



Growing Edible Arizona Forests, An Illustrated Guide

Excerpt from *leafnetworkaz.org*

Edible Tree Guide

LEARN Values, Characteristics of Edible Trees

- Chill Hour Requirements

Chill Hour Requirements

Chill hour requirements are the cumulative number of hours that wintering trees must spend between the temperatures of 32°F and 45°F to stimulate proper bud growth, fruit set and fruit development after the winter dormant period. Edible trees that have chill hour requirements are shown at **LEARN - Edible Trees that Grow in Arizona** at *leafnetworkaz.org*. Specific chill hours are available in the table below called **Chill Hour Requirements for Selected Edible Tree Species and Low Chill Varieties**. See the **Edible Tree Directory** at *leafnetworkaz.org* for the range of chill hours needed for the full range of Arizona edible tree species. For information on cold air drainage conditions and tree placement, see *leafnetworkaz.org* **CHOOSE - Cold Air Drainage and Chill Requirements**.

Many fruit and nut trees that grow in temperate climates (climates that are moderate rather than extremely cold or hot) have chill hour requirements. Most temperate fruits, such as figs, pomegranates, olives, apples, pears, peaches, and plums require 200 to 2000 chill hours in the winter. Fruit and nut trees requiring long chill hours are suited to the higher elevations of Arizona (High Plateau/Mountain and High Mountain areas), while fruits with low chill requirements (600 hours or below) grow best in the desert zones (Low to High Desert regions). In general, the later a fruit or nut tree typically blooms, the more chill hours it requires.



Dormant pomegranate in winter is accumulating chill hours.

Determining tree chill requirements is not an exact science, so different sources have different ranges of chill hours. Many types of fruit and nut trees have low-chill varieties that can be planted in desert areas. Ask experts at local nurseries and Cooperative Extension offices what the chill hours are in your location and their recommendations for appropriate tree varieties for your areas. Experiment to see what grows best at your site.

ADDITIONAL RESOURCES

- Dave Wilson Nursery: Fruit Tree Chilling Requirement. <http://www.davewilson.com/product-information-general/special-topics/fruit-tree-chilling-requirement>
- University of Arizona Cooperative Extensions: Deciduous Fruits and Nuts for the Low Desert. <https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1269.pdf>
- University of Arizona Cooperative Extension, Yavapai County: Fruit Tree Chilling Requirements. <https://ag.arizona.edu/yavapai/anr/hort/byg/archive/chillingreq.html>
- University of California: The California Backyard Orchard: Tree Selection. http://homeorchard.ucanr.edu/The_Big_Picture/Tree_Selection/

CHILL HOUR REQUIREMENTS FOR SELECTED EDIBLE TREE SPECIES AND LOW CHILL VARIETIES

Edible Tree Type	Normal Chill Hour Requirements	Low Chill Varieties for use in Desert Environments
Almond	250-600 hours	All-in-one, Garden Prince, Neplus Ultra, Nonparell Almond
Apple	100-1500 hours, depending on cultivar	Anna, Adina, Beverly Hills, Dorsett Golden, Early Dawn, Ein Shemer, Fuji, Gala, Golden Delicious, Gordon, Granny Smith, Michel, Mutsu, Pettingill, Red Fuji, Tropic Beauty, Valmour, Winter Banana, White Pearmain
Apricot	300-1000 hours	Autumn Royal, Castlebrite, Earligold, Floragold, Garden Annie, Gold Kist, Golden Amber, Katy, New Castle, Modesto, Patterson, Perfection, Royal, Royal Rosa, Snowball, Southern Giant
Cherry	400-1400 hours	Capulin cherry, Brooks, Lapins, Royal Rainier, Royal Lee, Minnie Royal
Fig	<100 hours	Adriatic, Black Jack, Black Madeira, Black Mission, Brown Turkey, Celeste, Conadria, Denny, Excell, Flanders, Italian Everbearing, White Kadota, Osborn, Panache, Pasquale, Peter's Honey, Tena, Texas Everbearing, Verte
Jujube	50-450, some up to 700 hours	Chico, Lang, Li
Mulberry	300-450 hours	Kaester, Illinois Everbearing, Persian, Phil's White, Sullivan,
Peach	150-1200 hours	August Pride, Babcock, Bonanza, Babcock, Champaign, Chelena, Desert Gold, Desert Red, Earligrande, Earlitreat, Early Amber, Eva's Pride, Flordaking, Flordaprince, Flordagrande, Four-star Daily News, Giant Babcock, Gulf Queen, Halloween, May Pride, Mid Pride, Red Baron, Santa Barbara, Saturn, Scarlet Robe, Southern Rose, Springtime, Strawberry Free, Tropiberta, Tropic Beauty, Tropic Snow, Tropic Sweet, Vallegrande, Ventura
Pear	200-1500 hours	Baldwin, Cornice, Flordahome, Hood, Kieffer
Asian Pear	200-1500 hours	Chojuro, Ishiwase, Kikusui, Shinko, Shinseiki, 20 th Century, Tsu Li, Yakumo, YaLi
Pecan	400-500 hours	Cheyenne, Choctaw, Comanche, Sioux, Western Schley
Persimmon	100-400 hours	Chocolate, Fuyu, Giant Fuyu, Hachiya, Honan Red, Izu, Maru, Nishimura Wase, Tamopan, Tanenashi
Plum	150-1500	Beauty, Burbank, Burgundy, Catalina, El Dorado, Elephant Heart, Elsie, Friar, Golden Nectar, Green Gage, Gulf Gold, Gulf Ruby, Hollywood, Howard Miracle, Kelsy, Laroda, Late Santa Rosa, Mariposa, Methley, Queen Ann, Santa Rosa, Satsuma, Shiro, Weeping Santa Rosa. Note, Japanese cultivars require fewer than European and American cultivars
Pomegranate	50-300 hours	Angel Red, Eversweet, Fleishmann, Gold, Grenada, Utah Sweet, Wonderful
Quince	100-500 hours	Orange, Pineapple