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Farm Fresh Delivered

2019 Post Harvest Handling Guide For Wholesale Suppliers



Agricultural Connections is proud to work with local farms and ranches to supply food to our 70+ wholesale clients in Central Oregon. This alphabetized quick reference guide serves as a companion to the 2018 “How to Wholesale” booklet available at:

https://hdffa.org/wp-content/uploads/2019/04/combined-wholesale-guide_2019_small.pdf

In the following pages, you will find information on standard pack sizes and other post-harvest requirements, along with labeling instructions and an explanation of quality issues most commonly observed for every crop sourced locally by Agricultural Connections in 2018-2019.

Whether you are new to wholesale or a seasoned supplier, please use this guide to help improve efficiency and consistency in our local food value chain. Thank you!



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Quality Control Policy

Product Quality is paramount to the shared success of Agricultural Connections, our suppliers, and our buyers. We require all suppliers to follow a food safety plan on their property to ensure the food we sell is clean and safe from contaminants. Product quality should generally conform to industry standards, with detailed specifications as noted in this Post Harvest Guide. Agricultural Connections reserves the right to refuse *any* product if a quality control check reveals any one or more of the common issues listed in this guide.

Quality Control Process

Agricultural Connections will check incoming products for quality using a standard procedure, outlined below. If we notice repeat quality issues from a supplier, we may request an in-person meeting to review our quality standards.

1-2 cases per delivery will be selected randomly, opened and looked at thoroughly. Boxes are carefully placed on the inspection table and opened from the top. We are looking for:

Visual: What is the general appearance and condition of the product? Does it meet size, shape, and color requirements? Is there any visible damage (mechanical or insect)? Any visible signs of mold, discoloration, dirt, or other imperfections?

Physical: How does the produce handle? Product may be squeezed/probed/bent lightly to check for softness, limpness, decay, or other imperfections.

Temperature: Does the product fall within the target arrival temperature range?

Quality Control Threshold

If a product fails our quality control check for *any* reason, we reserve the right to refuse part or all of the delivery. Suppliers are responsible for picking up/disposing of all refused product within 3 business days.

Exemptions and Exceptions

Agricultural Connections recognizes that standards do vary seasonally for some products. For example, new (spring) potatoes and late (fall/winter) potatoes do not need to meet the same standards. Agricultural Connections may also, from time to time, sell lightly damaged products- clearly labeled- at a reduced price to our wholesale buyers.



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Packaging Standards

Suppliers selling into the wholesale market must provide their own packaging supplies. For those new to wholesale, Agricultural Connections can help coordinate ordering, shipping, and receiving of packaging materials at our warehouse. Common packaging materials include:

- Waxed and non-waxed boxes in the following sizes:
 - Small
 - Medium
 - Large
 - Extra-large
- Waxed paper rolls (to line boxes) and paper cutters
- Plastic box liners
- Perforated root bags
- Plastic bulk bags (25 lbs. capacity)
- Flats, half-flats and other open trays

Boxes must be clean. The storage area for boxes must be off the ground, dirt-free, hair free, etc. If there is any remnant of soil on the box, wipe or spray it off before delivery. Pack with the appropriate packing technique per each crop. Packing methods are detailed in the following pages, and we encourage you to watch our free packing videos at <https://drive.google.com/file/d/>. More videos coming soon! You can also send requests for new packing videos to liz@agriculturalconnections.com anytime.

Use appropriate weights per industry standard, including bunch weights. Standards for weight and case size are detailed below. Slight variation is ok, but consistency in standard weights creates clear expectations for the Central Oregon local food system as a whole.

Agricultural Connections provides a no-cost recirculation of containers to our suppliers. Our primary concern is to return packaging materials that have a hard cost and that are re-useable. We provide retrieval from our buyer locations (with the cooperation of our buyers) and coordinate the return of containers to our warehouse. Suppliers can pick up containers on a first-come, first-serve basis. We do our best to separate containers by farm, so your up-front investment is respected. We do not offer free delivery service of containers to our suppliers. If you utilize our farm pick-up service, there is a small additional fee for returning containers to your farm.



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Labeling Standards

Suppliers must label all product. We encourage suppliers to utilize branded stickers for their labeling. Stickers/labels must include the following minimum food safety information:

- Farm Name (or logo)
- Crop name
- Variety
- Amount
- Harvest Date & Pack Date (both if different)

It's very important to remove old stickers/labels when re-using boxes. Failing to remove old stickers creates a lot of confusion during the receiving and delivery process. Supplier stickers should be placed in the upper left corner of the packing container. Consistency in label placement significantly increases efficiency in distribution. It is the supplier's responsibility to make sure your boxes are cleared of all old stickers/labels/tape/etc.

