The Produce Manual

From Inbound to Outbound

Best Practices

The World of #2 Produce

Produce has many attractive benefits, such as being highly nutritious and typically lower costs as compared to purchased shelf-stable product. However, it also presents unique handling requirements that can differ from traditional food bank staple items like canned goods.

As the network moves to increasing the amounts of produce into their operations, members have articulated a need for more materials to guide them on how to handle produce with varying operation support from one food bank to the next. This guidebook aims to address that need by providing a set of guidelines and best practices on produce handling for food banks, from receiving to outbound.

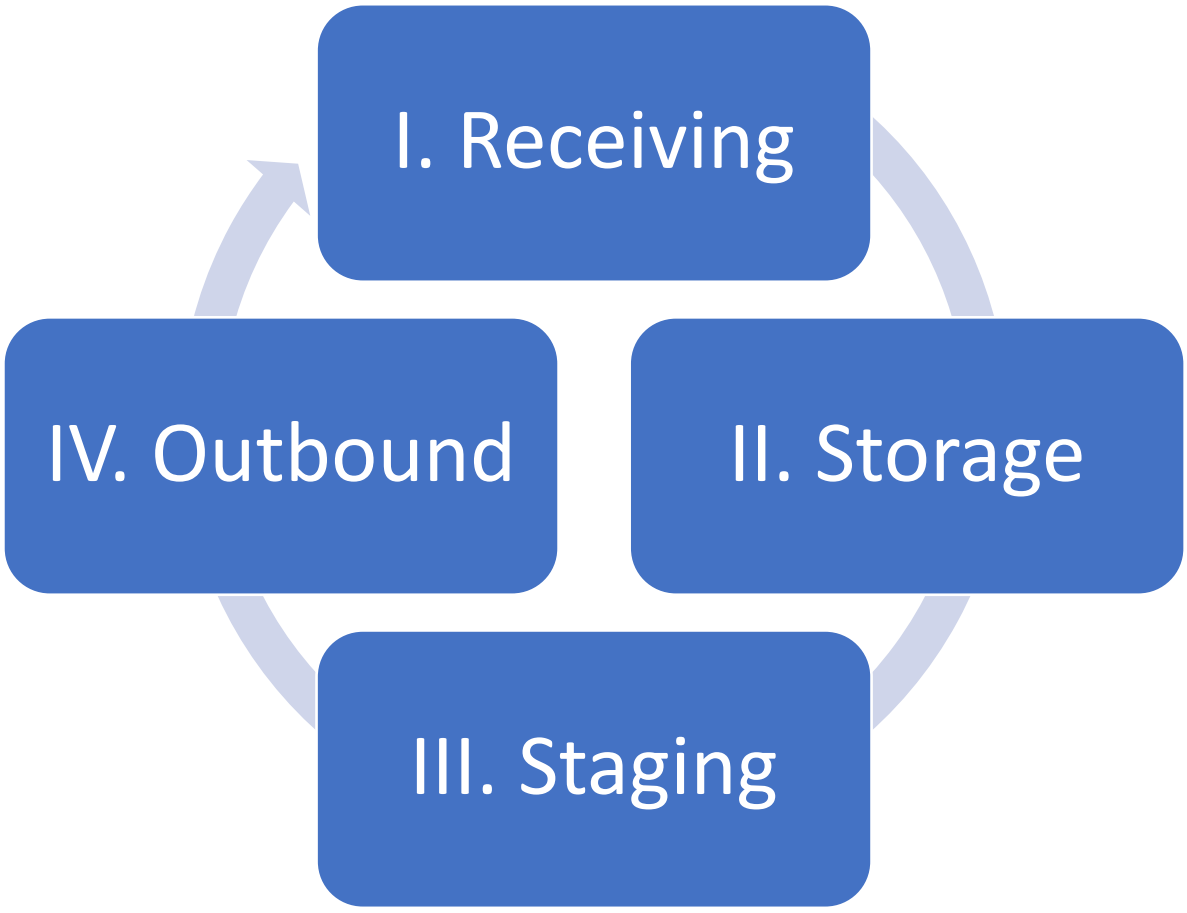
Food banks see a wide range of produce crops and quality, everything from excess product that is retail quality to produce that has gone beyond a salvageable state. This guidebook is intended to address the unique produce handling needs of food banks in a way that standard produce industry guides cannot. It incorporates produce industry standards for handling, best practices from members, and Feeding America policies.

Every food bank is different. Not every practice described in this toolkit will fit the needs of every food bank. This document is meant to be a guide, not a rulebook.

The Produce Process: From Inbound to Outbound

The following process and handling guidelines provide an organized overview of your most ideal situation handling produce. The process begins when the product arrives at the food bank and ends when it is distributed into the community. Please note that the information in this training is as equally important for your community partners as it is for your internal operations teams. Your

"I stand by this product. Our community leaders and volunteers understand what this #2 product is and the importance it plays in helping fight hunger" (YOU)



I. Receiving

When produce is received at the food bank, it is usually the first opportunity for food banks to physically examine the product. Unlike other food types like cans or other shelf-stable packaged food, produce requires unique and specific handling. Produce can generally withstand a range of storage/transport temperatures, but going too extreme on either end could cause damage Therefore, going through a thorough inspection process during receiving is crucial to ensuring product quality. Executing the receiving process well is also an essential part of inventory management. Recording dates, quantities, conditions, etc. are important for any type of food, but is especially important with food types that can go bad in days. Collecting and labeling the appropriate information during the receiving process will help the food bank coordinate inventory well. The "Receiving" section begins with best practices for pick-up at the donor site and then details a recommended receiving process, including instructions for inspection. There is a recommended produce inspection form for receiving that is included in the appendix (page 56).

Pick-up

Some food banks choose to pick up produce directly from the donor. For these food banks, it is a good idea for drivers to go through the inspection process detailed below at the pick-up site, before loading it onto the truck. That way, the driver can decide whether or not the load is usable before putting in the time and resources to transport it.

