Slide 1:

Cover slide

Notes to instructor: Welcome participants to this training session.

Slide 2:

Notes to instructor: Review the learning objectives with the participants.

Slide 3:

Fresh produce is considered a ready-to-eat food. When foods are not cooked, there is no "kill step" to eliminate any harmful microorganisms that might be present. This makes proper preparation, handling, and serving fresh produce critical to food safety. No matter how healthy a food is, if it is not safe, it cannot be nutritious.

Slide 4:

Schools have been implementing food safety programs based on HACCP principles since 2004. Many of you probably have participated in food safety training before, follow standard operating procedures, and have tasks in your jobs that are related to your school food safety program. We are now going to review preparation, handling, and service procedures specific to fresh produce. Some of the concepts may seem familiar. As we go through them, remember that they are critical when you are handling ready-to-eat foods like produce.

Slide 5:

The number one practice to prevent employees from spreading pathogens is proper handwashing. Let's review the proper procedure. Wet your hands with warm water (100°F), scrub with soap for 10 to 15 seconds, rinse and dry with a single use paper towel. Wash your hands when they become contaminated, which may be more often than you think. A 2008 observational study of school nutrition employees found that employees should have washed their hands approximately 11 times per hour based on the number of times that they changed tasks. Obviously, this number is very high. Managers should invest time in work simplification methods and scheduling work to help employees streamline the flow of tasks and reduce the number of times required for handwashing. Employees should organize their work space and be mindful of how often they are changing tasks that would require handwashing.

Slide 6:

These plates clearly show why practicing good handwashing techniques are so important. These Petri dishes were prepared by collecting the bacteria from unwashed and washed hands into the

dish. The Petri dish to your left has few microorganisms growing due to proper handwashing, while the dish to the right with unwashed hands shows many colonies of bacteria growing.

Slide 7:

Think about how often and how many hands touch surfaces such as the film wrap box throughout the workday. Look at the bacterial colonies growing on this Petri dish that could contaminate your hands or the product you are handling.

So remember, wash your hands when they are soiled, in between tasks, after using the restroom, and before starting to work. Even if you washed your hands in the restroom, they should be washed again in the kitchen before starting your next task.

Slide 8:

Now that your hands are clean, you are ready to handle fresh produce. Always wash produce under running water, and use a designated vegetable brush to scrub rough surface produce like cantaloupes and potatoes. Produce brushes should be on the small equipment bid list and easily available for kitchens to order.

Consider posting a sign over the produce sink indicating that it is to be used only for washing fresh produce. This helps to prevent cross contamination from raw meats, poultry, or eggs. Finally, never use unapproved chemicals on fresh produce. Although fresh-cut produce processors may use chlorine, it not recommended for use in school kitchens as a kill step for fresh produce.

Slide 9:

Fresh produce may become cross-contaminated easily and quickly from many surfaces including equipment, storage containers, your hands, and even gloves. Make sure that surfaces are cleaned and sanitized before and after each use. Start with clean and sanitized equipment, cutting boards, and knives. Avoid cross-contaminating produce with other foods, such as meat, poultry, or eggs. Gloves can become contaminated, just like your hands. Change gloves often and wash your hands before putting on a new pair. Wash your hands and change your gloves whenever they are contaminated or torn.

Consider that once you are preparing fresh produce, you have already purchased, received, and stored it properly to maintain its safety. All of those efforts are useless if you contaminate it again when you are ready to prepare or serve it. Develop and follow procedures to prevent contamination as produce flows through the “back of the house,” or your kitchen. Train and observe staff to make sure that fresh produce is being handled and prepared safely. Discard all fresh produce that may be contaminated. When in doubt, throw it out.

Slide 10:

To prevent cross contamination, all food contact surfaces need to be cleaned and sanitized properly. The only way to know if your sanitizer is killing germs is to test it with the appropriate test strip. Chlorine, quaternary ammonia, and iodine are all effective if used at the correct concentration, temperature, and for the right amount of immersion time.

Slide 11:

Notes to instructor: "Activated water" is a term for water that has been electrified or applied with an electric charge. "Ozonated water" is created by exposing water to ultraviolet light, thus splitting the oxygen molecules from 2 into 3. Studies have shown that activated water and ozonated water act as sanitizers. A sanitizer by definition kills 99.99% of specified bacteria within 30 seconds. Activated water is currently used by the foodservice industry to sanitize food contact surfaces, not produce. Ozonated water is currently being used on fresh produce to reduce pathogens and extend shelf life in the foodservice industry. Explain the difference between activated water and ozonated water to the participants.

In our fast-paced world of technology, scientists are always seeking innovative ways to improve food safety. Chemical washes or ozonated water may reduce pathogens found on the surface of fresh produce. However, these additional steps are not "kill" steps, but only a pathogen reduction step. To date, there are no kill steps that reduce pathogens on fresh produce to a safe level, except heat.

The bottom line is that you may choose to use chemical washes or ozonated water, but they are not going to ensure that the product is safe. According to the Food and Drug Administration (FDA) they are not superior to washing thoroughly under cool, running, potable water.

Slide 12:

Throughout the flow of food, fresh produce temperatures should be maintained for safety and quality. They should be monitored and documented during storing and serving as well.

