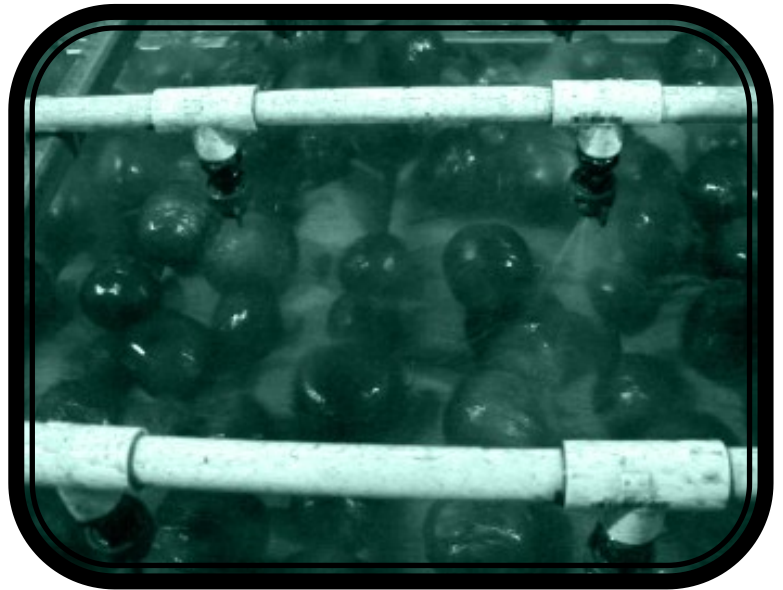




## Postharvest Washing Best Practices

Washing fruits and vegetables fresh from the field in a properly equipped dunk tank or hydrocooler can be of tremendous benefit, both in extending the shelf life of the produce and improving its safety to the consumer. If not properly managed, washing produce can amplify a small problem into a big one. There are a few points to consider for proper washing of fresh produce.

**Sanitizer usage.** Use a sanitizer in at least one step of the wash process. It is important to regularly measure and document actual free sanitizer levels in wash water and hydrocooler water as well as the amount of time that the product is in contact with the sanitizer. Inexpensive test strips for many commonly used sanitizers are available at restaurant supply stores.



Remember that sanitizing produce is a kind of pesticide application. The sanitizer used must be food grade in nature and must be labeled for the crop being placed in the dunk tank. Just like with other pesticides, the label is the law and must be followed. Keep a copy of the label and MSDS with your other pesticide labels.

Be sure to use a sanitizer level appropriate for the crop you are washing, as well. Leafy greens usually require much less sanitizer than root crops. Follow up high concentration applications of sanitizer with a potable water wash to minimize residue and off taste on the final product. A lower concentration over a longer period or a different sanitizer altogether may improve flavor and still have the same sanitizing effect.

Use a sanitizer that is compatible with the makeup of your equipment. Chlorine is corrosive on metals, making widespread application with some equipment impossible. When using spray nozzles on wash lines, opt for ceramic spray tips as they are



less likely to corrode as compared with brass tips.

**Organic load.** Recent research by Michigan State University and others clearly shows that increases in organic matter, i.e. dirt, can not only reduce overall free sanitizer levels more quickly, but actually interfere with the operation of some sanitizer testing equipment. Have a regular time to change the dunk water or recirculating hydrocooler water and document the process.

**Water Temperature.** Water has been shown to travel by osmosis into fleshy fruits and vegetables that are too rapidly cooled. Aim for water temperatures no more than 10 F cooler than the produce being cooled. If necessary, monitor the temperature of produce and wash water on certain high risk crops such as tomatoes and cantaloupe.

You will find a sample sanitizer testing log in the show notes. As always, you will want to alter these and the associated policies for the size and scope of your operation.

Once you have given consideration to these things, it is important to write up your procedure for postharvest handling. This should include sanitizer usage and concentration, water testing procedure and frequency as well as the frequency of total water replacement. Include this as part of a farm's food safety manual.

As has been said before, the auditor is looking for evidence of a system written in the GAP Manual to minimize incidence of foodborne illness, visual evidence that it is taking place and documentation that it has been taking place in the past. Writing a postharvest handling standard operating procedure is the first step. Implementing these procedures on your farm is the next step. Documenting that you check the sanitizer levels regularly during harvest is the final step.