



NEW ENGLAND EXTENSION FOOD SAFETY CONSORTIUM

GOOD AGRICULTURAL PRACTICES

In the Barn/Packing House
Temperature Control

New England GAP Guidelines Addressed Here: *Temperature Control in the Barn/Packing House*

- Refrigeration storage is maintained at the correct temperature.
- Refrigeration units are not loaded beyond capacity.
- If ice is used for cooling, it is made from potable water.
- Wash water changed when dirty or after several hours and maintained at temperature no more than 10 degrees cooler than the produce.

Temperature control is an important way to maintain the quality of produce and minimize the growth of pathogens. Monitoring produce and water temperatures is critical when cooling produce, washing and packing it, during cold storage, and when it is displayed at the point of sale.

If you use a water bath to cool produce, make sure the water temperature is not greater than 10° F. cooler than the produce pulp temperature. Some produce draws water into its stem areas when cooling water temperature is much lower than the temperature of the produce. So if there is a pathogen on the fruit or vegetable or in the water, it can be drawn into the produce interior along with the water. Tomatoes, peppers, apples, and potatoes are of highest concern.

Think about this:

Do you?--

- Have a metal stem thermometer or digital thermometer to check the temperature of produce and water baths?
- Have alcohol wipes to sanitize the thermometer before, between, and after using?
- Do you calibrate your thermometers regularly?
- Do you have at least two thermometers in the cooling rooms – one in the warmest area and one in the coolest area – and monitor them regularly?
- Keep records of temperatures in storage areas, during cooling?

What Can You Do?

- Find out which thermometers are appropriate for use in your operation. You may need refrigerator or cool room thermometers (some refrigeration equipment have built in thermometers, sometimes with temperature recording devices and alarms to

signal when something is wrong). Dial type bimetallic, thermistor, or thermocouples thermometers can be purchased at restaurant supply stores. These can be used to test the temperature of fruit or cooling water. Ask your local or state sanitarian for advice when choosing a thermometer.

- Cool fruits and vegetables quickly after harvesting to maintain quality and minimize the growth of pathogens.
- If you use ice to cool produce, it must be made with potable water.
- If you use cooling water baths to cool produce, avoid water temperatures that are greater than 10° F. cooler than the produce pulp temperature.
- Monitor temperature of wash, rinse, and cooling water.
- Check refrigeration storage temperatures at least once a day to make sure produce is stored at temperatures that maintain quality and minimize pathogen growth.
- Be careful not to overload refrigeration rooms beyond their cooling capacity.
- Monitor temperature of coolers.
- Use refrigerated trucks for transport and monitor truck temperature.

Additional References and Resources:

Postharvest Handling of Vegetable Crops

David Kopsell, former Vegetable Specialist with UNH Cooperative Extension

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

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