

Part 3

House Packing Facility

This is a critical area for food safety. Whatever was done to keep the produce safe during harvesting and transportation to the packing house can be undone in the packing house. Good handling practices that include water testing, disinfection of work areas, worker hygiene, etc. must be addressed to sell a safe product.

Receiving

3-1 Product delivered from the field which is held in a staging area prior to packing or processing is protected from possible contamination.

Auditor Observation

Harvested product should be properly stored after delivery to the packing house. Product should not be stored in the shade under trees (this is a primary source for contamination from roosting birds) or just covered with a mesh material.

3-2 Prior to packing, product is properly stored and/or handled in order to reduce possible contamination.

Auditor Observation

Product that will be packed several hours or days later should be properly stored under refrigeration or other controlled storage appropriate to the commodity. This prolongs product shelf life and protects it from contamination.

Washing/Packing Line

3-3 Source water used in the packing operation is potable.

Record required

Source water used in the packing of fresh fruits and vegetables, either for washing or as a way to disinfect or apply waxes, must be potable. Municipal water is regulated and must be tested for potability on a regular basis. If using municipal water, obtain a copy of their test results at least once a year. Farm wells should be tested at least once a year to determine if potable. Test results must be available for review by the auditors. Surface (ponds, lakes, streams, etc.) water is not considered potable for a packinghouse and cannot be used unless the water source has a treatment system and the water is tested on a regular basis. Water sources are tested for generic E. coli and the report must show no detectable E. coli.

3-4 If applicable, the temperature of processing water used in dump tanks, flumes, etc., is monitored and is kept at temperatures appropriate for the commodity.

Document required

If using water, the temperature should be monitored on a regular basis in dump tanks, flumes, etc. It can be checked automatically or with a standard thermometer at the same time as the disinfectant concentration. This should be done hourly. Temperature is critical because if the water temperature is cooler than the produce, water can be drawn into the produce. This is of special concern for tomatoes, peppers, apples, potatoes, and cantaloupe (See *Produce disinfection* log). The water should be within 10°F of the product pulp temperature. When water is taken in, it is possible for microorganisms to be taken in at the same time.

3-5 Processing water is sufficiently treated to reduce microbial contamination.

Document required

Reusing wash water may result in the build-up of microbial loads, including undesirable pathogens from the crop. Consider practices that will ensure and maintain water quality. There are several practices which will help reduce cross-contamination and maintain water quality. These include:

- Perform periodic water sampling and microbial testing,
- Change water as required to maintain sanitary conditions,
- Develop standard operating procedures for water quality,
- Clean and sanitize water contact surfaces including dump tanks, flumes, wash tanks and hydro coolers on a regular schedule,
- Install backflow devices and air gaps to prevent contamination of clean water,
- Routinely inspect and maintain equipment designed to assist in maintaining water quality.

3-6 Water-contact surfaces, such as dump tanks, flumes, wash tanks and hydro coolers, are cleaned and/or sanitized on a scheduled basis.

Document required

At the end of each day, packing areas should be cleaned. Also, the washing, grading, sorting and packing lines should be cleaned and/or sanitized to reduce the potential for microbial contamination (See *Packing house and storage cleaning recommendations*, *Packing house and storage facility-daily inspection log*, *Packing house and storage facility-monthly inspection log* and *Packing house and storage facility-quarterly log*). Procedures for carrying out these practices must be documented in the Grower Food Safety Plan. Make sure to include a copy of all logs used to address cleaning and sanitation in the packing house.

3-7 Water treatment (strength levels and pH) and exposure time is monitored and the facility has demonstrated it is appropriate for the product.

Document required

The best way to reduce pathogens is to keep them off the produce in the first place. Once a product is contaminated, it is very easy for this contamination to be transferred to other produce during the packing process. This makes it critical that the water used to wash, move or disinfect produce is monitored closely. There are several antimicrobial chemicals labeled to treat water in the packing operation. The effectiveness of these agents depends on the chemical, physical state, treatment conditions (water temperature, pH and contact time), resistance of the pathogen and nature of the fruit or vegetable surface. Some of the products used are chlorine, ozone, ultraviolet radiation, peroxyacetic acid and hydrogen dioxide. There are other products under investigation which will be available in the future. Select the product which will fit best for the packing house operation and follow all manufacturers' recommendations.

If using chlorine to disinfect produce, make sure the concentration of free chlorine is correct [i.e. 100-150 parts per million (ppm) for lettuce, cabbage and leafy greens, apples and melons; 200-350 ppm for tomatoes, potatoes and peppers] at pH 6.0-7.0 and contact time of 1-2 minutes.