How should you handle leftover produce? It will vary according to local and state food safety regulations. If leftover produce has been served without any possible customer contact, it may be stored for later use. If leftover produce has been exposed and possibly contaminated, discard it. When self-service is available customers may directly contaminate food or use utensils to cross-contaminate. Remember, produce is very fragile and perishable. Do not serve produce of questionable quality.

If refrigeration units are not available, use ice or ice packs as a way to keep produce chilled on the serving line. When using ice, make sure that it touches the bottom of the pan holding the produce. Do not place produce directly on the ice because the ice could be contaminated. Pre-wrapped or pre-packaged produce may be placed directly on ice.

Slide 13:

Monitor the time and temperature of all produce during holding and serving. The longer that some produce is held at room temperature, like strawberries, the quicker it will lose moisture, quality, and shelf life.

Some types of fresh produce, especially cut melons, cut tomatoes, and leafy greens must be temperature controlled for safety. These items are considered high risk from foodborne illness by the FDA because they are associated with more foodborne illness outbreaks than other types of produce.

Use a cleaned and sanitized thermometer to take the temperature of melons and cut tomatoes. It is best to use an infrared thermometer to take the surface temperature of leafy greens once they have been chopped into bite-sized pieces.

Slide 14:

Notes to instructor: Hand out the Handling Fresh Produce in Classrooms and Handling Fresh Produce on Salad Bars documents.

Slide 15:

Let's talk about serving fresh produce in the classroom. Always wash your hands before preparing or handling any produce. If produce is cut into pieces for service, pre-package or pre-wrap it into an individual container, or bag for each student. This helps to prevent cross contamination in the classroom. To maintain the temperature at 41°F or below for both quality and safety, deliver the product to the classroom as close to serving time as possible. If cut produce is held at room temperature for more than 2 hours or above 90°F for 1 hour, it should be thrown away.

Use of ice, ice packs, or refrigerated units help keep potentially hazardous product at or below 41 °F. Consider investing in refrigerators for classrooms or deliver product in coolers with ice or ice packs.

Leftover cut produce served in the classroom should be discarded because it is a potentially hazardous product. Train your staff and all involved with serving fresh produce in the classroom on handwashing, time and temperature control, and how to prevent cross-contamination.

Slide 16:

Classroom teachers and aides are your partners to make sure food is handled safely in classrooms. Explain to the teaching staff the importance of proper handwashing to prevent the spread of germs. Encourage teachers to allow sufficient time for children to wash their hands. Hand sanitizers alone cannot kill all of the harmful pathogens on your hands. If teachers choose to use hand sanitizers in the classroom, remind them that hand sanitizers are recommended for use after handwashing.

Explain to teachers and aides the importance of handwashing, temperature control, and discarding of leftovers.

Slide 17:
If you have salad bars in your schools, consider ways to prevent cross contamination as part of the preparation and setup. Use food shields or sneeze guards. Often, students are not tall enough for standard sneeze guard height to effectively protect the food. An alternative would be to pre-portion foods into individual servings, which eliminates direct contact between the students and the food and sharing of serving utensils in order to reduce potential for cross-contamination.

Each bulk self-service container should have its own cleaned and sanitized utensil to prevent cross-contamination. Always label containers clearly so that customers know what is in them without taste testing. Use dispensers or single-use packages for salad dressings or condiments to potential cross-contamination. They are more attractive than bulk containers and pre-portioned to help control food costs. Eating utensils should be individually wrapped or if unwrapped, be sure to keep the handles up to prevent contamination of the food contact surface.

Slide 18:

No matter where or how fresh produce is served, controlling temperatures is critical to food quality and safety. Check to make sure your equipment is operating properly. If you use ice, the bottom of the serving pan should come into contact with the ice or ice pack. Chill foods to 41°F before placing them on the serving line. The only way to know if produce is held at safe temperatures is to take and record the internal temperature of the food. Do this at least every 2 hours during serving. A cleaned and sanitized probe thermometer may be used, or an infrared thermometer may be used for chopped, leafy greens. Calibrate your bi-metallic stemmed thermometer at least weekly for accuracy.

Set up the salad bar as close to serving time as possible. Put out only enough food for each serving period. Not only is this important for food safety, but also it is also important to maintain quality and help reduce waste. When refilling salad bar containers, do not place fresh food on top of food that is already out for service.

Slide 19:

Trained staff should monitor the salad bar at all times during service. Students may not be educated on food safety practices to prevent contamination of the salad bar. Observe the salad bar to make sure students are not touching food with bare hands, coughing or sneezing on the food, touching it with jewelry or clothing, placing foreign objects in the food, or placing dropped food back on the bar for service. Ensure that students are not using the same plate when returning to the food bar during the serving period.

A recommendation in elementary schools is for foodservice staff to prepare the salad plate with items the student selects then hand the plate to the student.

Slide 20:

A clean serving line is an attractive serving line. Use clean and sanitized cloths or terry towels to wipe up spills. Do not leave dirty towels out in view of customers. Dirty towels reduce eye appeal and increase the chance of cross contamination.

Finally, the salad bar should be cleaned at the end of the serving day. Do not use chemical sprays when food is on the bar. Food that will be used the following day should be covered, labeled, dated and refrigerated immediately after serving is over. If food has become contaminated either deliberately, or accidentally, it must be discarded.

Notes to instructor: Time permitting, show preparation and service segments from"What Went Wrong?" and "What Went Right?" videos. Videos and viewing guides are available on www.nfsmi.org/producesafety.