It is particularly important for the drivers to take photos at pick-up, since there are no other food bank personnel there to help assess on-site. In the event that a load is rejected, photos are necessary evidence of the reasons for rejection.

Field Heat

Keep in mind that most produce loads are packed to order and field heat may not have time to cool to the correct temperatures before food bank arrival. Farms often may not have cooler facilities at the pick-up site, and produce that has sat out in the sun may be too hot to cool down to the proper transport temperature when loaded, even if the refrigerated truck itself is at the recommended temperature before the truck is loaded. This is not necessarily grounds for rejection unless there is visible decay, mold, or foul odor upon arrival. If not able to properly cool to the appropriate product temperature, distribute immediately to clients as quickly as possible.

Receiving Process

Executing produce receiving well is important because it helps ensure product quality and good inventory management. The receiving inspection is typically the first opportunity to examine the condition of the produce, while the information documented during receiving is a key input into the overall inventory management system.

The following produce inspection form is recommended to document the process detailed in this section.

Produce Inspection Form

The following form must be completed and returned to freshproduce@feedingamerica.org within one hour of receiving the load.

Produce Inspection Form to Report a Quality Issue

This form must be completed with proper documentation to be considered for reimbursement through FANPP.

Date	Time	Carrier
Loading Zone/Dock #	License Plate	Inspected by:

Seal:

Were the trailer door seals intact? (Check one):		
Yes	No	Missing
Seal Number(s)		

Temperature:

Bill of Lading stated temperature		Reefer running at time of arrival: YES / NO
Ambient temperature of trailer		Reefer Set Point
Pulp temps taken by item		
Temperature Recorder #		Recorder found: YES / NO
Average Temp	High Temp	Low Temp

Valid Reasons for Rejection with proper documentation: (Check all that apply)		Comments
	Live infestation (pests)	
	Severe decay over 50% unusable product	
	Temperature abuse	
	Visible damage to the truck	
	Cross contamination	
	Foreign debris	
	Aldulterated or food safey risk	

Possible Freight Claim: YES / NO	Federal Inspection Requested: YES / NO
Amount of Loss (pounds/quantity):	

Before rejecting a load, do not release driver. You will need to take pictures of the BOL and all temperatures to demonstrate the scope of the issue then send to *freshproduce@feedingamerica.org* immediately.

Date/Time FA Released Driver:	FA Contact:

Inspection Process

Inspecting should happen at multiple times throughout the life of the product—not just at receiving, but also while it is stored and before it gets loaded. However, inspection when the produce is first received should be the most thorough.

Please note the following USDA terminology for condition/grade/quality and food banks should pay special attention to condition defects:

- Condition Defect – The relative degree or soundness of a product and includes, but is not necessarily limited to, its firmness, or stages or ripeness, shriveling, flabbiness, or any other progressive factor which affects its marketability. Condition defects worsen over time
- Grade Specified Contract - The commodity is sold as to a specific US grade. Both quality and condition defects are utilized to determine breach of contract
- Quality Defect - These defects do not change over time and include, but are not limited to; scars, shape, dirt, small presence of insects

The following steps are recommended as part of receiving produce:

1. **Check the seal (if applicable)**
   - Verify the actual seal number with the seal number on the Bill of Lading (BOL) to make sure that it is the original seal.
   - 3rd party trucks may not have a seal for various reasons (i.e., distribution to multiple food banks). Working with partners that seal their loads is best practice. 10
2. **Record truck temperature (if possible)**
   - Refrigerated trucks usually have a temperature recorder that shows the truck temperature during its journey. If it is too high, the produce may have begun to decay; if too low, the produce may be frozen or damaged by chill.
   - National Produce Program (NPP) trucks are required to have a single use, paper strip temperature recorder. Pull the paper strip from the temperature recorder, review, and attach to BOL for future reference. Please notify NPP at freshproduce@feedingamerica.org if no recorder is found.
   - Member-Arranged freight trucks - It is advisable for food banks to require growers/shippers to use temperature recorders.
3. **Assess produce appearance (take photos)**
   - The food bank inspector should do a visual scan to check for signs of damage, decay, pests, etc. when first opening the door.
   - Pull the pallets off from front, middle and back of the truck and examine quality from pallets top, middle and bottom of each pallets sampled.
   - Take photographs of the produce from multiple areas of the shipment to provide documentation, particularly if there is a reason to reject the load.

4. **Check product samples (temperature, condition) from multiple areas of the shipment**
    - A measuring device for temperatures need to be taken from inside the product using a pulp thermometer (most accurate) (acceptable temperatures in “Produce Storage/Transport Guidelines”) and/or an infrared device which provides the surface temperature of the product.

    - A pulp thermometer should be inserted into the core of each item type/product (see picture) and recorded on the BOL and/or the internal inspection forms for your food bank.

    - An infrared thermometer can determine the surface temperature of each item type (Please note: This is not as accurate as the pulp temperature device). •

    - Conditions can vary between different areas of the truck and for this reason, it is recommended to obtain samples from different pallets in the front, middle and back of the shipment and inspect the top, middle and bottom of the selected pallets to be comprehensive in the inspection process.
    - Food bank inspectors should assess the qualitative condition of the samples for signs of decay and damage. If necessary, inspectors should cut into the product samples to examine for rot, discoloration, etc.
    - A few samples are not representative for the quality of a full load. Product may come from different fields, different lots, etc.