Additional Resources:

- Agricultural Connections has produced a series of "how to pack" videos featuring a variety of products, with more videos coming soon! These videos are a great resource if you are new to packing product for wholesale, or are looking for more information on how to reduce product damage while meeting standard pack sizes. Watch them here: <https://drive.google.com/file/d>
- Check out *Wholesale Success* by FamilyFarmed, the definitive industry standard on all things wholesale. You can purchase a spiral-bound hard copy through FamilyFarmed (familyfarmed.org) or view select portions of the manual for free at Minnesota Institute for Sustainable Agriculture (MISA) at: www.misa.umn.edu/publications/cropsandsoil/wholesalesuccess.
- For more information on developing a food safety, visit the FDA food Safety Plan Builder at: <https://www.fda.gov/food/food-safety-modernization-act-fsma/food-safety-plan-builder>
Here, you can find training videos, current food safety requirements, and download a "Builder Tool" to create your own custom food safety plan.



A.

Arugula	
Standard Count/Weight	Bulk: 3 lbs. Bunched: 12 or 24 count
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> • Bunched: small wax, wax paper on top and bottom • Bulk: non-wax with plastic liner
Target Arrival Temperature	32-36°F
Size/Shape Requirements	Standard: 3 – 6” maximum leaf length Baby: 3” maximum leaf length
Color Requirements	Green, smooth, young leaves.

Most common quality issues with Arugula	
Soft Rot/Fungal decay	Exposure to heat/post-harvest or storage temps are too high (should be stored as cool as possible, without freezing)
Dirt	Visible dirt or soil clumps
Poor Trimming	Damage to leaves or stems, often showing discoloration

Asian Greens	
Standard Count/Weight	20 lbs.
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> • Medium wax, wax paper on top and bottom
Target Arrival Temperature	32-36°F
Size/Shape Requirements	Depends on variety
Color Requirements	Depends on variety

Most common quality issues with Asian Greens	
Soft Rot/Fungal decay	Exposure to heat/post-harvest or storage temps are too high (should be stored as cool as possible, without freezing)
Dirt	Visible dirt or soil clumps
Poor Trimming	Damage to leaves or stems, often showing discoloration



B.

Basil	
Standard Count/Weight	Bulk loose: 1 lb., 3 lb., or 5 lb. Bunched: 12 count
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> • small wax, wax paper top and bottom OR small non-wax with plastic liner Bunch with rubber bands. Cover with blanket for storage to avoid overcooling.
Target Arrival Temperature	54°F
Size/Shape Requirements	Bunched: Stem length no more than 2" Bulk: no stem (1/2" max) Uniformly sized, strong aroma and flavor.
Color Requirements	Fresh, green leaves

Most common quality issues with Basil	
Dirt	Visible dirt or soil clumps
Poor Trimming	Damage to leaves or stems
Mold/bacterial decay	Can occur especially where stems or leaves are mechanically cut. Low harvest temperatures can prevent this, but may increase the risk of chilling injury.
Water loss	Harvested too early/stored too long, or chilling injury

Beets	
Standard Count/Weight	Bulk: 25 lbs. Bunched: 12 or 24 count <ul style="list-style-type: none"> • Bunch weight: 1 -1 ¼ lbs.
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> • Bunched: small (12 ct) or large (24 ct) wax, wax paper on top and bottom • Bulk: 25 lbs. plastic root bag Field heat removed (hydro cooled preferred)
Target Arrival Temperature	32-36°F (top-iced)
Size/Shape/Color Requirements	Baby: 1 ½ - 2" diameter Standard: 2 - 3 ¼" diameter



	<p>Jumbo: more than 3 ¼" diameter. (Jumbo not suitable for bunched cases, only include in bulk bags)</p> <p>Greens: no more than 12" length (top and include anything larger in bulk bag only).</p>
Color Requirements	Uniform coloration, consistent with description

Most common quality issues with Beets	
Damaged tops	Broken, either at stem or leaves
Insect presence/ damage	Damage is usually found in the greens, as small holes that often have a brownish rim. Look for clusters or colonies of insects in small crevices of the leaves (aphids).
Flabby/wilted	Droopy, lacking turgidity, flaccid (either in leaves or bulbs)
Undersized	Heads smaller than 2 inches in diameter
Breakdown of Greens	Yellow, brown, or blackish coloration of leaves or stems that often melt or disintegrate when touched
Breakdown of bulbs	Soft or discolored areas, often found near the stem
Dirty	Visible or excessive dirt on bulb or greens

