

Part 4

Storage and Transportation

Product, Containers and Pallets

4-1 The storage facility is cleaned and maintained in an orderly manner.

Auditor Observation

The storage interior must be clean and maintained. During 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. Drains must be clear to prevent water from flooding the storage floor. All wastewater from toilets and hand washing stations must drain away from the storage area in case of a spill.

The storage facility should be cleaned on a regular schedule or as required to minimize free-floating dust and other airborne contaminants (See *Packing house & storage cleaning recommendations*, *Packing house and storage facilities-daily-inspection*, *Packing house and storage facilities-monthly-inspection* and *Packing house and storage facilities-quarterly-inspection*). All visible debris and unnecessary items should be removed in a timely manner.

4-2 Bulk storage facilities are inspected for foreign material prior to use and records are maintained.

Record required

If the products are stored in bulk (i.e. potatoes and onions) a log should be used to inspect the storage prior to loading (See *Packing house & storage cleaning recommendations*, *Packing house and storage facilities-daily-inspection*, *Packinghouse and storage facilities-monthly-inspection* and *Packinghouse and storage facilities-quarterly-inspection*). Any product stored outside must be covered and protected from contamination.

4-3 Storage rooms, buildings and/or facilities are maintained and sufficiently sealed or isolated and are protected from external contamination.

Auditor Observation

Doors & windows should be checked to ensure that rodents, rain water, etc., cannot enter the facility.

4-4 Storage grounds are reasonably free of litter and debris.

Auditor Observation

Grounds surrounding the storage building should be kept clear of waste and litter to discourage breeding of pests and rodents. This includes emptying garbage containers 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 dumpster should be reasonably free of debris. All garbage containers in the storage facility must be covered.

4-5 Floors in storage areas are reasonably free of standing water.

Auditor Observation

Standing water can be a source of pathogens if not removed. Ideally, the packinghouse has floor drains, but if not water should be removed each day. During production water is normal, but every effort should be made to remove it at days end.

4-6 Possible wastewater spillage is prevented from contaminating any food handling area by barriers, drains, or sufficient distance.

Auditor Observation

Sinks, toilets and drains must be designed to inhibit back flow into the packing facility.

4-7 There is a policy describing procedures which specify handling/disposition of finished product which 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 sanitation system prior to repacking.**

4-8 Packing containers are properly stored and sufficiently sealed, to be protected from contamination (birds, rodents, pests and other contaminants).

Auditor Observation

Containers not being used are stored and protected from contamination by pests, bird droppings, dirt and water. Wherever containers are stored, inside or outside, they must be covered for protection. The auditor will want to see the storage area. The containers must be protected from exposure to soil and other foreign material

4-9 Pallets, pallet boxes, tote bags and portable bins, etc. are clean, in good condition and do not contribute foreign material to the product.

Auditor Observation

All pallets, bins, totes, etc., should be inspected to make sure they are clean and in good repair on a periodic basis. A system to repair, clean and/or disinfect containers and pallets should be in place.

4-10 Product stored outside in totes, trucks, bins, other containers or on the ground in bulk is covered and protected from contamination.

Auditor Observation

If storing produce outside in bins or boxes, they should be covered with plastic tarps or in closed trucks. Just putting an empty box on top is not sufficient.

4-11 Non-food grade substances such as paints, lubricants, pesticides, etc. are not stored in close proximity to the product.

Auditor Observation

Non-food grade substances should not be stored with food grade lubricants or close to produce. Keep non-food grade and food grade materials in different rooms or cabinets.

4-12 Mechanical equipment used during the storage process is clean and maintained to prevent contamination of the product.

Auditor Observation

All equipment should be assessed regularly. This includes forklifts, automatic doors, etc. Any cleaning and maintenance must be documented.

Pest Control

4-13 Measures are taken to exclude animals or pests from storage facilities.

Document required

Establish proactive procedures to exclude pests and animals. Screens, wind curtains, bird deterrent tape and traps should be utilized to reduce problems with pests. Dogs and cats should not be allowed to roam the storage area.

4-14 There is an established pest control program for the facility.

Document required

The pest control program should be written down and included along with a copy of the log in the Grower Food Safety Plan (See *Bait station control log*). Each trap should be numbered, flagged and marked on a map indicating bait station location. All bait traps containing poison must be located outside the storage area. Only non-poison methods can be used in the storage areas.

4-15 Service reports for the pest control program are available for review.

Record required

A pest control log should be maintained indicating dates of inspections, inspection reports and steps taken to eliminate any problems

4-16 Interior walls, floors and ceilings are well maintained and are free of major cracks and crevices.

Auditor Observation

The auditor will look over the storage areas to see if they are well maintained. This includes whether there are major cracks and crevices in the walls, doors, ceiling and floors where pests may hide. All areas where pests may enter should be sealed to the extent possible. Insulation in the ceiling and walls should not be loose. This is an ideal location for birds and other pests to hide.

The presence or evidence of rodents, birds, other mammal type pests, pets, excessive amounts of insects or feces in the storage area will result in an immediate failure of the audit.

Ice and Refrigeration

4-17 The water used for cooling and/or making ice is potable.

Record required

Water used to produce ice must meet drinking water standards in order to reduce the risk of food contamination. If purchasing ice obtain a copy of the water test from that location or if from a farm well have it tested at least once a year.

4-18 Manufacturing, storage, and transportation facilities used in making and delivering ice used for cooling the product have been sanitized.