5. **Set an expiration date based on the temperature and condition assessment (72 hours)**
    - Food bank inspectors should set a date by which the produce needs to be moved out of the warehouse. This date should be based on temperature and condition at receiving, as well as the typical life span of the product. Identifying an expiration date will help manage inventory efficiently.
    - Because there are so many factors affecting produce life span, this task is best done by people experienced in produce handling. For some guidance on how to estimate life span, see “Product lifespan estimation”
    - Keep in mind that donated produce is often a USDA #2 grade with surface blemishes that do not affect its overall quality

PLEASE NOTE THAT ONCE YOU SIGN THE BOL, THE VENDOR/DONOR IS TECHNICALLY OFF THE HOOK FOR ANY DAMAGE THAT MAY HAVE OCCURRED IN TRANSIT OR IN THE NEAR FUTURE.

Quick Receiving Produce Checklist

Quick Receiving Produce Checklist

Today's Date:	PR#:
Date of Delivery:	Inspected by:

Food Bank must contact Feeding America within 1 hour of receiving the load by emailing this form and the FA Produce Inspection Form to Report a Quality Issue to freshproduce@feedingamerica.org and/or your designated PFS

****Do not release the driver until Feeding America has advised to do so****

Please complete the following steps in order below:

Step	Completed & Info Sent to FA
Bill of Lading Copy	
9 Pictures/or Video of the sample*	
FA Produce Inspection Form to Report a Quality Issue	
Check Reefer	
Seal Intact (Yes/No)	
Unload pallets	
Inspect all item types (Damage, mold, live infestation (bugs, birds, rodents, etc.)	
Take temperatures (via pulp, infrared, temp recorder)	
Reload pallets if quality issues	
BOL updated with quality issues, temps listed before returning to the driver	

*Please submit a total of 9 pictures or 1 video for a product sample from the front, middle, back of the trailer and top, middle, bottom of the pallets to demonstrate the scope of the issues noted.

When emailing Feeding America the Produce Inspection Form and this form, please elaborate as to the specific events that took place.

Looking to Reject? Feeding America states the following:

Valid reasons to reject a load of PPO produce with adequate photo evidence:

- Live infestation (insects, rodents, birds, etc.)
- Severe decay and/or mold should not exceed more than 10% of the original offer's notated usable percentage (i.e. Donor offered on Meal Connect as 90% usable, then less than 80% usable would be grounds for rejection with proper documentation)
    - More than 50% usable product: With proper food bank documentation, FANO will request credits with the donor for any food bank losses and the food bank should accept the load for a discount
    - Less than 50% usable product: With proper food bank documentation, FANO will recommend sending to the load to the closest and least expensive dump location •
        - Please have local dump info handy (pig farmers are acceptable)
- Dry Truck (non-reefer/non-refrigerated) should not be accepted unless previously approved by donor, member and FANO prior to delivery
- Visible damage to the truck that may indicate that the temperature could be compromised (open holes on the trailer, accident damage, etc.)
- Potential temperature abuse - Reefer temp, Bill of Lading (BOL), and temperature recorder tape vary significantly from the pulp temp along with vast fluctuations that would indicate temperature changes in the product
- Dirty trailer with visible foreign debris or contamination
- Documented seal was broken prior to delivery and product appears to be missing and/or adulterated and poses a food safety risk

Invalid reasons to reject a load of produce with or without photo evidence:

- Shifted pallets that can be restacked and redelivered
- Minor decay and mold that could be culled and salvaged - product can still be distributed (small waste amount in comparison to the load)
- No known temperature abuses
- Not exactly as ordered (quantity may vary based on availability at the time of harvest and may be packed by volume, not by weight)
- Did not meet the delivery appointment – The food bank must make every possible concession to fit in the load that was ordered (only in extreme circumstances will FANO redirect the load to another facility)
- Not enough shelf life per your preference
    - Food Banks are pass throughs, not storage facilities. Challenge your agency relations team to build capacity and distribution teams to always have additional outlets.
    - Your goal should be to move all perishable product within 48 hours
- Please keep in mind that there could be some discoloration, deformation, and exterior/surface blemishes that are common amongst # 2 product and may have slight decay, THAT'S OK!

Produce Lifespan Estimation (Courtesy of St. Mary's Food Bank in AZ)

The inspection process is conducted by assessing condition and temperature. You will need to determine the percentage of decay or damage on each carton sampled (**using best judgment practice**) and record that percentage along with general description of findings. Each percentage will be totaled, and an overall percentage will be determined.

The same basic process will be used to determine percentages on temperatures. Each overall percentage is equal to one point. Example: 20% = 20 points. Add the two numbers together to obtain your overall score.

Example of Inspection #1: 10 pallets of cantaloupes come into the food bank; during your inspection you notice the following. All cartons are straight and show no damage externally, but about 20% of the cantaloupes you inspected have minimal or some sunken places and appear sound. There is no sign of mold or decay visible on the melons. When you cut (generally 1 to 3 melons per pallet if suspect) a few of the melons showed some slight translucent discoloration in the flesh near or under the external sunken places. The pulp temperatures (taken from the sample melons) are reading 40 degrees consistently.

Condition is good no visible decay, sunken area's 20%..... score = 20
Temperature is only 4 degrees above standards…….…… score = 4
Total score = 24 - Product recommended to be distributed within 4 days for maximum usage

Example of Inspection #2: 10 pallets of cantaloupes come into the food bank; during your inspection you notice the following. Most cartons are broken and show damage externally; about 60% of the cantaloupes you inspected have multiple sunken places and some mold is present sporadically through the carton. There are also consistent signs of decay visible on the vine end (belly button). When you cut (generally 1 to 3 melons per pallet if suspect) a sample of the melons, there is discoloration in the flesh near or under the external sunken places. The pulp temperatures (taken from the sample melons) are reading 73 degrees consistently.

Condition is poor, visible decay, sunken area's 60%..... score = 60
Temperature is 35 degrees above standards…… score = 35
Total score = 95 - Product should be disposed of, and not distributed.