No matter which method is used to disinfect produce, the system must be monitored. Growers who have an automated system think there is no need to check on a regular basis. This is not true. Develop a manual monitoring schedule, even if the system is automated. For example, chlorine levels, pH and contact time should be checked manually each hour if the system is not automated (See *Produce disinfection log*). The procedure used to disinfect the water along with logs should be included in the Grower Food Safety Plan. If an outside firm is employed to handle the disinfection system their logs should be available for review.

3-8 Food contact surfaces are in good condition; cleaned and/or sanitized prior to use and cleaning logs are maintained.

Document required

All surfaces that come in contact with produce must be cleaned and/or sanitized on a regular basis. If using the equipment daily, it should be cleaned and sanitized at the end of the day. Otherwise, clean/sanitize prior to use (*see Packhouse & Storage Facility Daily log*).

3-9 Product flow zones are protected from sources of contamination.

Auditor Observation

Areas of possible contamination also include open mesh steel catwalks, motors without shields, overhead dripping, leaking pipes, and ceilings dripping from condensation and box conveyors to second floor storages. Product in flow zones running under these mentioned areas could be subject to contamination from dirty shoes, dripping lubricants and water, cobwebs or dust hanging from ceilings or light fixtures. Shield the flow zone to keep the area contaminant free.

3-10 The water used for cooling and/or making ice is potable.

Record required

Ice or cold water (hydro cooling) is often used to reduce the temperature of a product. Water used for this must be potable in order to reduce the risk of food contamination. If ice is purchased, a water report should be obtained from the source to ensure the water is potable. If using farm well water, the well should be tested once a year to ensure it meets drinking water standards.

3-11 Any ice used for cooling produce is manufactured, transported and stored under sanitary conditions.

Record required

Ice making facilities must be sanitized on a regular schedule. This includes the production and storage area and any conveyors, augurs or bins used to transport the ice. If ice is purchased, obtain the schedule from the seller. The schedule should be documented in the Grower Food Safety Plan. (*see Ice Sanitation Facility Log*)

Ice must be transported in covered containers. If bins are used, either transport in a closed truck or cover the bins with plastic. At no time should ice be placed in wood boxes/bins or moved over wood surfaces. There is a chance wood will get into the ice then be introduced into the produce. Bins used to transport ice should be sanitized before filling.

Packing House Worker Health and Hygiene

3-12 Employee facilities (locker rooms, lunch and break areas, etc.) are clean and located away from packing area.

Auditor Observation

Facilities used by employees to take breaks, prepare for work and/or eat meals must be clean and separate from the packing areas. This area may be within the building away from the packing area or be an outside-designated area. All places must be kept clean to the extent that the nature of the work allows. Workers cannot eat or take breaks within the packing area. Water can be allowed on a packing line, but the container must be plastic and located below the packing line.

3-13 When there is a written policy regarding the use of hair nets/beard nets in the production area, it is being followed by all employees and visitors.

Policy/standard operating procedure required

3-14 When there is a written policy regarding the wearing of jewelry in the production area, it is being followed by all employees and visitors.

Policy/standard operating procedure required

If the packing house has a written policy related to hairnets, beard nets and any restrictions relating to jewelry, it must be written down. Personal hair follicles and jewelry such as watches, earrings and rings can harbor microorganisms. The same policy must be enforced for employees and visitors (*See Please note hairnet, beard net and jewelry policy*). Make sure to post the policies where everyone can see them.

Packinghouse General Housekeeping

3-15 Only food grade approved and labeled lubricants are used in the packing equipment/machinery.

Record required

Food-grade approved lubricants must be used on all packing equipment. Lubricants such as WD-40, Liquid Wrench, etc. used in other parts of the packinghouse are not acceptable in areas that come in contact with the product. The auditor may ask to see the food grade lubricants or a receipt of purchase.

3-16 Chemicals not approved for use on product are stored and segregated away from packing area.

Auditor Observation

Food-grade and non-food-grade lubricants/chemicals must be stored separately either in separate rooms or segregated within the same room. The intent is that the two are

sufficiently separated and prominently marked in order to prevent cross contamination or mistaken use of non-food-grade for food grade. Include a written policy in the Grower Food Safety Plan related to where food-grade lubricants are used and stored.

3-17 The plant grounds are reasonably free of litter and debris.

Auditor Observation

Grounds surrounding the packinghouse should be kept clear of waste and litter to discourage breeding of pests and rodents.

3-18 The plant grounds are reasonably free of standing water.

Auditor Observation

Areas around the packing house should be graded to allow water to drain away. If obvious long-standing water is observed the auditor cannot award these points.

