

# GAPs and GHPs for the Urban Farm: Animals, Soil, Health & Hygiene

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Food Safety Basics for Urban Farmers

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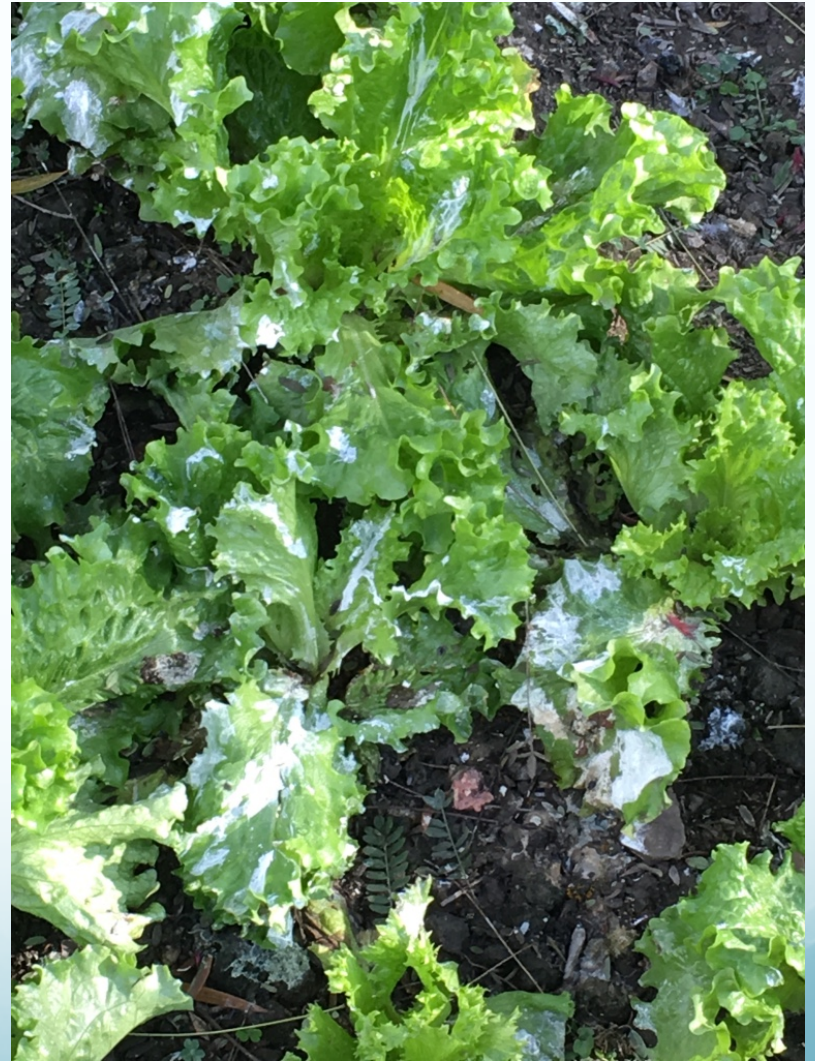
# ANIMALS



