Increasing Food Safety on the Farm with Worker Health and Hygiene
Introduction

This module is one of three self-paced learning tools designed to serve as an introduction to the information in the “Good Agricultural Practices” manual developed by NDSU Extension.

Development and production of the GAP manual was funded in part by the North Dakota Department of Agriculture.

Completing this module does not result in a certificate of course completion issued by the Produce Safety Alliance and the Association of Food and Drug Officials.

Adapted with permission from Cornell University.
This module was adapted from the Produce Safety Alliance Grower Training program and is used here with permission from Cornell University.

Visit producesafetyalliance.cornell.edu for more information about training, including upcoming courses, to meet FSMA regulatory requirements.
This module is not a certification program. We encourage you to participate in face-to-face Produce Safety Alliance workshops for more in-depth information.
Instructions

• Please read through the information on the slides and in the notes.

• To view the notes: In the upper left corner of most slides, you will see a “speech bubble.” Mouse-over, click or right-click on the bubble to read additional material about the information on the slide.

• For more information about field-to-fork food safety, visit www.ag.ndsu.edu/fieldtofork and click on Good Agricultural Practices.

• Contact Julie Garden-Robinson at Julie.garden-robinson@ndsu.edu for more information
Pretest: On a piece of paper, answer these questions. The answers are at the end.

1. List three reasons workers are a safety concern.

2. List at least four routes of contamination on the farm.

3. List four or more items that growers should let farm visitors know.

4. OSHA requires 1 toilet and sink facility per _____ workers within ____ mile of the working area.
After reading through this information, you will be able to:

- Identify potential routes of contamination associated with workers
- Identify adult learning concepts and topics to include in a worker training program
- Describe how to monitor that facilities are maintained on the farm
- Describe corrective actions that may be used to correct identified problems
- Identify recordkeeping tools for worker health and training

Adapted with permission from Cornell University.
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
Routes of Contamination

- Feces
- Clothing
- Hands
- Footwear
- Tools & Equipment
- Illness & Injury

Adapted with permission from Cornell University.
Importance of Training Workers

- Fresh fruits and vegetables often receive no additional processing (such as cooking), so contamination with a pathogen can result in illness when the produce is consumed.
- Workers need to use food safety practices every day to reduce produce safety risks.
- Food safety practices are learned so training is key to successful implementation.

Adapted with permission from Cornell University.
Potential Training Challenges

- Time for training
- Language
- Literacy level
- Training mid-season
- Variation in hygiene practices and expectations
- Misconceptions/misperceptions

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Communication

• Good communication supports food safety by improving risk identification and reduction

• Trained workers know:
  – How to identify food safety risks
  – How to reduce risks they find
  – Who to tell if they see a food safety risk they cannot minimize or eliminate
  – That their food safety concerns will be taken seriously
Everyone Needs Training

• Implementing food safety practices is a company wide task
  – Managers, farm workers, office staff, volunteers, interns, family members

• Everyone needs to know how to identify and reduce food safety risks
  – Practices they are responsible for doing
  – How to report food safety risks they see

• Owners, managers, and supervisors should set a good example and follow company policies
Visitors

• Growers must:
  – Make visitors aware of the farm’s food safety policies
  – Provide access to toilet and handwashing facilities

• 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

Adapted with permission from Cornell University.
Training Programs Must Include

• Principles of food hygiene and food safety
• Recognizing symptoms of foodborne illness and the importance of personal hygiene for all personnel and visitors
• Other training relevant to the worker’s job

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Training Programs Must

• Be appropriate for the job and conducted upon hiring
• Include refresher training throughout the season (at least annually) or when a problem arises
• Be easily understood
• Be supervised by a qualified person
• Include a process for documenting the training

Adapted with permission from Cornell University.
Worker Qualifications

Workers and supervisors must be qualified to conduct their job duties through:

• Education
• Training
• Experience

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Training Workers to Identify and Reduce Risks at Harvest

- Evaluate contamination risks before and during harvest such as significant animal activity, presence of fecal matter, damaged crops, or extensive animal tracks
- Never harvest produce destined for the fresh market that is visibly contaminated with feces
- Never harvest dropped produce
- Only use clean harvest and packing containers

Adapted with permission from Cornell University.
Resources Provided to Support Food Safety Practices

- Toilets
- Toilet paper
- Soap
- Clean water
- Paper towels
- Container to catch wastewater
- Garbage cans
- First Aid Kit
- Break Areas

Adapted with permission from Cornell University.
Toilet & Handwashing Facilities

• Provide a sufficient number of toilets and sinks to meet worker and visitors’ needs
  – OSHA requires one facility per 20 workers within ¼ mile of the working area
• Facilities must be fully serviced on a regular schedule
• Toilet and handwashing facilities must be well stocked
• Facilities should be monitored every day when in use

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Drinking Water & Break Areas

• Workers should be provided with drinking water to reduce the risks of heat exhaustion
• Break areas do not need to be a separate building but must be in a designated area
• Healthy workers are better able to do their jobs and implement food safety practices!
Workers Must

• Maintain personal cleanliness
• Avoid contact with animals (other than working animals)
• Maintain gloves in a sanitary condition, if used
• Remove or cover hand jewelry that cannot be cleaned
• Not eat, chew gum, or use tobacco in an area used for a covered activity
• Notify their supervisor if they are ill
• Wash their hands

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When Must Hands Be Washed?

