

Developing a Plan for Third-Party Audits

Good Agricultural Practices (GAPs)



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Part 4 — Storage and Transportation

Container and Pallets

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.

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.

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 ground around the dumpster should be reasonably free of debris. All garbage containers in the storage facility must be covered.

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.**

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. A system to repair, clean and/or disinfect containers and pallets should be in place.

Pest Control

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. A pest control log should be maintained indicating dates of inspections, inspection reports and steps taken to eliminate any problems (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. The pest control program should be written down and included along with a copy of the log in the Grower Food Safety Plan.

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

Water used to produce ice should be potable 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 twice a year (See *Water source testing log*).

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 can not be sanitized or ice may get into the produce.

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. Thermometers should be checked on a regular schedule for accuracy and those checks should be documented (See *Thermometer 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.

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.

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

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 shoots 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*). 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 air temperatures.

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.

Traceability

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.