Scoring Tiers: Preferred length of time allotted for distribution and maximum usage

- 0 – 24 = 4 days
- 25 – 49 = 3 days
- 50 – 74 = 2 days
- 75 – 99 1 day (dump)

II. Storage

Once produce has been received and inspected, the food bank needs to hold it until it can go out again for distribution. Your goal should be to move all perishable product in 48-72. Keeping produce in the recommended storage conditions gives it the best chance of getting to the client's hands in good condition. Most produce requires temperature controlled storage space to maintain its quality. Also, some crops have special storage considerations to consider (i.e., apples and bananas should not be stored together because the ethylene gas that the apples emit will cause the bananas to ripen too quickly).

Temperature

Maintaining proper temperature is KEY to ensuring quality. Produce should spend as little time as possible outside of its recommended temperature settings. In addition to temperature, please note other facto that affect produce such as ethylene and odors.

Storage for Safety Measures

Within coolers, adequate air circulation should be provided. Avoid placing warm products in coolers with insufficient capacity and air flow. The temperature within the cooler will rise and as the room begins to cool again, condensation may occur and drop onto the product. Product should always be able to breath. Too much shrink wrap can cause the product to sweat and cause damage, even if kept at the correct temperature.

Certain crops should not be stored near one another. If your food bank doesn't have the ability to segregate products, the use of an ethylene scrubber is highly recommended. Some crops (like apples) emit ethylene gas which causes ethylene sensitive crop (like bananas) to ripen too quickly if exposed. Likewise, some crops (like lemons) have strong odors that affect some sensitive crops (like pineapples).

Many food banks are unable to store product at the specified temperature. In this instance, please refer to the below chart referring to temperature "groupings" for storage purposes best suited to support the integrity of the produce.

Storage Inspections

Just because you checked it on the inbound doesn't mean your job is done. Produce should be checked daily, it not more often. In doing so, you are able to keep on top of the quality of the produce and ensure that there's no new signs of damage, decay, or pest infestation and that is it being held in the proper temperature. Based off these quality checks, you may need to change the order in which pallets are used in "FIFO" for distribution purposes.

Produce Storage/Transportation Guidelines

PRODUCT	STORAGE TEMP (°F)	ETHYLENE SENSITIVE	ETHYLENE PRODUCER	ODOR SENSITIVE	ODOR PRODUCER	SUSCEPTIBLE TO FREEZING
APPLES	32-34	N	Y	Y	N	Y
BANANAS	56-58; to ripen 60-65	Y	N	N	N	Y
BEANS, SNAP/GREEN	40-45	N	N	N	N	Y
BEANS, LIMA	37-41	Y	N	N	N	Y
BERRIES, BLACKBERRIES	32-34	N	N	N	N	Y
BERRIES, BLUEBERRIES	32-34	N	N	N	N	Y
BERRIES, STRAWBERRIES	32-34	N	N	N	N	Y
BROCCOLI	32	Y	N	N	N	Y
CABBAGE	32	Y	N	Y	N	N
CANTALOUPE	36-41	N	Y	N	N	Y
CARROTS	33-35	Y	N	Y	N	N
CAULIFLOWER	32	Y	N	N	N	N
CELERY	32-36	N	N	Y	N	N
CORN	34-38	N	N	Y	N	N
CUCUMBERS	45-50	Y	N	N	N	Y
MIXED FRUIT, FRESH CUT	33-41	N	N	N	N	Y
GRAPES	30-32	N	N	Y	Y	Y
GRAPEFRUIT	CA and AZ: 50-55; FL and TX: 50-60	Y	N	N	N	N
HONEYDEW	45-50	N	N	N	Y	Y
LEMONS	45-48	Y	N	N	N	Y
LETTUCE WHOLE	34-36	Y	N	N	N	Y
LETTUCE LEAF	34-36	N	N	N	N	N
NECTARINES	31-32; to ripen 51-77	N	N	N	N	N
OKRA	43-45	Y	N	N	N	Y
ONIONS, BULB	40-60	Y	N	Y	Y	Y
ONIONS, GREEN	32	N	N	N	Y	N
ONIONS, SWEET	45-55	N	N	Y	Y	Y
ORANGES	FL: 32-34; CA: 45-48; AZ & TX: 32-48	N	N	N	Y	Y
PEACHES	In-transit: 32-34; Receiving 57-77	N	Y	N	N	Y
PEARS	32; To ripen 60-70	N	Y	Y	Y	Y
PEPPERS, BELL	45-50	Y	N	N	Y	Y
PINEAPPLES	Green: 50-55; Ripe: 45	N	N	Y	N	Y
PLUMS	In-transit: 32-34; Receiving 51-77	N	Y	N	N	Y
POTATOES	45-50	N	N	Y	Y	Y
SALAD MIXES, FRESH CUT	33	N	N	N	N	N
SQUASH	Soft: 41-50; Hard: 50-55	Y	N	N	N	Y
SWEET POTATOES	55-60	Y	N	N	N	Y
TOMATOES	62-68; Ripe 55-60	N	N	N	N	Y
WATERMELONS	50-60	Y	N	N	N	Y

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Ethylene sensitive products should NOT be stored or transported with ethylene-producers. Similarly, odor sensitive products should NOT be stored or transported with odor producers

Data from *The Guide: Produce Availability & Merchandising Guide*

Produce Storage/Transportation Groupings

Ethylene Sentivive*	**Ethylene Producers***
• Bananas • Beans, Snap/Green • Broccoli • Cabbage • Carrots • Cauliflower • Cucumbers • Honeydew Melons • Lettuce • Okra • Onions • Peaches • Pears • Peppers, Bell • Plums • Squash • Sweet Potatoes • Watermelon	• Apples • Cantaloupe • Pears • Plums
Odor Sensitive**	**Odor Producers****
• Apples • Cabbage • Carrots • Celery • Corn • Grapes • Onion • Pears • Pineapples • Potatoes	• Grapes • Lemons • Onions • Oranges • Pears • Peppers • Potatoes

*Ethylene is a gas that causes many fruits and vegetables to rip. Certain crops are particularly sensitive to it, whole others produce large quantities of it. Ethylene sensitive crops should never be stored or transported with ethylene producers.