<table>
<thead>
<tr>
<th>When Hands Must Be Washed</th>
</tr>
</thead>
<tbody>
<tr>
<td>After using the toilet</td>
</tr>
<tr>
<td>Before starting or returning to work</td>
</tr>
<tr>
<td>Before and after eating and smoking</td>
</tr>
<tr>
<td>Before putting on gloves</td>
</tr>
<tr>
<td>After touching animals or animal waste</td>
</tr>
<tr>
<td>Any other time hands may become contaminated</td>
</tr>
</tbody>
</table>

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Proper Handwashing

1. **Wet hands** with water
2. **Apply soap and lather.** Be sure to wash the front and backs of hands as well as in between the fingers. Rub hands together for AT LEAST 20 seconds
3. **Rinse** hands thoroughly with clean water
4. **Dry** with a paper towel (turn off faucet with used towel)
5. **Throw** the paper towel in a trash can

*Antibacterial hand sanitizers CANNOT replace handwashing*
Proper Use of Toilets

- All urination and defecation should be done in a toilet, NEVER in the field or nearby production areas
- Toilet paper should be deposited into the toilet, not in a garbage can or on the floor
- Always wash hands after using the toilet
Worker Clothing

• Clean clothes should be worn each day
• Footwear cleanliness is important
  – Designated footwear helps prevent cross-contamination
• Gloves, if worn, must be changed when they become contaminated or torn
  – If reusable gloves are used, clean often or as needed
• Aprons, gloves, and other food safety equipment should be removed before using the toilet and should be stored in a clean, designated area when not in use

Adapted with permission from Cornell University.
Worker Illness

- Workers who are sick or show signs of illness can contaminate fresh produce
- Ill workers must not handle fresh produce
- Symptoms of illness can include:
  - Nausea
  - Vomiting
  - Diarrhea
  - Fever
  - Jaundice

Adapted with permission from Cornell University.
Worker Injury

- Worker injuries may pose food safety risks
  - A first aid kit should be available, stocked, and monitored
  - Clean and bandage all wounds
    - If the wound is on the hands, a glove should be worn to create a double barrier
  - Discard any produce that may be contaminated
  - Clean and sanitize any items that came in contact with bodily fluids
  - Report all injuries to supervisor

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Monitoring

• Develop a monitoring process to ensure:
  – Workers are following food safety practices and farm policies every day
  – Facilities are available, clean, and well stocked every day

• This can include:
  – Training supervisors to observe employee behavior
  – Appointing someone to check facilities each day
  – Using monitoring logs

Adapted with permission from Cornell University.
Corrective Actions

• Workers are not following food safety policies
  – Develop rewards to encourage positive practices
  – Implement deterrents for poor practices

• Facilities are not cleaned, restocked or are broken
  – Sanitation company contact on speed dial
  – Retraining workers or improving monitoring process

• Facilities leak in the field or packinghouse
  – Emergency plan for spills

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Recordkeeping

- Document actions taken to support worker health, hygiene, and training on the farm such as:
  - Worker training programs
  - Monitoring and restocking of toilet and handwashing facilities
  - Illness and injury reporting
  - Restocking of first aid kits

Adapted with permission from Cornell University.
Recordkeeping Tips

• Take advantage of template recordkeeping logs, but be sure to modify them to fit your farm

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Recordkeeping

• Example of documenting worker training
  – Date
  – Name of trainer
  – Materials/information covered
  – Printed names & signatures of attendees
  – Manager signature

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Summary

- Worker health and hygiene is critical to food safety because workers can introduce food safety risks.
- Everyone should be trained but anyone who handles covered produce must be trained.
- Visitors must be made aware of policies too.
- Training should emphasize health and hygiene practices that reduce risks.
- A written training program should be developed, implemented, and documented.

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Answers

1. List three reasons workers are a safety concern.
   
a) Can carry human pathogens
b) Can spread human pathogens
c) Require training to reduce risks
Answers

2. List four routes of contamination.

a) Feces
b) Clothing
c) Hands
d) Footwear
e) Tools and equipment
f) Illness and injury
Answers

3. List four or more items that growers should let farm visitors know.

Growers must:
  a) Make visitors aware of the farm’s food safety policies
  b) Provide access to toilet and handwashing facilities

Other key information for visitors should include:
  c) Areas of the farm they are allowed to visit
  d) The importance of not visiting the farm when ill
  e) How to wash their hands
  f) Instructions to keep pets at home

Adapted with permission from Cornell University.
4. OSHA requires one toilet and sink facility per 20 workers within 1/4 mile of the working area.
Improving Food Safety with Worker Health and Hygiene