Broccoli	
Standard Count/Weight	<p>Florets: 10 or 20 lbs.</p> <p>Crowns: 20 lbs.</p>
Post-Harvest / Packing Requirements	<p>Box:</p> <ul style="list-style-type: none"> ● Florets, small or medium wax ● Crowns, medium or large wax <p>Field heat removed (hydro cooled preferred). Harvest early, during cool part of the day.</p>
Target Arrival Temperature	32-36° F
Size/Shape Requirements	<p>Florets: 1-4" diameter, 1 ½ - 4 ½" length</p> <p>Crowns: 3" minimum diameter, 3-6" length</p>
Color Requirements	Bright to dark green

Most common quality issues with Broccoli	
Floret yellowing	Over-maturity
Hollow Stems	Cavities in the cut ends, may be caused by boron deficiency
Flabby/Wilted	Droopy, lacking turgidity, flaccid
Under-maturity	Small heads (less than 3 inches in diameter)



Over-maturity	Small heads (less than 7 inches in length), or multi-colored/light-colored florets. Spring temps below 40°F can initiate early budding.
Pin Rot	Small sunken spots of yellow or brown discoloration that give easily to pressure or leave residue on fingers or paper
Water Soaking	Saturated looking areas of the florets
Poor Trimming	Rough areas of the stalk where leaves have been ripped off, showing signs of discoloration or breakdown
Pests/Disease	Susceptible to cabbage aphid, monitor nitrogen levels

Brussels Sprouts	
Standard Count/Weight	10 or 20 lbs.
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> • small wax, wax paper on top and bottom
Target Arrival Temperature	32°F
Size/Shape Requirements	1- 2 ½" diameter
Color Requirements	Green outer leaves and white cut end. Inner leaves slightly yellow and tightly arranged.

Most common quality issues with Brussels Sprouts	
Bacterial/soft rot	Discoloration, disintegrates when handled
Black or gray leaf spot	Areas of dark discoloration (black or gray) on the leaves
Gray mold	Visible gray mold on leaves or stem
Seed stem	Over-mature, seed stem is visible as more than 25% of the sprout when cut
Insect Damage/Presence	Any visible damage or presence of insects
Dirt	Visible dirt or soil clumps

C.

Cabbage	
Standard Count/Weight	Red and Green: 20 or 40 lbs. Napa: 35 lbs.
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> • medium, large, or extra-large wax, with wax paper on top and bottom Harvest with 1-2 wrapper leaves intact



Target Arrival Temperature	32-36° F
Size/Shape Requirements	2-4 lbs. per head
Color Requirements	Depends on variety

Most common quality issues with Cabbage	
Wilted layers	Over-maturity or exposure to heat
Discolored wrappers	Exposure to ethylene, poor handling, nutrient deficiencies
Seed stem	Sponginess of the head, or visible when cut (stalk inside is more than 25% of the head)
Immaturity	Small heads less than 4 inches in diameter, or varied coloration
Over-maturity	Loosely packed or spongy when squeezed, excessive seed-stem, or bursting
Breakdown	Areas of dark discoloration that often melt or disintegrate when handled
Poor trimming	Rough areas of the stalk where leaves have been ripped off, often showing discoloration or signs of breakdown
Insect damage/presence	Wrapper leaves can have some insect damage, inner leaves cannot

Carrots	
Standard Count/Weight	Bulk: 25 lbs. Bunched: 24 count
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> • Bunched: large wax, wax paper on top and bottom • Bulk: 25lb plastic root bag
Target Arrival Temperature	32-36°F
Size/Shape Requirements	Bunched standard: 1 - 2" diameter Bunched baby: ½ - 1" diameter Bulk: 1- 2 ½" diameter Firm, straight, smooth with little residue (hairiness). No cracking or sprouting.
Color Requirements	Depends on variety

Most common quality issues with Carrots	
Cracked/Sprouted	Visible cracks or sprouts
Bacterial/fungal rot	Tissue damage or color loss/discoloration
Flabby/Wilted	Droopy, lacking turgidity, flaccid