**Some crops will readily absorb odors from certain other crops with strong odors if kept in the same area. Crops labeled as odor sensitive should be stored or transported with odor producers.

Produce Storage/Transportation Temperature Groupings

Very Cold Group: 32 – 38 F	Cold Group: 45 – 50 F	Cool Group: 55 – 65 F
• Apples • Beans, Lima • Berries, Blackberry • Berries, Blueberries • Berries, Strawberries • Broccoli • Cabbage • Cantaloupe • Carrots • Cauliflower • Celery • Corn • Grapes • Lettuce • Mixed Fruit, Fresh Cut • Nectarins • Onions, Green • Peaches • Pears • Plums • Salads, Fresh Cut	• Beans, Snap/Green • Cucumbers • Grapefruit • Honeydew Melons • Lemons • Onions, Sweet • Okra • Oranges • Peppers, Bell • Pineapples • Potatoes • Squash • Watermelon	• Bananas • Onions, Bulb • Sweet Potatoes • Tomatoes

These cooler groupings are meant to help organize storage for coolers at food banks, not to be taken as an exact indication of recommended storage temperatures.

III. Staging

Staging is the last internal step before the produce is distributed. This step is as critical as any. Different crops in different conditions at receiving have different lifespans. While the best practices below focus on produce in the food bank, it is important to acknowledge the role of the agencies as well.

FIFO and FEFO: First In First Out and First Expiration First Out

FIFO and FEFO are both inventory management practice for perishable goods that will minimize spoilage along with your 72 hour goal for distribution of perishable product. FEFO allows you to uniquely approach every product and assign it an expiration date based off it's current state and projected shelf life. For instance, there could be shipments of potatoes and strawberries received on Monday. However, during the receiving inspection, the strawberries are assigned an expiration date of Wednesday and the potatoes on the following Monday. In this instance, FEFO would determine that the strawberries should leave the building first. To use FEFO, make sure to assign, label, and document expiration dates on the inbound. With FIFO, you simply distribute based on when it was brought in opposed to the receiving dates of other items. FIFO is as effective as FEFO if you turn your perishable product within 72 hours.

IV. Outbound

On its way out the door, the basic of handling and transporting the produce are the same as they have been throughout the whole process. There are some tips in around loading onto transport that will help ensure the produce stays fresh.

- Pre-cool the unit to recommended storage/transport temperature before loading
- Verify produce is grouped with "friends"
- QC the product one more time
- Load as quickly as possible (If not a temp controlled loading dock)
- Load the truck based off what will delivered to each agency
- Use load bars or other strapping devices

Apples

Receiving and inspecting Apples:

Apples should be firm and have smooth skin.

Storing and Handling:

Apples should be stored at 32-34°F, at 85-95% humidity. Susceptible to freezing; Do not store below 29°F.

Sensitive to Ethylene: NO	Odor Sensitive: YES
Produces Ethylene: YES	Odor Producing: NO

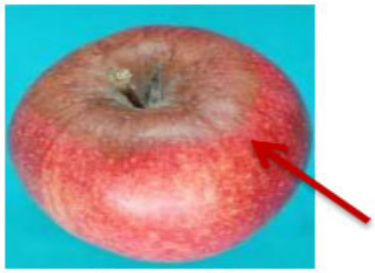
Acceptable

Bruises

Superficial Spots

Not Acceptable

Blue mold



Gray mold

Alternaria rot

Bull's eye rot

Apricots

Receiving and inspecting Apricots:

should be firm to slightly soft (ripe), but not overripe (mushy).

Storing and Handling:

Apricots should be stored at 32-36°F, 85-95% humidity. Do not store below 31°F.

Sensitive to Ethylene: YES	Odor Sensitive: NO
Produces Ethylene: YES	Odor Producing: NO

Acceptable

Sunburn or ripe

Surface scarring, mechanical damage

Not Acceptable

Split Skin

Rotten, Mushy

Bananas

Receiving and inspecting Bananas:

Avoid fruit with damaged skin

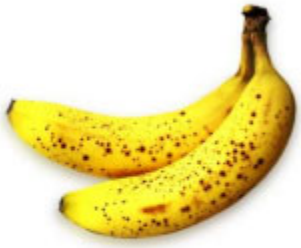
Storing and Handling:

Apricots should be stored at 56-58°F, at 85-95% humidity. To ripen green bananas, store at 60-65°F. Bananas bruise easily, handle with care.

Sensitive to Ethylene: YES	Odor Sensitive: NO
Produces Ethylene: NO	Odor Producing: NO

Acceptable

A few bruises



Slight speckling

Not Acceptable

Chill damage

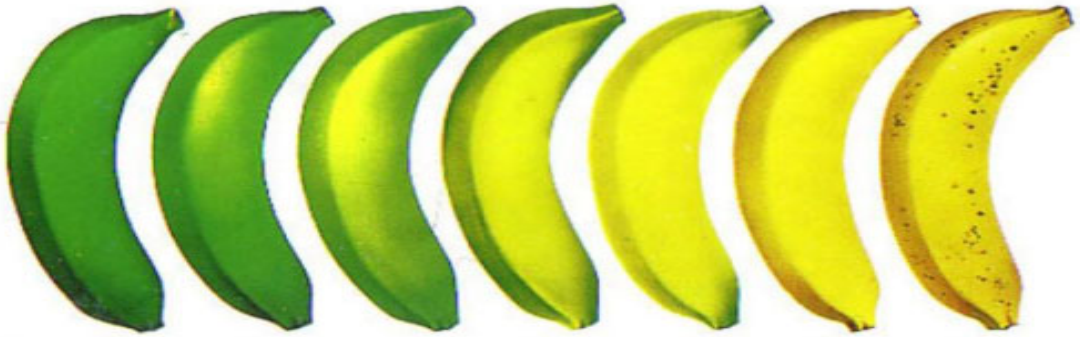
Overripe

Also, overripe

Suggested Guide for Banana Ripening

Pulp Temperatures °F

	Day 1	2	3	4	5	6	7	8
4 Day Schedule	ETHYLENE 64°	64°	62°	60°				
5 Day Schedule	ETHYLENE 62°	62°	62°	62°	60°			
6 Day Schedule	ETHYLENE 62°	62°	60°	60°	60°	58°		
7 Day Schedule	ETHYLENE 60°	60°	60°	60°	60°	58°	58°	
8 Day Schedule	ETHYLENE 58°	58°	58°	58°	58°	58°	58°	58°