# Identify, Monitor and Minimize Risk

- In the fields
- In and around the packing shed
- In and around storage area

# Inspect Fields Before Harvest

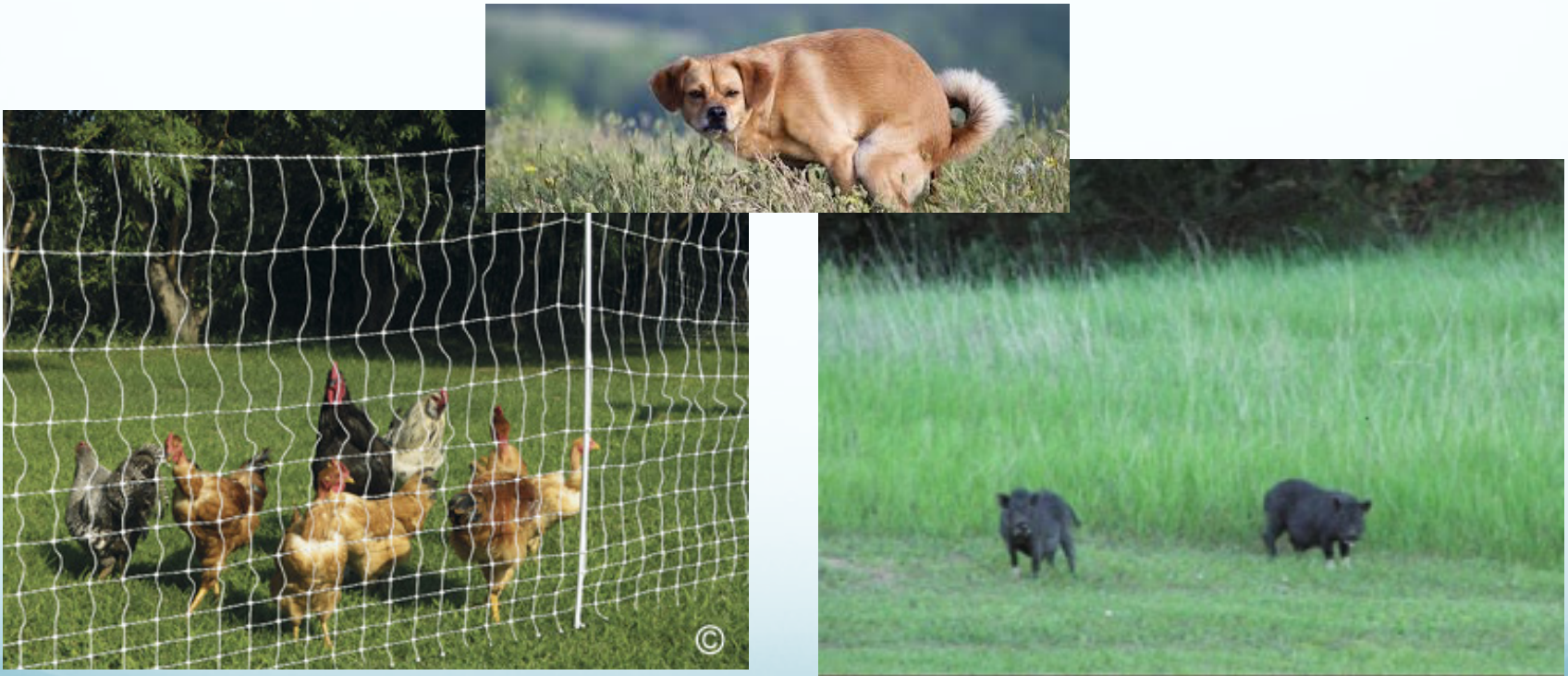




# Monitor, Minimize Wildlife & Animal Entry

Keep domestic animals  
out during production

Monitor & record entry of  
all animals



Keep all animals out of production area 120 days before harvest.

# Pest control in field

## Deterrents

- Eliminate nesting areas (brush piles tall grass)
- Install fencing
- Motion activated sprinkler?



## Traps





# In the packing shed: Monitor packing area for pests



# Exclude and Discourage Pests

- Inspect all walls, doors, windows – Repair holes and seal any cracks between floors or walls
  - Make sure door seals are in place to prevent pest entry
- Deter birds from roosting in rafters with nets or spikes
- Keep doors and windows closed as much as possible
- Cut grass around packing area
- Remove all food sources and nesting sites in packing shed
- Remove cull piles and garbage everyday, and as needed throughout the day
- Keep produce covered, when possible

# Pest Control

- Monitor for evidence of rodent presence (droppings, sighting).
- Traps can help monitor and reduce pest activity
  - Identify all trap locations on a map
  - Place traps along walls of packing or storage operations
  - Check traps regularly and dispose of trapped animal immediately with gloves.
  - Keep records
  - Do not use bait inside the packing area
- Store pallets of produce at least 12" from walls to aid in visual inspection and trap monitoring
- Train all workers to report any pest problems they see
- Be sure your pest control program is controlling the pests you have!



# SOILS



# Know Your Soil History

- Avoid farming on land with history of soil contamination
    - Dumpsite
    - Old home or barn
    - Old livestock pens
    - Sewage or toilet spill
    - Flooding from creeks or rivers
    - Septic tank spill on field
    - IF RISK, soil test.
- 3 YEAR BUFFER no flooding from creeks/rivers or septic tank or other sewage



Ensure there is no landfill or sewage treatment facility next to farm





If known risk, then  
test your soil and/or consider  
other options



# Manure & Compost

- If no manure is applied, no concern.
- If raw manure: follow NOP standards (120 day interval before harvest in contact, 90 day no contact).
- Composted Manure: must use properly treated manure.
- Need records of source of manure or *own* records with SOP.
- Store manure safely (no runoff)
- Keep records of application



# 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 O157: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



# Principles of Good Health and Hygiene Training

# Avoid handling produce when you are sick!

Diarrhea

Runny nose, cough,  
sneeze



The average sneeze travels up to 8 feet!