Cauliflower	
Standard Count/Weight	20 lbs.
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> • medium or large wax, wax paper on top and bottom Well-trimmed and cooled
Target Arrival Temperature	32-36°F
Size/Shape Requirements	3" minimum diameter Stem removed, minimal outer leaves (no more than one layer)
Color Requirements	White to creamy white colored curds

Most common quality issues with Cauliflower	
Discoloration	Yellow or abnormal coloration
Enlarged brackets	Leaves grow through curds
Riciness	Curds are rough or granular
Fuzziness	More than 1/3 of the head appears fuzzy
Inconsistent Sizing	Heads have more than 1 inch difference in size
Pin rot	Small sunken spots of yellow or brownish discoloration that give easily to pressure, or leave residue on fingers or paper
Poor trimming	Excessive outer leaves (more than 20% of the crown covered)

Celeriac, Rutabaga & Winter Turnip	
Standard Count/Weight	25 lbs.
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> • 25 lb. plastic root bag
Target Arrival Temperature	32-36°F
Size/Shape Requirements	Minimum 1 lb. root Consistent sizing. Firm texture and flesh.
Color Requirements	Green top, remove for storage

Most common quality issues with Celeriac	
Chill damage	Sponginess, translucent discoloration
Brown rot	Areas of discoloration that may disintegrate when handled
Brown heart	Water core that exceeds 5%



Flabby/wilted	Droopy, lacking turgidity, flaccid
Immaturity	Heads smaller than 7 inches in length, or multi-colored/light colored florets
Cracking	Discolored, rough, or deep cracks in the root
Poor trimming	Rough areas of the stalk where leaves have been ripped off

Chard	
Standard Count/Weight	Bulk: 4 lbs. Bunched: 12 or 24 count
Post-Harvest / Packing Requirements	<p>Box:</p> <ul style="list-style-type: none"> • Bunched: small wax, wax paper on top and bottom. • Bulk: medium or large wax, wax paper on top and bottom. <p>Bunch in the field, at least 4" up the stalk. Don't pick the newest leaves, as they don't hold up in storage. Oldest leaves are too tough.</p>
Target Arrival Temperature	32-36°F
Size/Shape Requirements	Bunched: 12- 16" max length, including stem. 6-8 leaves per bunch. Bulk: 6" max length, including stem.
Color Requirements	Uniform color in bunch

Most common quality issues with Chard	
Wilted	Over-maturity or exposure to heat
Yellowing	Exposure to ethylene, heat, or nutrient deficiencies
Breakage	Stems or leaves are broken or cracked
Tip burn	Covering more than 5% of leaf edges
Insect damage	Holes in leaves or stems which detract from appearance
Breakdown/decay	Areas of dark discoloration that often disintegrate when handled
Chill damage	Dark discoloration affecting any portion of the leaf or stem
Poor trimming	Rough area of the stalk where leaves have been ripped off, often showing discoloration or signs of breakdown

Chicories (Radicchio, Endive, Escarole)	
Standard Count/Weight	Bulk: 4-10 lbs. Loose: 12 count
Post-Harvest / Packing Requirements	Box:



	<ul style="list-style-type: none"> • Small wax box, wax paper on top and bottom. <p>Wash in sanitized water and drain upside-down. Store in a cold room.</p>
Target Arrival Temperature	37-41°F
Size/Shape Requirements	Depends on variety. Very crisp and turgid, no more than 1.5 inches of root visible.
Color Requirements	Depends on variety

Most common quality issues with Chicories	
Bacterial soft rot	Discoloration or loss of crisp-ness, wilting
Dirt	Visible dirt or soil clumps
Insect Damage/Presence	Damage to leaves or stems, insects visible

Cilantro	
Standard Count/Weight	12 or 24 count
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> • small or medium wax, wax paper on top and bottom
Target Arrival Temperature	32-36°F
Size/Shape Requirements	6" minimum. No flowering.
Color Requirements	Bright green

Most common quality issues with Cilantro	
Wilted	Exposure to heat
Yellowing	Exposure to ethylene, heat, or nutrient deficiencies
Breakage	Stems or leaves are broken or cracked
Tip burn	Covering more than 5% of leaf edges
Insect damage	Holes in leaves or stems
Breakdown/ decay	Areas of dark discoloration that disintegrate when handled
Poor trimming	Rough area of the stalk where leaves have been ripped off, often showing discoloration or signs of breakdown
Dirty	Visible dirt or clumps of soil