Color Index No.	1	2	3	4	5	6	7
Peel Color	Green	Green – trace of yellow	More green than yellow	More yellow than green	Green tip	All yellow	Yellow – flecked with brown

Notes:

- Temperatures are °F
- Temperatures are PULP not AIR
- Proper temperature, humidity, time, air circulation, mature bananas and ethylene are required for ripening.
- Use the Super-Ripening Center® and Ethy-Gen® II to hasten ripening.
- Maintain 100-150 ppm of ethylene until color breaks.
- After 24 hour ripening initiation period, vent room for 15-20 minutes with fan on.
- For delayed shipment hold at 58°F.

Bell Peppers

Receiving and inspecting Bell Peppers:

Bell Peppers should be firm in texture

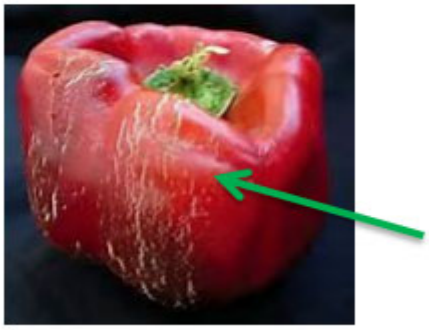
Storing and Handling:

Apricots should be stored at 45-50°F, at 85-95% humidity. Avoid storing below 42°F to avoid chill injury.

Sensitive to Ethylene: YES	Odor Sensitive: NO
Produces Ethylene: NO	Odor Producing: YES

Acceptable

Variations in Color



Surface cracks, blemishes, puckering

Not Acceptable

Decay, heavy puckering or rotting

Mold

Berries (Black and Blue)

Receiving and inspecting Berries:

Berries should be firm and fairly dry. Berries do not ripen after harvest; discard any green berries.

Storing and Handling:

Blueberries and blackberries should be stored at 32-34°F, at 90-98% humidity. Do not store below 30°F as blackberries are very susceptible to freeze damage. Blackberries are very perishable, distribute them immediately.

Sensitive to Ethylene: NO	Odor Sensitive: NO
Produces Ethylene: NO	Odor Producing: NO

Acceptable

Should not be green or underripe

Cartons should not be oozing, slight moistness is ok

Not Acceptable

Mushy and discolored fruits

Mold

Broccoli

Receiving and inspecting Broccoli:

Broccoli should be firm and not limp. Some yellow is ok

Storing and Handling:

Broccoli should be stored at 32°F, at 90-98% humidity. Handle with car to avoid damage to clusters. Do not store below 30°F .

Sensitive to Ethylene: YES	Odor Sensitive: NO
Produces Ethylene: NO	Odor Producing: NO

Acceptable

Some Yellowing

Multi-Colored varieties

Not Acceptable

Discoloration from rot (soft, dark spots)

Moldy

Cabbage

Receiving and inspecting Cabbage:

Cabbage should be fairly even colored and heavy for its size. Outer wrapper leaves can be removed if damaged.

Storing and Handling:

Broccoli should be stored at 32-36°F, at 90-98% humidity. Do not store below 30°F.

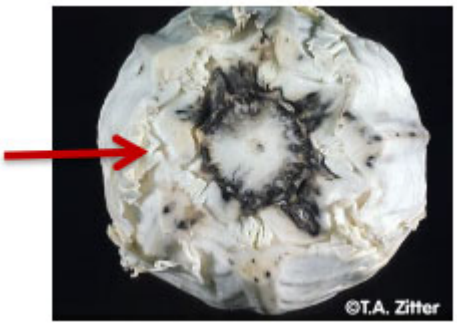
Sensitive to Ethylene: YES	Odor Sensitive: YES
Produces Ethylene: NO	Odor Producing: NO

Acceptable

Outer leaf damage

Insect damage

Not Acceptable



Black Rot

Downy mildew

Cantaloupe

Receiving and inspecting Cantaloupe:

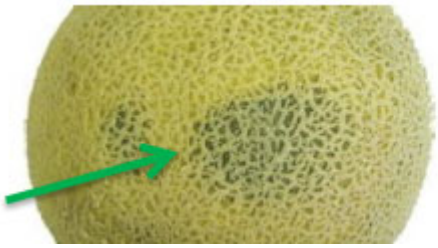
Cantaloupes should be round with good netting or webbing over creamy colored rind. Cantaloupes have a distinctive aroma and the blossom end will yield to gentle pressure when ripe.

Storing and Handling:

Cantaloupes should be stored at 36-41°F, at 90-98% relative humidity. Susceptible to freezing, do not store below 30°F.

Sensitive to Ethylene: NO	Odor Sensitive: NO
Produces Ethylene: YES	Odor Producing: NO

Acceptable



Slight discoloration

Variations in shapes

Not Acceptable

Mold

Decay

Carrots

Receiving and inspecting Carrots:

Cantaloupes should have firm, smooth exteriors (should snap went bent too far). Color should be vibrant orange to orangish red.

Storing and Handling:

Cantaloupes should be stored at 33-35°F, at 90-98% relative humidity. Do not store below 30°F.

