



Temperature and Shelf-life

The most important factors affecting how long fruit and vegetables will last after harvest (known as shelf-life) are temperature, air moisture (or relative humidity), and physical damage. This fact sheet focuses on temperature as it directly affects the rate at which fruits and vegetables break down.

Rule of thumb: The approximate rule of thumb for the effect of temperature on the shelf life of harvested fruits and vegetables is:

Shelf life is halved for every 10 °C increase in temperature

For example, the average shelf-life for a ripe tomato

Temperature	Shelf life
10 °C	About one week
20°C	3 to 4 days
40 °C	about one day.

Note: Storing fruits and vegetables at very cold temperatures can also reduce shelf-life because produce can be damaged by freezing (< 0 C) or chilling (< 5 to 15 C) of subtropical and tropical fruits and vegetables

How to increase product shelf life: Keep harvested fruits and vegetables as cool as possible to increase shelf life:

1. Avoid or reduce direct exposure to the sun. Produce left out in the sun gains heat and may also become sun-burned
2. Place harvest boxes and bins in the shade or under loose covers if produce cannot be quickly removed from the field
3. Harvest when produce temperature is lower (e.g., early in the morning)
4. Provide shade during transport (e.g., use covers) and in the markets (e.g., use umbrellas to provide shade).



Figure 2. Higher temperature of tomatoes placed in the sun



Figure 1. Lower temperature of tomatoes placed in the shade

For more information visit: <http://ip.ucdavis.edu>

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Reference: Small-Scale Postharvest Handling Practices, Kitinoja and Kader, UC Davis

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