Corn	
Standard Count/Weight	35 or 48 count
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> • large wax Hydro-cooled.
Target Arrival Temperature	32°F
Size/Shape Requirements	6" minimum Well-developed kernels, fresh tight green husks
Color Requirements	Uniform color (dependent on variety)

Most common quality issues with Corn	
Decay	Typically on the husk or silk
Poor Trimming	Damage to husk, cut kernels
Dehydration	Desiccation of kernels or husk/silks

Cucumber	
Standard Count/Weight	10 or 20 lbs.
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> • Small wax, wax paper on top and bottom. • English only: individually wrapped in plastic, or small box with plastic liner. Packed neatly in rows.
Target Arrival Temperature	45-50°F
Size/Shape Requirements	6 - 8" length 2 - 2 ½" diameter Practically straight, not constricted or overly pointed.
Color Requirements	Green, glossy, uniform color

Most common quality issues with Cucumber	
Desiccation	Shriveled tips or bodies, soft flesh or limpness/pliability
Discoloration	Yellowed tips or bellies more than 10% of the surface area
Breakdown	Spots of decay, sunken depressions, mold at stem-end or strong odor
Poor trimming	Rough area of the stalk where leaves have been ripped off, often showing discoloration or signs of breakdown



E.

Eggplant	
Standard Count/Weight	15 or 20 lbs.
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> • small or medium wax, wax paper between crop Rapid hydro-cooling to 50°F immediately after harvest.
Target Arrival Temperature	48-57°F
Size/Shape Requirements	Depends on variety
Color Requirements	Deep purple, consistent color, green calyx

Most common quality issues with Eggplant	
Chill Damage	External: brown, sunken-in spots or areas of the skin, discoloration of calyx Internal: grey or brownish cavities visible when cut perpendicularly
General appearance	Discoloration or wilting of the calyx; nicks, cuts, scars or rough patches on the globe
Size	No more than 15% variation in size
Packing	No part of skin or calyx should be showing (if wrapped)
Poor trimming	Rough areas of the stalk where ripped from plant, often showing discoloration or signs of breakdown

F.

Fennel	
Standard Count/Weight	10 lbs. 12 count
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> • small wax, wax paper on top and bottom Hydro-cooled
Target Arrival Temperature	32-36°F
Size/Shape Requirements	minimum 4" length tops 3 - 5" diameter bulb
Color Requirements	Bright white bulbs



Most common quality issues with Fennel	
Wilted	Improper cooling, prolonged exposure to heat
Yellowing	Exposure to ethylene, heat, or nutrient deficiencies
Breakage	Stems or leaves are broken while packing
Tip burn	Covering more than 5% of leaf edges
Breakdown/decay	Areas of dark discoloration that disintegrate when handled
Epidermal peel	Cold growing conditions, outer layer of skin is detached or ripped
Chill damage	Dark or translucent discoloration affecting any portion of root or tops
Poor trimming	Rough areas of the bulb or stock where ripped
Dirt	Visible dirt or clumps of soil

G.

Garlic	
Standard Count/Weight	1 or 10 lbs.
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> • small wax, wax paper on bottom Neatly trimmed, fully cured, dry, and free from nicks and cuts to skin from harvesting.
Target Arrival Temperature	32-40°F
Size/Shape Requirements	Minimum 1 ½" diameter bulb
Color Requirements	Uniform color

Most common quality issues with Garlic	
Curing	Skins should be completely dry and mostly intact, with bulbs well enclosed in sheath
Staining	15% shows dark discoloration of skin due to fungal or bacterial growth
Firmness	Skin only gives moderately to firm pressure, not spongy or soft
Decaying cloves	Individual cloves feel hollow and show breakdown when cut
Shatter	Outer sheath is broken and cloves are loose
New roots	Reestablishment of roots post-harvest that exceed 1 inch in length
Dormant	Elongated growth of new stalk that is either yellow or green
Poor trimming	30% of case show stalk or roots with jagged ends; trimming exposes flesh

Green Onions	
Standard Count/Weight	12 or 24 count



Post-Harvest / Packing Requirements	<p>Box:</p> <ul style="list-style-type: none"> • small wax, wax paper on top and bottom <p>Pre-cooled, well-trimmed, clean. Bunched and banded with rubber.</p>
Target Arrival Temperature	32-36°F
Size/Shape Requirements	10-20" length ¼ to ½" diameter bulb
Color Requirements	White to bright green

Most common quality issues with Green Onions	
Wilted	Over-maturity or exposure to heat
Yellowing	Exposure to ethylene, heat, or nutrient deficiencies
Breakage	Stems are broken or cracked
Tip Burn	Covering more than 5% of edges
Thrip damage	Spotted discoloration of upper greens
Breakdown/decay	Areas of discoloration that disintegrate when handled
Poor trimming	Rough areas of the stalk where have been ripped off
Chill damage	Dark discoloration affecting any portion of the leaf or stem

H.

