



Cooperative Extension

Meredith Melendez, Senior Program Coordinator, RCE of Mercer County
Wesley Kline, County Agent, RCE of Cumberland County

Food safety is a critical component of providing quality fresh produce. Growers are faced with greater regulations from the federal government and more requirements from buyers designed to reduce incidences of foodborne illness outbreaks involving fruits and vegetables. Multi-state outbreaks of pathogenic *Escherichia coli*, salmonella and *Listeria monocytogenes* have raised awareness of the potential for foodborne illness to start on the farm. Pre- and post-harvest activities should take place with potential cross-contamination risks in mind. Many fruits and vegetables are harvested, sorted, and/or packed by hand, therefore worker health and hygiene is an important part of a farm food safety program. Farms can implement and follow Good Agricultural Practices (GAPs) to help reduce the risk of product contamination.

Anyone who works at a farm, family members included, is a food handler and should receive worker health and hygiene training. Workers showing symptoms of illness are not the only potential source for contamination of a saleable product. Many illnesses are spread through the fecal-hand-oral route of contamination. Infected persons can shed pathogens before symptoms appear and after symptoms have subsided. Employees educated on proper hand washing, farm food safety policies, and microbial risks can greatly improve the quality and safety of the final product.

Worker Training

Workers should be trained annually at the beginning of the growing season on health and hygiene practices. Training must be conducted in the preferred spoken language of the worker and include proper hand washing (timing and techniques), personal hygiene practices, potential routes of product contamination from workers, the portable toilet spill emergency containment plan (when such toilets are used), and any other worker health and hygiene policies specific to the farm. The farm should designate one person responsible for food safety and the training of its workers. The worker training sessions must be documented, indicating the type of training given, who attended the date of the training, and include the signed initials of each participant. This information is required for third-party audits. An excellent 15-minute worker training DVD produced by Cornell University is available through the Cumberland County and the Mercer County Rutgers Cooperative Extension offices for a small fee.

At the end of the training workers should understand:

- Where restroom facilities are located
- When it is appropriate to wash their hands
- How to correctly wash their hands
- How to properly use gloves and protective clothing

- The symptoms of foodborne illness
- The relationship between personal hygiene, safe food handling, and foodborne illnesses
- The role of workers in preventing the microbial contamination of fresh fruits and vegetables

Signage

Hand washing and personal hygiene signage must be posted in English as well as the language appropriate for your workers. Consider signage with pictures to aid low-literacy workers. Signage should be located at/in toilet facilities, hand washing areas, and any break areas. This signage should be visible to all workers and farm visitors. If your farm is frequented by the general public, additional signage regarding hand washing may be needed.

Visitors

Visitors to your farm have the potential to contaminate your product. A visitor policy regarding product contact, hand washing, and your farm health and hygiene policies should be prominently posted. Restrooms and handwashing facilities should be clearly marked and signage regarding proper hand washing should be in the language of your farm visitors.

Farm Policies

Farms complying with a third-party audit are required to have policies regarding gloves, hairnet use, and jewelry that workers are permitted to wear while on the job. Some farms are required to comply with a third-party audit due to buyer requirements. Even farms not complying with an audit should consider having these policies in place.

Glove Policy

Gloves not used in a sanitary manner are as much of a sanitary risk as dirty hands. When gloves, or any protective clothing, are used their proper use should be included in the worker training.

A sample glove policy could include the following:

“Employees are provided with disposable gloves, but employees must wash their hands thoroughly before and after wearing gloves, or when changing to a new pair of gloves. Gloves must be discarded when they become torn, contaminated, or removed for any reason. Gloves are not permitted in the restroom and must not be reused.”

Bathroom Facilities/ Hand Washing Facilities

Bathroom facilities must be located within five minutes walking (or driving if a vehicle is available) distance from any working area. Toilet facilities should be cleaned regularly and monitored daily. Worker training should include the location of the bathroom facilities and how they are to be used. Non-native workers may mistakenly place soiled toilet paper in a wastebasket or on the floor due to rudimentary sewage systems in their home country. Worker training should make it clear that toilet paper belongs in the toilet. Signage in the language appropriate for your workers should be used to demonstrate proper bathroom facility use.

Handwashing facilities should be located outside of the bathroom because research has shown that people are much more likely to wash their hands when they are in public view. All workers at the farm should wash their hands after using the toilet, taking a break, eating, smoking, or at any other point when their hands may have become contaminated. Proper hand washing includes wetting the hands with potable water, applying soap, vigorously lathering the soap on the hands for at least twenty seconds, rinsing the hands in clean running water, and drying hands with a single-use paper towel.

Signage should be prominently displayed indicating proper personal hygiene and hand washing. Handwashing stations should be monitored regularly to ensure a ready supply of water, soap, and single-use paper towels. Grey water from the handwashing station must not be allowed to enter crop areas as it can serve as a source of contamination.

Operations that utilize portable toilets should have an emergency containment plan in place and all workers should be familiar with this plan. In the case of a portable toilet spill, one acceptable plan would be to immediately call the portable toilet service company and to build an earthen dam around the spill area to prevent further movement of the spilled contents.

First Aid Supplies

First aid supplies must be readily available in a location that is easily accessible and known to workers. Kits must be checked regularly to ensure they are stocked. When possible, first aid kits should be located in the packing area, near the restrooms, and in farm vehicles. Train workers how to properly use a single-use glove when wearing a bandage on their hand. Skin lesions on the hand, including open wounds, cuts, blisters, and

boils must be bandaged and covered with a single-use glove. Glove use over a bandage must comply with the glove use policy described above.

Personal Cleanliness

Clothing can become a source of contamination on the farm, particularly when working with pesticides, composts, or animals. Workers exposed to potential contaminants should not have contact with harvestable product, packed product, or the packing area.

Smoking and Eating

Designate areas for smoking and eating at the farm. These areas must be separate from product areas and should not be located in the field. Workers unable to return to the break area for lunch should eat outside of the harvest areas, either in a drive row or adjacent to the field. Place trash in a trash can and remove the contents from the field each day.

Reporting Illness

Research has shown that employees will not self-report illness if they believe they will be sent home without pay. An appropriate ill employee policy should state that the employee will be given alternate work in a non-food contact capacity. Utilization of an ill employee policy is an important way to reduce the risk of product contamination from workers.

There are many resources available for the creation of your farm food safety plan and third-party audit preparation. These materials are available online at njveg.rutgers.edu and at the Rutgers Cooperative Extension offices in both Cumberland County and Mercer County. These resources include a 15-minute Worker Health and Hygiene Training DVD, forms for documentation, and farm food safety plan guidance documents.

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