Sensitive to Ethylene: YES	Odor Sensitive: YES
Produces Ethylene: NO	Odor Producing: NO

Acceptable

Spots on outer surface

Odd shapes

Not Acceptable

Rot

Mold

Corn, Sweet

Receiving and inspecting Sweet Corn:

Sweet Corn should have firm but kernels should not be hard and dry like feed corn. Colrs will vary from white to deep yellow. If in the husk, the should be green with hints of white allowed. Slight presence of decay on the husk will NOT affect the corn itself. Presence of aphids are ok according to the USDA and are not harmful if consumed.

Storing and Handling:

Corn should be held at 34-38°F, at 95% relative humidity. Do not store below 32°F.

Sensitive to Ethylene: NO	Odor Sensitive: YES
Produces Ethylene: NO	Odor Producing: NO

Acceptable

Various colors and shapes

Dark silks are ok

Not Acceptable

Corn Worm

Smut mold

Cucumbers

Receiving and inspecting Cucumbers:

Cucumbers should be firm in texture. Color should be green or mostly green

Storing and Handling:

Corn should be stored at 45-50°F, at 85-95% relative humidity. Do not store below 45°F.

Sensitive to Ethylene: YES	Odor Sensitive: NO
Produces Ethylene: NO	Odor Producing: NO

Acceptable

Blemishes

Slight Yellowing

Not Acceptable

Rot-puckered and soft (possible chill injury)

Moldy

Lettuce

Receiving and inspecting Lettuce:

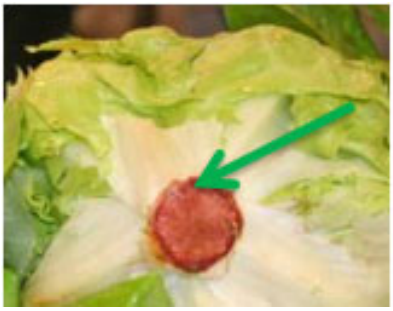
In general, avoid some wilting, but mainly discolored and translucent leaves. For iceberg, browning on the core is natural and ok and occurs from oxidation post-harvest.

Storing and Handling:

Corn should be stored at 34-36°F, at 90-98% relative humidity. Keep lettuce away from varying temperature zones and do not store below 32°F.

Sensitive to Ethylene: YES	Odor Sensitive: NO
Produces Ethylene: NO	Odor Producing: NO

Acceptable



Brown Core

Tears and slight bruising

Not Acceptable

Mold and / or discolored wilted leaves

Translucent Leaves (freeze damage)

Onions

Receiving and inspecting Onions:

Onions should be relatively firm with papery skin. Slightly lose outer skin is common with # 2's and should not affect the product. This may be a field packed commodity, presence or dirt and or gnats is not uncommon for # 2 product and is not a reason to reject the product.

Storing and Handling:

Onions should be stored at 40-60°F, at 85-95% relative humidity. For extended storage (one week or more), hold in mid 30's. Keep out of direct sunlight.

Sensitive to Ethylene: YES	Odor Sensitive: YES
Produces Ethylene: NO	Odor Producing: YES

Acceptable

Sprouts

Unusual Shapes

Not Acceptable

Bulb Rot

Bacterial Soft Rot

Oranges

Receiving and inspecting Oranges:

Oranges should be firm, heavy for size, and have fine textured skin. Skin color of a ripe orange ranges from orange to greenish-orange. Various stages of green are natural both on and off the tree and does not affect the flavor or quality of the orange.

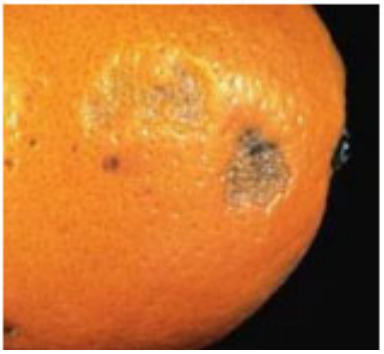
Storing and Handling:

Optimal storage temperature variers by type: FL 32-34°F, CA 45-48°F, AZ and TX 32-48°F at 85-95% relative humidity. For temperature related questions, contact the grower.

Sensitive to Ethylene: NO	Odor Sensitive: NO
Produces Ethylene: NO	Odor Producing: YES

Acceptable

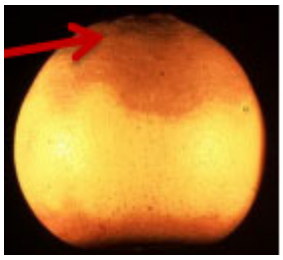
Greenish-orange



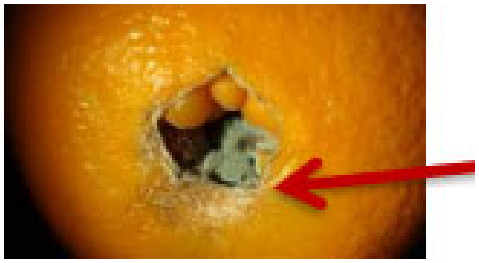
Small spots

Not Acceptable

Mold



Stem Decay



Stem Mold

Peaches

Receiving and inspecting Peaches:

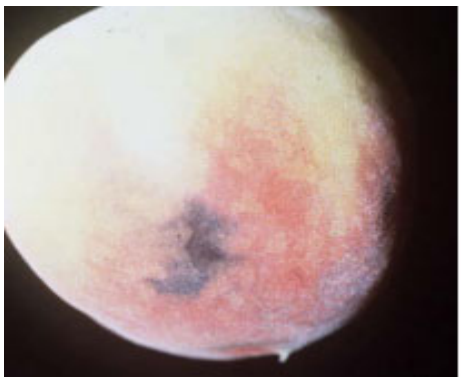
Peaches should be relatively firm to slightly soft (ripe), but not mushy.