Culinary Herbs (Marjoram, Mint, Oregano, Rosemary, Sage, Tarragon, Thyme)	
Standard Count/Weight	<p>1 lb. case 12 count bunch</p> <ul style="list-style-type: none"> • Bunch weight: 1 ½ - 2 oz. per bunch
Post-Harvest / Packing Requirements	<p>Box:</p> <ul style="list-style-type: none"> • plastic produce bag OR small wax, wax paper on top and bottom <p>Herbs should not be washed. Bunch with rubber bands or twist-ties.</p>
Target Arrival Temperature	32°F
Size/Shape Requirements	Depends on variety
Color Requirements	Fresh and green

Most common quality issues with Culinary Herbs	
Mold/Decay	Avoid mechanical damage to leaves and maintain low temperatures in storage



K.

Kale	
Standard Count/Weight	Loose Bulk: 3-5 lbs. case Bunched: 12 or 24 count
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> ● Bulk: small wax, paper on top and bottom ● Bunched: medium or large wax, paper on top and bottom Remove field heat as quickly as possible. Hydro-cooled.
Target Arrival Temperature	32-36°F
Size/Shape Requirements	Bulk: 6" max length, including stem. Bunched: 12- 16" max length, including stem. 6-8 leaves per bunch.
Color Requirements	Consistent (within variety)

Most common quality issues with Kale	
Decay	Discoloration, disintegrates when handled
Freezing Injury	Discoloration, wilting
Insect damage/presence	Holes in the leaves or damage to stalk
Dirt	Visible dirt or soil clumps

L.

Lettuce	
Standard Count/Weight	Standard: 12 or 24 count Baby: 30 to 40 count
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> ● large wax, paper on top and bottom Hydro-cooled preferred. Pack bottom 12 heads face-up, top 12 heads face-down (alternate for larger packs).
Target Arrival Temperature	32-36°F
Size/Shape Requirements	Standard: 5-12" diameter



	Baby: 4-6" diameter
Color Requirements	Depends on variety

Most common quality issues with Lettuce	
Wilted/lacking sugar	Exposure to heat, stored at too low humidity, inadequate moisture in the field
Discoloration	Age, poor handling, exposure to ethylene, or nutrient deficiencies
Tip burn	Small areas of tan or brown discoloration at outer edges of leaves, or areas on inner edges greater than 1 inch x ½ inch- length to width
Seed stem	Excessive spacing of the leaves near base, visible when stalk is cut as more than 25% of the head
Immaturity	Heads smaller than 4 inches in diameter, or varied coloration
Over-maturity	Loosely packed leaves, showing excessive seed stem
Breakdown	Areas of dark discoloration that disintegrate when handled
Downy mildew	Visibly detracts from appearance or is causing breakdown
Cracking/broken	Damage to head severe enough to cause issues when trimming

M.

Mustard and Collard Greens	
Standard Count/Weight	Bunched: 12 or 24 count Bulk baby mix: 3-5 lbs.
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> ● Bulk: small wax, paper on top and bottom ● Bunched: medium or large wax, paper on top and bottom Remove field heat as quickly as possible. Hydro-cool.
Target Arrival Temperature	32-36°F
Size/Shape Requirements	Bunched: 12- 16" max length, including stem. 6-8 leaves per bunch. Bulk: 6" max length, including stem.
Color Requirements	Consistent color

Most common quality issues with Mustard Greens	
Overheating	Wilted leaves or flaccid stems
Dirt	Visible dirt or soil clumps



Insect damage/presence	Holes in leaves or damage to stems
Freezing injury	Loss of water content, wilted

O.