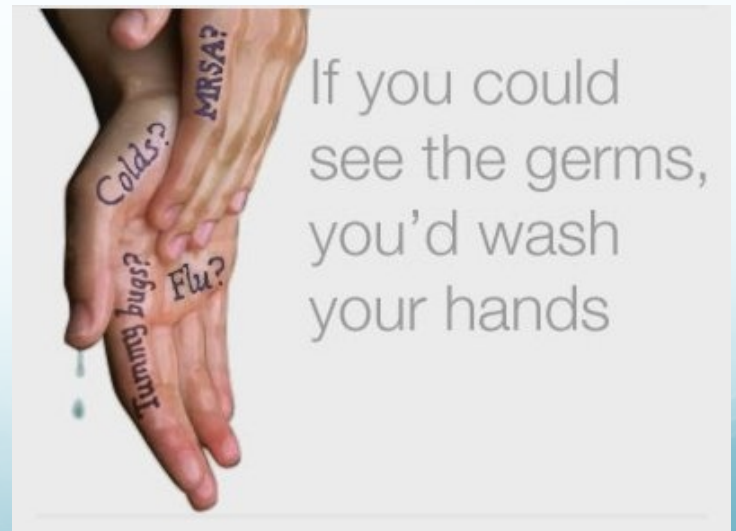
Assign workers other duties while they are sick or send them home

# Wash or Wipe?



# Handwashing is Best!!

## Proper Handwashing





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



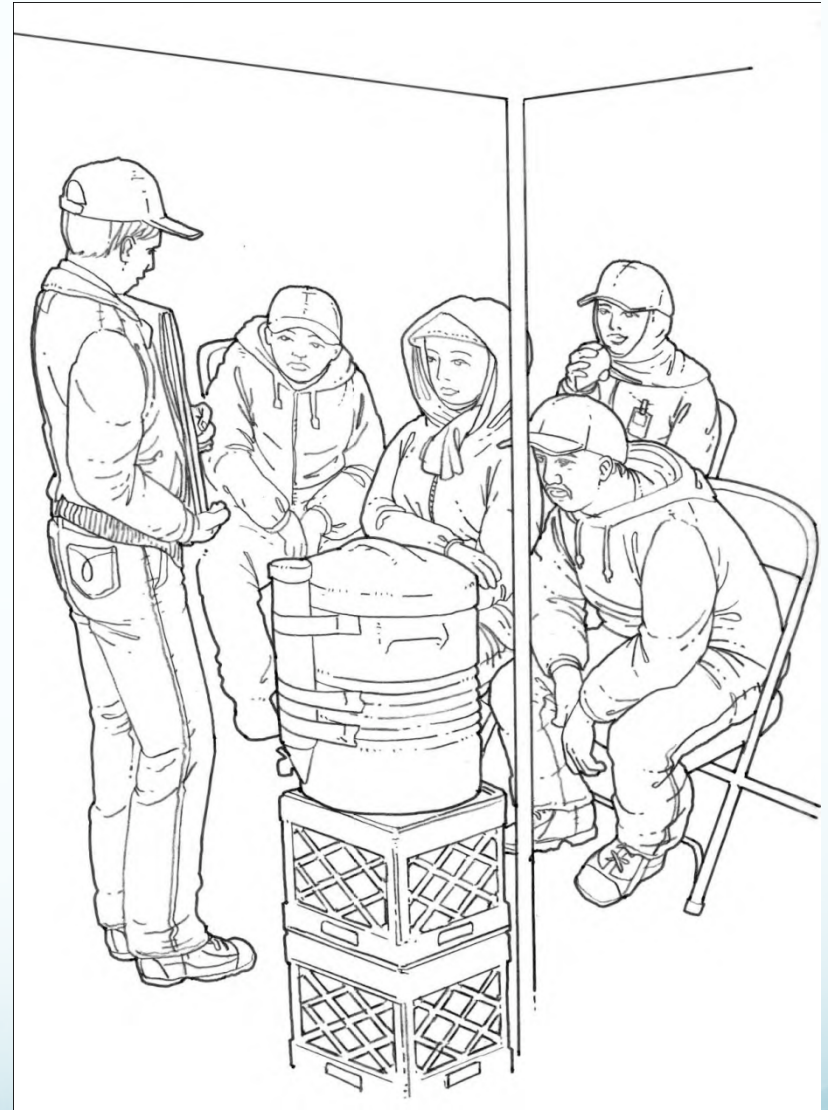
# Personal Hygiene Training

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.