Record required

Ice making facilities must be sanitized on a regular schedule. This includes the production and storage area and any conveyors, bins or augurs used to transport the ice. (See *Ice Sanitation Facility Log*) Obtain a copy of the sanitization log from the icemaker. The schedule should be documented in the Grower Food Safety Plan. All ice hauled to a separate location must be transported in a closed truck or the bins covered. No ice should be transported in wood containers since the wood cannot be sanitized or pieces of wood may get into the produce.

4-19 Climate-controlled rooms are monitored for temperature and logs are maintained.

Document required

Refrigeration systems must be maintained regularly and kept in good operating condition. Storage temperature logs will help auditors verify the rooms are maintaining proper temperatures (See *Storage temperature log*). It is suggested that the temperature be checked before starting work for the day. This will give the most accurate reading in the storage.

4-20 Thermometer(s) are checked for accuracy and records are available for review.

Document required

Thermometers should be checked on a regular schedule for accuracy and those checks should be documented (See *Thermometer Calibration log*). Thermometers only need to be checked for accuracy monthly. The easiest method is to place an adjustable thermometer in a jar with crushed ice and water. Even if an automated system is in place, thermometers should be manually checked monthly.

A Note on calibration of your thermometer:

This information on thermometer calibration is brought from “Food Store Sanitation”, 1988, Sixth Edition, Gravani, Robert B., Rishoi, Don C., Cornell University Food Industry Management Distance Education Program, Lebhar-Friedman Books, Chain Store Publishing Corp.

Melting Point of Ice Calibration Method

1. Place ice in a container and let it melt.
2. Stir to make sure that the temperature in the ice/water mixture is uniform throughout the container.
3. When the ice is partially melted and the container is filled with a 50/50 ice and water solution, insert the thermometer and wait until the needle indicator stabilizes. The thermometer should be 32°F (0°C).
4. If the thermometer is not reading 32°F (0°C), it should be adjusted by holding the head of the thermometer firmly and using a small wrench to turn the calibration (hex) nut under the head until the indicator read 32°F (0°C).

An important item to remember as you are calibrating your thermometer using the melting point of ice method is to never add tap water to ice because this will **not** be 32°F (0°C) but will be at a higher temperature. The calibration will be much more accurate if you use melting ice.

4-21 Refrigeration system condensation does not come in contact with produce.

Auditor Observation

All condensation should be piped to the outside. If that is not possible, it should be piped into a drain in the floor.

4-22 Refrigeration equipment (condensers, fans, etc.) is cleaned on a scheduled basis.

Document required

The refrigeration units should not come in contact with produce and the condensers, fans, etc. must be cleaned on a scheduled basis. The best time to clean the units is just prior to the storage season. If the rooms are always used a schedule should be established to clean them at least once a year. Record when the units are cleaned.

4-23 Iced product does not drip on pallets of produce stored below.

Auditor Observation

If storage racks are used in the storage, make sure ice product does not drip on the produce below. Ice product should be stored on pallets at floor level.

Transportation

4-24 Prior to the loading process, conveyances are required to be clean, in good physical condition, free from disagreeable odors, and from obvious dirt/debris.

Policy/standard operating procedure required

Employees should make every effort to ensure that trucks and trailers are clean, free of odors that could taint food taste and generally are in good condition. Refrigeration units should be calibrated on a regular schedule and produce items should be shipped only

with produce items. Canvas sheets on refrigeration units should be in good shape with no rips or holes and securely fastened to the unit and trailer. A log must be maintained to show that trucks were checked prior to loading (See *Carrier monitoring log*).

4-25 Produce items are not loaded with potentially contaminating products.

Policy required

If trucks are partially loaded, the supervisor or owner should verify that nothing on the truck could potentially contaminate the produce. State a clear policy in the Food Safety Plan.

4-26 Company has a written policy for transporters and conveyances to maintain a specified temperature(s) during transit.

Policy required

Produce temperature requirements during shipment should be recorded on the manifest. The trailer should be at the proper temperature prior to loading. The refrigeration units are not designed to lower temperatures, but to maintain temperatures. If shipping straight loads of produce, consider placing a temperature recorder in the trailer to document temperatures.

4-27 Conveyances are loaded to minimize damage to product.

Policy/standard operating procedure required

A company policy must be included in the Grower Food Safety Plan explaining how trucks are loaded to minimize produce damage. Following is an example:

Procedure to minimize produce damage

Produce is palletized with glue strips on the top of each carton, hand stacked and

wrapped with plastic to secure cartons to the pallet. Pallets are secured with load braces after loading the truck.

Worker Health and Personal Hygiene

4-28 Employee facilities (locker rooms, lunch and break areas, etc.) are clean and located away from storage, shipping and receiving areas.

Auditor Observation

Facilities used by employees to take breaks, prepare for work and/or eat meals must be clean and separate from the storage areas. This area may be within the building away or be an outside-designated area. All places must be kept clean to the extent that the nature of the work allows.

4-29 When there is a written policy regarding the use of hair/beard nets in the storage and transportation areas, it is being followed by all affected employees and visitors.

Policy/standard operating procedure required

4-30 When there is a written policy restricting the wearing of jewelry in the storage and transportation areas, it is being followed by all affected employees and visitors.

Policy/standard operating procedure required

If the storage facility 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.

Traceability

4-31 Records are kept regarding 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 Introduction section for an explanation of a Traceback system.