

Recommended storage temperatures for fresh produce

The recommended storage temperatures presented in table 1 are collated from a range of sources, for use by growers, transporters, wholesalers, exporters, importers and retailers. These recommendations vary with the commodity, variety, and sometimes with the stage of fruit ripeness.

Fresh horticulture produce generally need low temperature and high relative humidity to maximize storage life and maintain the quality and flavour. Low temperatures reduce the respiration rate and slow down the metabolic processes that reduce produce quality, but chilling injury will occur if temperatures are too low. High relative humidity help reduce weight loss and shrivelling. The storage life of some commodities can be extended beyond the recommended storage life by controlling or modifying the oxygen and carbon dioxide concentrations in the storage atmosphere.

Table 1 – Recommended storage temperature and expected shelf life for a range of fresh produce types*.

Fresh produce	Recommended temperature (°C)	Storage life	
<i>Group 1: Chilling temperature (around 0°C)</i>			
Fruits	Cherry	-1 - 0°C	2 - 3 weeks
	Nectarine	-1 - 0°C	2 - 3 weeks
	Pear	-1 - 0°C	2 - 6 months
	Plum	-1 - 0°C	1 - 4 weeks
	Table Grape	-1 - 0°C	3 - 6 months
	Blueberry	-0.5 - 0.5°C	1 - 2 weeks
	Kiwifruit	0°C	2 - 3 months
	Strawberry	0°C	5 - 7 days
Vegetables	Garlic	-1 - 0°C	More than 9 months
	Artichoke	0°C	Globe: 2 - 3 weeks Jerusalem: 4 - 5 months
	Broccoli	0°C	3 - 4 weeks
	Cabbage	0°C	Early crop: 3 - 6 weeks Late crop: up to 6 months
	Carrot	0°C	Bunched: 10 - 14 days Immature roots: 4 - 6 weeks Mature roots: 7 - 9 months Fresh-cut: 3 - 4 weeks
	Cauliflower	0°C	Less than 3 weeks
	Celery	0°C	Up to 5 - 7 weeks
	Chives	0°C	2 - 3 weeks
	Lettuce	0°C	Up to 4 weeks
	Onion	0°C	Bunched green: 3 - 4 weeks Pungent dry: 6 - 9 months
	Peas	0°C	1 - 2 weeks
	Radish	0°C	3 - 4 weeks
	Spinach	0°C	Up to 2 weeks
	Mushroom	0 - 1°C	7 - 9 days
	Sweet corn	0 - 1.5°C	The maximum duration including transit should not exceed 7 days
	Asparagus	0 - 2°C	2 - 3 weeks

Fresh produce	Recommended temperature (°C)	Storage life	
<i>Group 2: Low temperature (2 to 6°C)</i>			
Fruits	Apple	-1 - 4°C depends on variety	1 - 12 months
	Avocado	5 - 7°C for 'Hass'	Less than 6 weeks
	Cantaloupe	2.2 - 5°C	12 - 15 days
	Logan	4 - 6°C	2 - 3 weeks
	Lychee	2 - 5°C	3 - 5 weeks
	Orange	3 - 8°C	Up to 3 months
	Pomegranate	5 - 7°C	2 months
	Mandarin	5 - 8°C	2 - 6 weeks
	Passionfruit	7°C	2 - 4 weeks
Vegetables	Bok choy	0 - 5°C	
<i>Group 3: Mild temperature (7 to 11°C)</i>			
Fruits	Honeydew	7 - 10°C	7 - 15 days
	Pineapple	Ripe: 7 - 10°C Partially-ripe: 10 - 13°C	7 - 10 days 14 - 20 days
	Papaya	7 - 13°C	1 - 3 weeks
	Lime	9 - 10°C	6 - 8 weeks
Vegetables	Potato	Seed tubers: 4 - 5°C Tubers for fresh consumption: 7 - 10°C Tubers for frying: 10 - 15°C	5 - 8 months 1 - 2 months
	Beans	5 - 7.5°C	7 - 10 days
	Squash	5 - 10°C	2 weeks
	Zucchini	5 - 10°C	2 weeks
	Capsicum	7.5°C	3 - 5 weeks
	Chilli	7.5°C	3 - 5 weeks
	Choko	10°C	10 - 12 weeks
	Cucumber	10 - 12.5°C	Less than 14 days
	Eggplant	10 - 12°C	Less than 14 days
	Pumpkin	10 - 13°C	2 - 3 months
<i>Group 4: Relative high temperature (around 13°C)</i>			
Fruits	Watermelon	10 - 15°C	2 - 3 weeks
	Mango	13°C for mature-green; 10°C for partially-ripe/ ripe	2 - 4 weeks for mature green fruit, depending on variety
	Grapefruit	12 - 14°C	Up to 6 - 8 weeks
	Banana	13 - 14°C	2 - 3 weeks
	Lemon	14 - 15°C	4 - 6 months; may be held at 7 - 14°C for 1 month
Vegetables	Basil	12°C	2 weeks
	Ginger	12 - 14°C	6 months
	Tomato	Mature Green: 12.5 - 15°C Light Red: 10 - 12.5°C Firm-ripe: 7 - 10°C	2 weeks 3 - 5 days
	Sweet potato	13 - 15°C	4 - 6 months

* Combined sources from:

1. UC Davis Postharvest centre 2017, 'Produce fact sheet', University of California, viewed 21 December 2017, <http://postharvest.ucdavis.edu/Commodity_Resources/Fact_Sheets/>.
2. Gross, KC, Wang, CY & Saltveit, M 2016, *The commercial storage of fruits, vegetables, and florist and nursery stocks*, United States Department of Agriculture, California.
3. Watkins, JB & Ledger, S 1990, 'Recommended temperature and relative humidity for storage of fruit and vegetables', in Watkins, JB & Ledger, S, *Forced-air cooling*, Queensland Department of Primary Industries, Brisbane.

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