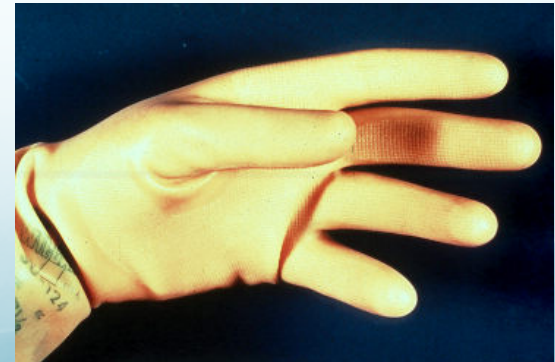
# Provide Clean Potable Drinking Water

- Clean drinking water is available always and water source documented.



# 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





# If someone is injured...

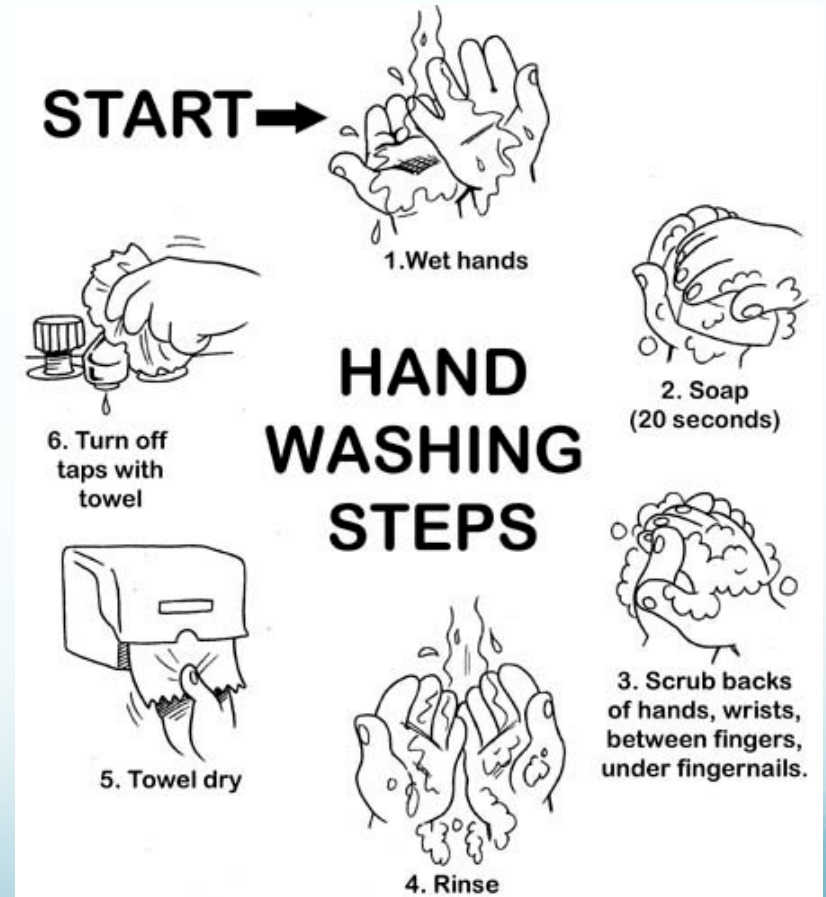
- If injured (including cut/nosebleed, etc), workers must treat wound immediately.
- Any contaminated product is discarded.
- All contaminated surfaces and tools disinfected.
- Clean contaminated containers
- Everyone on farm knows location of 1<sup>st</sup> aid kit.



# 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

- Identify, monitor and minimize risk of animal intrusion
- Know your soil history and test if necessary
- 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
- Put up signage for handwashing instruction
- Provide and maintain clean restroom and handwashing stations
- Monitor workers to ensure compliance & implement corrective actions as needed

Questions?