



Storage of Fresh Produce

Storing produce at the proper temperature is critical to obtaining the longest shelf-life. Table 1 provides the optimal storage temperature and shelf-life for each commodity. If a crop is stored at higher than ideal temperatures, the shelf-life will be reduced. Similarly, if a crop is stored at a lower than ideal temperature, freezing or chilling injury could compromise the shelf-life.

Table 1. Fruit and vegetable storage conditions and shelf-life.

Crop	Ideal Storage Temperature (°F)	Shelf-Life at Ideal Storage Temperature
Apples	30-40	1-12 months
Asparagus	32-35	2-3 weeks
Beans, Butter/Lima	37-41	5-7 days
Beans, Snap	40-45	7-10 days
Beets, Topped	32	4-6 months
Blackberries	31-32	2-3 days
Blueberries	31-32	1-2 weeks
Boysenberries	31-32	2-3 days
Broccoli	32	10-14 days
Brussels sprouts	32	3-5 weeks
Cabbage	32	3-6 weeks
Cantaloupe	32-36	5-14 days
Carrots, Mature	32	7-9 months
Cauliflower	32	3-4 weeks
Celery	32	2-3 months
Cherries	30-31	2-3 weeks
Collards	32	10-14 days
Corn	32	5-8 days
Cucumbers	50-55	10-14 days
Eggplant	46-54	1 week
Grapes	31-32	2-8 weeks
Kale	32	2-3 weeks
Lettuce	32	2-3 weeks
Mustard	32	10-14 days
Okra	45-50	7-10 days
Onions, Green	32	3-4 weeks
Onions, White	32	1-8 months
Parsnips	32	4-6 months
Peaches	31-32	2-4 weeks
Pears	29-31	2-7 months
Peas, English	32	1-2 weeks
Peas, Southern	40-41	6-8 days
Peppers, Bell	45-55	2-3 weeks
Plums	31-32	2-5 weeks
Potatoes, Irish	40	4-5 months
Potatoes, Sweet	55-60	4-7 months

Crop	Ideal Storage Temperature (°F)	Shelf-life at Ideal Storage Temperature
Pumpkins	50-55	2-3 months
Radish	32	3-4 weeks
Raspberries	31-32	2-3 days
Rhubarb	32	2-4 weeks
Rutabaga	32	4-6 months
Spinach	32	10-14 days
Squash, Summer	41-50	1-2 weeks
Squash, Winter	50-55	2-6 months
Strawberries	32	5-7 days
Tomatoes, Ripe	46-50	4-7 days
Tomatoes, Cherry	47-50	4-7 days
Turnips	32	4-5 months
Watermelon	50-60	2-3 weeks

From Hardenburg *et al.*, 1986. The Commercial Storage of Fruits, Vegetables, and Florist and Nursery Stocks. U.S. Department of Agriculture, Agriculture Handbook No. 66 (revised) 130 p.

At times, even when crops have the same ideal storage temperature, they should not be stored together. Some crops (mainly true fruits) produce high levels of ethylene, the ripening hormone. Ethylene can compromise the quality and reduce the shelf-life of crops by causing bitterness, softening, discoloration and stem detachment. Moreover, onions and peppers can impart off-flavors to apples and potatoes, if they are stored together. Commodities also differ in ideal relative humidity conditions. Most fruits and vegetables are composed of more than 80 percent water; therefore, the higher the relative humidity in the air surrounding the commodity during storage, the longer the shelf-life. The ideal relative humidity for the majority of fruits and vegetables is 90-95 percent; however, root crops, like onions and garlic, will be damaged and decay more quickly at high humidity and should be stored at 65-75 percent relative humidity, if possible. Table 2 shows crop storage compatibility.

Table 2. Storage compatibility.

Group 1. Temperature 32-36 °F, Relative Humidity 90-95%				
Apples*	Berries	Grapes	Pears*	Rutabagas
Asian pears*	Cantaloupe*	Parsnips	Plums*	Turnips
Beets, topped	Cherries	Peaches*	Radishes	
*These items can produce high levels of ethylene that can be detrimental to items in Group 2.				
Group 2. Temperature 32-36 °F, Relative Humidity 90-95%				
Beets, topped	Cabbage	Cherries	Greens	Radishes
Berries	Carrots	Corn	Lettuce	Rhubarb
Broccoli	Cauliflower	Grapes	Parsnips	Rutabagas
Brussels sprouts	Celery	Onions, Green	Peas	Turnips
Group 3. Temperature 32-36 °F, Relative Humidity 65-75%				
Garlic	Onions	Shallots		
Group 4. Temperature 50 °F, Relative Humidity 90-95%				
Beans [†]	Eggplant	Peppers	Squash, Summer	Tomatoes, Ripe
Cucumbers	Okra	Potatoes [†]	Squash, Winter	Watermelon
[†] Fifty degrees is slightly above ideal conditions for these commodities.				

Adapted from Boyhan *et al.*, 2009. Postharvest Handling and Transportation of Fruits and Vegetables. The University of Georgia Cooperative Extension Fact Sheet 100. 4 p.

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