



NEW ENGLAND EXTENSION FOOD SAFETY CONSORTIUM

GOOD AGRICULTURAL PRACTICES

In the Barn/Packing House
Worker Health & Hygiene

New England GAP Guidelines Addressed Here:

Worker Health and Hygiene in the Barn/Packing House

- Worker food safety training in place.
- Workers practice good personal hygiene
- Sick employees and those with uncovered open wounds sores, etc assigned to other duties where there is no direct contact with fresh produce.
- Restrooms are assessable and well serviced (are cleaned regularly and well supplied with water, soap and paper towels
- Harvested produce does not come in contact with workers with poor hygiene and/or dirty boots and clothing (avoid cross-contamination)

Many fresh fruits and vegetables are eaten with little or no cooking-they are "ready to eat". Because they are not cooked, raw fruits and vegetables can be a source of disease-causing bacteria, viruses or parasites (pathogens). Foodborne disease outbreaks have been associated with raw tomatoes, carrots, sprouts, lettuce, cantaloupe and cabbage.

Humans and animals are the major source of pathogens in our food supply. *E.coli 0157.H7*, *Salmonella spp.*, *Shigella spp.*, *Staphylococcus aureus*, *Giardia lamblia*, *Cryptosporidium parvum* and *hepatitis A* can often be traced back to human or animal sources. When fruits and vegetables are processed or packed, there is likely to be direct human contact with fresh produce.

"Personal hygiene" includes practices that promote health and cleanliness. Good worker hygiene practices during production and harvest can help to minimize microbial contamination. Therefore, it is important to make worker health and hygiene a priority. Frequent and effective handwashing should be expected. To make this possible, toilet facilities must be clean, maintained and supplied. You will need to think about how you will address worker illness. Infected employees - those with infectious diseases or open lesions/wounds - could increase the risk of transmitting foodborne illnesses. Workers with symptoms of nausea, vomiting or diarrhea should not handle the fruits or vegetables. Prevention practices and knowledge are the key to the safety of the fruits and vegetables that you harvest.

Post-harvest "processing" that includes removal of anything more than soil and plant material or debris, may be subject to state regulations. If produce is packed in the field, producers should keep in mind the importance of good worker hygiene. For example, strawberries and tomatoes, most often eaten uncooked or "raw" by the consumer, should be

harvested whenever possible with limited bare hand contact. If produce is harvested and packed without additional cleaning, e.g. potatoes, the machinery should be well maintained and cleaned regularly.

- ***Teach employees how to effectively wash their hands.***
 - Wet your hands;
 - use soap, rubbing hands together for at least 20 seconds to develop a lather
 - clean under finger nails
 - rinse
 - dry with a paper towel.

- ***Teach employees when to wash their hands.***
 - before starting to pack or process,
 - after each break
 - after handling unsanitary items such as decayed produce
 - after using the toilet facilities.

What should come first?

- ***Train your workers.*** Be sure to include these basic hygiene principles:
 - the relationship between hygiene, safe food handling, and foodborne illness and the role of workers in preventing microbial contamination of fresh fruits and vegetables --why hygiene is important
 - the importance of proper handwashing and the use of toilet facilities
 - the importance of not working when ill

Formal (classroom) training of employees may not be practical. A one-on-one talk between the supervisor and worker may do the job. In any case, be sure to demonstrate to the worker the best way to wash hands. While a training program should fit your operation and needs, it is important that everyone have a working knowledge of basic good hygiene practices.

- ***Develop a policy on worker illness.***
 - Be familiar with the symptoms of illness such as vomiting, diarrhea, nausea and fever.
 - Make sure that workers know that they need to tell a supervisor when they have symptoms of illness
 - Sick employees should be reassigned to duties that do not require contact with produce.
 - Check workers daily for skin lesions such as boils, blisters, and open wounds. Infection can lead to transmission of pathogens. Lesions should be bandaged and gloved. If the lesion cannot be covered, the worker should not handle produce.

What can you do?

- Be aware of any federal, state or local regulations regarding standards for worker health/hygiene.
- Provide employees with easy access to handwashing facilities or stations with potable water, soap and paper towels.
- Provide employees with easy access to toilet facilities that are cleaned, serviced, and stocked with soap, paper towels and toilet paper on a regular basis. If portable toilets are used, they must be maintained to prevent wastewater from contaminating the fields.
- If necessary, have multilingual signs in place to remind workers about hygienic practices e.g. handwashing.
- Provide employees with easy access to toilet facilities that are cleaned, serviced, and stocked with soap, paper towels and toilet paper on a regular basis.
- Do not allow workers to smoke or eat in the packing/processing area - saliva could be sprayed on the produce.
- Teach employees that uncovered sneezing or coughing may contaminate fresh produce and equipment.
- Where applicable, limit bare hand contact with fresh produce - encourage use of gloves made of impermeable material. Latex gloves are not recommended because they have been associated with serious allergies.
- Encourage workers to start each day in clean clothing. Pockets should be empty to prevent things from falling into food.
- Do not allow workers to wear jewelry, including bracelets and necklaces. Simple wedding bands are acceptable. Their fingernails should be filed or cut short, clean and without polish or "fake" nails.
- If workers travel from the field to the processing facility, minimize the chance of cross-contamination with manure from shoes/boots. Have employees change boots or use a sanitizing dip.

References and Resources:

Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables

US Department of Health and Human Services, Food and Drug Administration

Center for Food Safety and Applied Nutrition (CFSAN), October, 1998

Food Safety Initiative Staff, HFS-32

U.S. Food and Drug Administration

Center for Food Safety and Applied Nutrition

200 C Street S.W. Washington, D. C. 20204

<http://www.cfsan.fda.gov/~dms/prodguid.html>

Food Safety Begins on the Farm: A Grower's Guide: Good Agricultural Practices for Fresh Fruits and Vegetables

Anusuya Rangarajan, Elizabeth A. Bihn, Robert B. Gravani, Donna L. Scott, and Marvin P. Pritts. Cornell University, Cornell Good Agricultural Practices Program (607) 254-5383 eab38@cornell.edu

U.S. Food and Drug Administration (FDA) Good Manufacturing Practices (GMP)

Code of Federal Regulations (CFR); section 21, part 110.

http://www.access.gpo.gov/nara/cfr/waisidx_01/21cfr110_01.html

Minimizing Microbial Food Safety Hazards for Fresh Fruits and Vegetables

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<http://www.oznet.ksu.edu/library/>

Food safety gateway to government food safety information

<http://www.foodsafety.gov/>

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