Onions	
Standard Count/Weight	Bulk: 20 or 40 lbs. Bunched spring: 12 count or 10 lbs.
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> ● Bulk: small or large non-wax ● Bunched: small wax, wax paper on top and bottom <p>Cured onions can be packed in non-wax boxes. Uncured (any type) should be packed in a wax box with wax paper.</p>
Target Arrival Temperature	32-45°F
Size/Shape Requirements	Bunched: 2 – 3” diameter Bulk: 3 – 6” diameter
Color Requirements	Consistent color, minimum staining or discoloration

Most common quality issues with Onions	
Curing	Skins are dry and mostly intact
Staining	15% or more shows dark discolorations of the skin from fungal/bacterial growth
Firmness	Skin gives only moderately to firm pressure and is not spongy or soft
Peelers	50% or more of the skin is missing or falls off when handled
Bottle Neck	Abnormally thick necks
Molding/decay	Green or grey fuzz visible and flesh that disintegrates when handled
New roots	Reestablishment of roots post-harvest that are more than 1 inch in length
Dormant	Elongated growth of new stalk that is either yellow or green, inside or outside of onion, and emerging from the top
Poor trimming	30% of the case shows stalk or roots 3 inches or longer; or expose layers of flesh when cut
Dirt	Visible dirt or clumps of soil still



P.

Parsnips	
Standard Count/Weight	25 lbs.
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> • plastic root bag Rapid cooling immediately after harvest.
Target Arrival Temperature	32-36°F
Size/Shape Requirements	1 ½ - 3" diameter
Color Requirements	Uniform color

Most common quality issues with Parsnips	
Parsnip Canker	Black or orange patches on the roots or shoulder
Rot	Visible gray mold, soft rot, or
Insect Damage/Presence	Aphids, worms, or other insects visible, damage to root, shoulder, or greens

Peppers (Bell)	
Standard Count/Weight	10 or 15 lbs.
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> • small wax, wax paper on top and bottom Do not field pack. Brush wash to remove dirt. Rapid cool after harvest.
Target Arrival Temperature	45°F
Size/Shape Requirements	3" minimum diameter
Color Requirements	Uniform color (at least 95% colored), depends on variety

Most common quality issues with Bell Peppers	
Gray Mold	Improper field sanitation, mechanical wounds. Dip in hot water at 126-130°F for 4 min if detected.
Black Rot	Avoid chilling injuries
Bacterial soft rot	Improper water sanitation when washing/hydro-cooling
Dirt	Visible dirt or soil clumps



Peppers (Hot)	
Standard Count/Weight	5 or 10 lbs.
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> • small wax, wax paper on bottom and top
Target Arrival Temperature	45°F
Size/Shape Requirements	Depends on variety
Color Requirements	Depends on variety

Most common quality issues with Hot Peppers	
Discoloration/decay	Areas of dark discoloration or decay that disintegrate with soft pressure
Desiccation	Water loss resulting in wrinkling of the skin

Potatoes	
Standard Count/Weight	20 - 50 lbs.
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> • small, medium, or large non-wax • new potatoes only should be packed in wax box
Target Arrival Temperature	New crop: 50-60°F
Size/Shape Requirements	A/large: 3" minimum (softball size) B/medium: 2 - 3" (baseball size) C/Small: 1 ½ – 2" (golf ball size)
Color Requirements	Uniform bright color (depends on variety)

Most common quality issues with Potatoes	
Curing	Skins set, mostly intact and dry
Dormant	Fresh re-growth more than ¼ inch in length
Greening	Areas of skin are green due to exposure to sunlight or other UV source
Unset Skins	10% or more of the skin is missing or skin peels easily with light scratching
Rhizoctonia	Excessive black spotted growths on skin caused by fungal infestation of soil
Molding/decay	Green or gray fuzz is visible, flesh disintegrates when handled
Enlarged lenticels	Sunken discolored areas often caused by too-cold storage temps
Checking	Semi-circular cracks of the skin caused by freezing in ground, before harvest
Hollow heart	Discoloration or cavities inside potato when cut horizontally
Dirt	Visible dirt or soil on the skin or packed in crevices



R.

Radish	
Standard Count/Weight	12 or 24 count <ul style="list-style-type: none"> bunch weight: ¾ - 1 ¼ lb. per bunch
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> small or medium wax, wax paper on top and bottom Neatly packed, 7-10 per bunch.
Target Arrival Temperature	32-36°F
Size/Shape Requirements	¾" – 2" diameter
Color Requirements	Uniform color

Most common quality issues with Radish	
Damaged tops	Broken, either at stem or leaves
Insect damage	Usually found in the greens, usually as small holes with a brownish rim
Flabby/wilted	Droopy, lacking turgidity, flaccid in leaves or bulb
Undersized	Bulbs smaller than ¾ inch diameter
Breakdown of greens	Yellow, brown, or black color of leaves or stems that often disintegrates when handled
Growth cracks	More than one, discolored, or greater than ¼ inch deep
Dirt	Visible dirt on bulb or greens

S.