Storing and Handling:

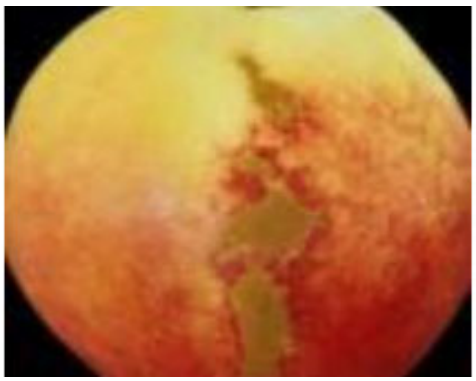
Peaches should be stored between 32-36°F, 90-98% relative humidity. Do not store below 31°F.

Sensitive to Ethylene: YES	Odor Sensitive: NO
Produces Ethylene: YES	Odor Producing: NO

Acceptable



Skin discoloration (inking)



Surface scarring and/or bruising

Not Acceptable

Severe bruising

Rot, Mold

Potatoes

Receiving and inspecting Potatoes:

All potato varieties should be fairly clean, firm, and smooth. This may be a field packed commodity, presence or dirt and or gnats is not uncommon for # 2 product and is not a reason to reject the product.

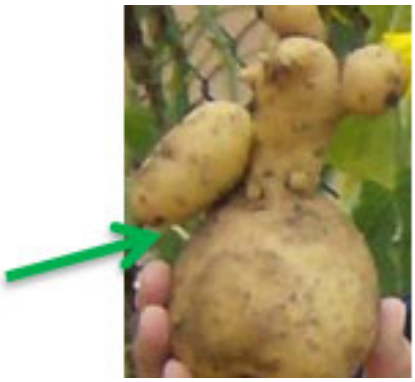
Storing and Handling:

Potatoes should be stored between 45-50°F, at 85-95% relative humidity. Potatoes are susceptible to freezing and chill injuries. Do not store below 42°F.

Sensitive to Ethylene: NO	Odor Sensitive: YES
Produces Ethylene: NO	Odor Producing: YES

Acceptable

Peepers/Sprouts



Odd shapes

Not Acceptable

Severe scabs

Blight rot

Squash, hard

Receiving and inspecting Hard Squash:

Hard Squash (winter squash) are typically larger in size and have harder outer rinds. Most common types are acorn, butternut, kabocha, and spaghetti. Should be generally firm in texture

Storing and Handling:

Hard Squash should be stored at 50-55°F, at 85-95% relative humidity. Do not store below 50°F.

Sensitive to Ethylene: NO	Odor Sensitive: YES
Produces Ethylene: NO	Odor Producing: YES

Acceptable

Colors, shapes, sizes

Discoloration and surface blemishes

Not Acceptable

Start or decay (wet spots)

Mold and rot

Squash, soft

Receiving and inspecting Soft Squash:

Soft Squash (summer squash) should be firm in texture with shiny and textured rinds. Most common types are zucchini, yellow, crookneck, pattypan

Storing and Handling:

Soft Squash should be stored at 41-50°F, at 85-95% relative humidity. Do not store below 41°F.

Sensitive to Ethylene: YES	Odor Sensitive: NO
Produces Ethylene: NO	Odor Producing: NO

Acceptable

Irregular Shapes

Discoloration, surface blemishes

Not Acceptable

End Rot

Tip Mold

Sweet Potatoes

Receiving and inspecting Sweet Potatoes:

Sweet potatoes should be relatively smooth and firm. This may be a field packed commodity, presence or dirt and or gnats is not uncommon for # 2 product and is not a reason to reject the product.

Storing and Handling:

Sweet Potatoes should be stored at 55-60°F, at 85-95% relative humidity. Store in well ventilated areas.

Sensitive to Ethylene: YES	Odor Sensitive: NO
Produces Ethylene: NO	Odor Producing: NO

Acceptable

Odd Shapes

Sprouting

Not Acceptable

Soil Rot or mold

Chill Damage (soft spots)

Watermelon

Receiving and inspecting Watermelon:

Watermelon should be firm in texture with shiny rinds. Watermelons do note ripen after harvest. A ripe watermelon will produce a distinct hollow sound when thumped.

Storing and Handling:

Watermelons should be stored at 50-60°F, at 85-95% relative humidity. Susceptible to chill injury. Do not store below 41°F.

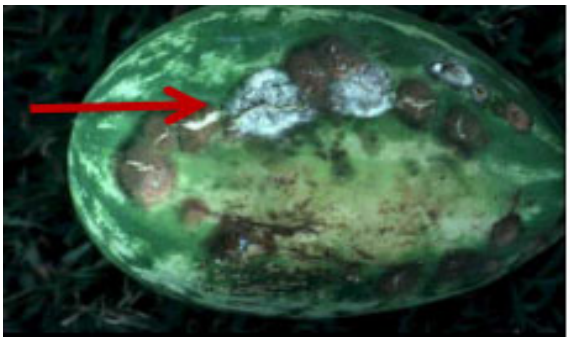
Sensitive to Ethylene: YES	Odor Sensitive: NO
Produces Ethylene: NO	Odor Producing: NO

Acceptable

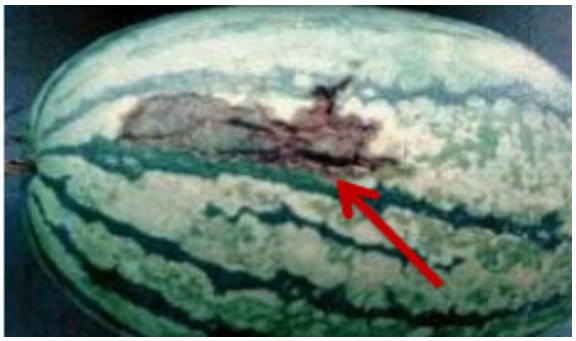
White/yellow patch (sun burn)

Small spots (powdery mildew)

Not Acceptable



Anthracnose / decay / mold



Fruit Blotch