Industry
ALL segments of produce industry
Keep a record of training - simple

Food Prot. Trends. 26(5):310-315
Worker Health and Hygiene: How do you wash your hands?

1. Wet hands – potable/drinkable water
2. Apply soap – antimicrobial not needed
3. Scrub hands – 20 seconds
4. Rinse hands
5. Dry hands – paper towels. Not on their clothes!!
Worker Health and Hygiene: When do you wash your hands?

After:

- Eating or smoking
- Working in the field
- Handling animals or animal products (e.g. manure, compost)
- Using the rest room
- Emptying the trash
- Using chemicals
- Working with traps
Hand washing station requirements

- Clean and sanitary
- Clean running water
- Hand soap
- Disposable hand towels
- Trash container
- A handwashing sign
- Inspect regularly

Toilet and handwashing standards apply to facilities inside the home if they are used by harvesters and handlers.
Handwashing Stations

From Penn State, 2012
Proper Hand Wash Station

5 Gallon Thermal Container

Warm Water 100°F-120°F

Soap

Continuous Flow Spigot

Paper Towels

5 Gallon Discard Bucket
https://www.youtube.com/watch?v=SMa5OTa3PnU
What about hand sanitizers?

- They are NOT a substitute for hand washing
- Not very effective on soiled hands
- If you supply them, encourage their use AFTER hands are washed

From Penn State, 2012

Courtesy Wes Kline – Rutgers Cooperative Extension
What can you do? (continued)

- Be aware of cross-contamination
- Clean clothing to begin the day
- Limit bare hand contact and encourage use of gloves where applicable
- Multilingual signs when necessary and feasible as reminders of hygienic practices
- Be aware of symptoms of illness
  - Are sick employees allowed to handle fresh produce?
Pick Your Own Operations
Why consider health and hygiene?

- Customers “harvesting” produce are no different than employees and should observe good hygiene practices

- Communicate awareness about food safety issues to the public
Pick Your Own Operations
Visitor Health and Hygiene Policy

- If ill, please don’t pick.
- Wash hands when appropriate
- Do not eat in fields
- No smoking
- If injured, tell farm host
- No pets – unless service animal
Hygiene at Pick Your Own Operations: What can you do?

- Provide customers with well-maintained and serviced toilet and handwashing facilities
- Post signs to encourage customers to wash their hands before picking produce
- Be alert to illness and open wounds whenever possible
On Farm Petting Zoos – Not a good idea!!

Farms/zoos tied to dozens of illnesses in US and Europe over last 20 years

Between 1996 and 2010, CDC received reports of approximately 150 animal-to-human disease outbreaks in public settings.
Petting Zoo fun!

- UK: Farms/Events found liable
  - 2009 E. coli 0157:H7 outbreak
    - 93 sick, 76 children under age 10
    - Several children acute kidney failure
    - No deaths
  - 2014 – Lambing Live, Country Store
    - 22 children
  - 10/2012 – County fair North Carolina
    - E. coli 0157:H7
    - 106 sickened
    - 2-year old died

What went wrong at Lambing Live:
- Uncontrolled access to lambs
- Children rolled in feces-covered straw
- Animals densely packed
- Hand washing basins meant for visitors used to clean animal feeding dishes
  - 2-year old died
Petting Zoo fun!

- 2004 – North Carolina State Fair
  - E coli 0157:H7
  - 187 people sick
  - 15 with HUS
- 2015 – Washington Fair Grounds
  - E coli 0157:H7
  - 60 people sick
  - 40 people at event
  - 20 secondary – i.e. siblings
  - Manure bunker nearby