3-19 Outside garbage receptacles/dumpsters are closed or are located away from packing facility entrances and the area around such sites is reasonably clean.

Auditor Observation

Garbage receptacles/dumpsters need to be maintained regularly and located a reasonable distance from the packing house entrance. This includes emptying on a regular schedule and closing the lids when not in use. If the dumpster is located adjacent to the packing house, it must have a lid. Areas surrounding the ground around the dumpster should be reasonably free of debris. All garbage containers in the packing facility must be covered.

3-20 Packing facilities are enclosed.

Auditor Observation

Packinghouses that cannot be enclosed during non-working hours will not be considered an enclosed facility. When operating, it is normal and acceptable to have some doors open.

3-21 The packing facility interior is clean and maintained in an orderly manner.

Auditor Observation

The packing house interior must be clean and maintained. During packing operations some evidence of dirt and debris will be visible, but there should be no evidence that it has accumulated over time and been ignored.

3-22 Floor drains appear to be free of obstructions.

Auditor Observation

Drains for wash water must be clear to prevent water from running onto the packinghouse floor. All wastewater from toilets and hand washing must drain away from the packing area in case of a spill. Drains are a major concern since they can harbor pathogens which are difficult to remove.

3-23 Pipes, ducts, fans and ceilings which are over food handling operations, are clean.

Auditor Observation

These can be sources of cross contamination and should be cleaned on a scheduled basis.

3-24 Glass materials above product flow zones are contained in case of breakage.

Auditor Observation

All glass materials i.e. lighting equipment must be covered in case of breakage. Any overhead lighting regardless of height above the product must be protected or have shatter proof bulbs

3-25 Possible wastewater spillage is prevented from contaminating any food handling area by barriers, drains, or a sufficient distance.

Auditor Observation

All wastewater must be directed out of the packing facility whether it be through drains or barriers. Every effort should be made to slope floors and drains to reduce the chances of wastewater flowing into the packing area.

3-26 There is a policy describing procedures which specify handling/disposition of finished product that is opened, spilled or comes into contact with the floor.

Policy/standard operating procedure required

A written policy must be included in the Grower Food Safety Plan on what will happen to open finished product that is spilled or comes in contact with the floor. A statement like the following could be included in the manual. **All product that is spilled will be collected and disposed of in the dumpster.** Another example – **When water is used to disinfect produce the spilled product will be examined for damage. If not damaged it will be run through the disinfection system prior to repacking.**

3-27 Only new or sanitized containers are used for packing the product.

Document required

Only new or sanitized containers are to be used for packing. If containers are sanitized, maintain a log and describe how the containers are sanitized in the food safety plan. Reusable containers (RPC's) must be cleaned and sanitized prior to use either at the farm or RPC management company. A cleaning log or record is required. If containers are clean, single use plastic liners can take the place of a sanitation step if the container cannot be sanitized, i.e. cardboard (See *Container sanitization log*).

3-28 Pallets and containers are clean and in good condition.

Auditor Observation

All pallets and containers should be inspected prior to use. Pallets that do not look in good condition or have an odor should be discarded.

3-29 Packing containers are properly stored and protected from contamination (birds, rodents, and other pests).

Auditor Observation

All containers must be stored to protect from birds, rodents and other pests. If stored outside, cover with tarps. Just having empty boxes on top is not sufficient.

Pest Control

3-30 Measures are taken to exclude animals or pests from packing and storage facilities.

Document required

Consider using screens, wind curtains, bird deterrent tape, traps, etc. to discourage pests. Pet dogs, cats or other animals should not be allowed to run free in the facility.

3-31 There is an established pest control program for the facility.

Document required

All traps and bait stations should be numbered, flagged and marked on a map for easy identification. Bait stations containing poison must be located outside the packing house. Traps and non-poison means can be used inside. Document the pest control program in the Grower Food Safety Plan.

3-32 Service reports for the pest control program are available for review.

Record required

An established pest control program must be maintained and documented with service reports available for review by the auditors (See *Bait station control log*).

3-33 Interior walls, floors and ceilings are well maintained and are free of major cracks and crevices.

Auditor Observation

Walls, floors, ceilings, doors, etc. should be checked for holes and repaired where pests may enter. In addition, there should be no loose insulation materials protruding from walls or ceiling where pests may hide.

Traceability

3-34 Records are kept recording the source of incoming product and the destination of outgoing product which is uniquely identified to enable traceability.

Document required

The food safety plan must contain a system for tracing all incoming and outgoing product. This can be accomplished with stickers, ink stamps or writing on each container. Records must be maintained in case of a recall. This can be done with a log or electronically. See the introduction section for an example of a traceability system.