Salad Mix & Spinach	
Standard Count/Weight	Bulk: 3 lbs.
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> small non-wax, plastic liner Cool as soon as possible after harvest.
Target Arrival Temperature	32-36°F
Size/Shape Requirements	Baby Spinach: 4" maximum leaf length All other: depends on variety
Color Requirements	No yellowing



Most common quality issues with Salad Mix & Spinach	
Dirt	Visible dirt or soil clumps
Bacterial soft rot/fungal decay	Improper sanitation or storage temperatures. Maintain low temperatures.
Insect damage/presence	Small holes in leaves, edges chewed, or visible insects.

Summer Squash	
Standard Count/Weight	20 lbs.
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> • small wax, paper on top and bottom Be careful not to scratch during harvest, brush to remove dirt, remove blossom. Room cool.
Target Arrival Temperature	41 -50°F
Size/Shape Requirements	Baby/petite: 4 – 5” maximum length Standard: 5 – 9” length Patty pan: 3 – 5” diameter
Color Requirements	Uniform, shiny

Most common quality issues with Summer Squash	
Mechanical Damage	Scratches/bruises/cuts/scars on skin surface
Chilling injury	Loss of water content/flaccid

T.

Tomatoes (Slicer)	
Standard Count/Weight	15 lbs.
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> • Open tray, one layer only. Pack stem down.
Target Arrival Temperature	50-60°F
Size/Shape Requirements	2 ½ - 4” diameter
Color Requirements	Uniform color, orange red to deep red



Most common quality issues with Slicer Tomatoes	
Breakdown/decay	Areas that disintegrate when handled, or sunken discolored areas
Mold	White or grey fuzz on calyx, or in cracks or deep cavities of the skin
Growth cracks	Radial and concentric or catface that detract from appearance
Cuts, bruises	When they detract from appearance
Immaturity	Too green, checkboard
Over-maturity	Overripe, too soft to the touch
Shrivel	Skin folds or moves above the flesh when handled
Other defects	Scald, freezing injury, smooth net-like russeting, spray or sun burn, hail, drought spots, excessive scars, insects

Tomatoes (Heirloom)	
Standard Count/Weight	10 lbs., single variety or mixed pack
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> open tray Pack stem down. Mature, well sorted, consistent size within variety.
Target Arrival Temperature	50-58°F
Size/Shape Requirements	Depends on variety
Color Requirements	Depends on variety

Most common quality issues with Heirloom Tomatoes	
Catface	Healed cracks detract significantly from appearance
Shrivel	Skin folds or moves above flesh when handled
Growth cracks	Flesh is visible, commonly on shoulders or near calyx
Early/late blight	Tough areas of skin and flesh from nutrient deficiencies
Blight	Skin show any visible signs of spotted breakdown
Mold	White or grey fuzz on calyx, or in cracks or deep cavities on skin
Breakdown/decay	Areas of skin or flesh that disintegrates when handled

Tomatoes (Cherry)	
Standard Count/Weight	12 pint count
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> open flat, 12 pints Mature, well sorted, consistent size within variety.



Target Arrival Temperature	50-58°F
Size/Shape Requirements	Depends on variety
Color Requirements	Depends on variety

Most common quality issues with Cherry Tomatoes	
Shrivel	Skin folds or moves above flesh when handled
Growth cracks	Flesh is visible, commonly on shoulders or near calyx
Early/late blight	Tough areas of skin and flesh from nutrient deficiencies
Blight	Skin show any visible signs of spotted breakdown
Mold	White or grey fuzz on calyx, or in cracks or deep cavities on skin
Breakdown/decay	Areas of skin or flesh that disintegrates when handled

W.

Winter Squash	
Standard Count/Weight	35 lbs.
Post-Harvest / Packing Requirements	Box: <ul style="list-style-type: none"> very supportive non-wax box (add additional support in bottom of box if necessary) Brush off dirt/soil at harvest. Store unwashed to preserve outer wax.
Target Arrival Temperature	50-55°F
Size/Shape Requirements	Minimum 6 units per case
Color Requirements	Bright yellow or orange, Depends on variety

Most common quality issues with Winter Squash	
Cold/chill damage	Loss of water content
Soft rot/decay	Visible rot or spot of decay, disintegrates when handled
Broken/cracked	Surface is not consistent
Excessive Dirt	Visible soil clumps or dirt patches