

Growing Temperate Tree Fruit and Nut Crops in the Home Garden and Landscape

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Varieties for Planting in the Home Garden

Where you live (your "climate zone") will determine which varieties of temperate tree fruit and nut crops will perform best in your home garden, when fruits and nuts are harvested, and which pest and disease problems are more common. This table describes *selected* varieties that are suitable for home gardeners in California. The number of varieties could easily be doubled or tripled if all heirloom varieties and newer varieties available at nurseries or through mail order were included.

Certain varieties are superb eaten fresh. Other varieties tend to be used more often for cooking, canning, and freezing. Experts do not always agree about which varieties are best suited for various uses because individual tastes differ. Thus, the comments in the table regarding these issues are offered as points of interest only, not as official advice endorsed by the UC.

Apple (*Malus domestica*)

Apples are adapted to many areas of California. A cool climate is needed for coloration in most red varieties. Winter chilling requirements for most varieties (except "low chill") are 1200-1500 hr below 45°F. Foggy days and dews can cause heavy cosmetic russetting on fruit. There are hundreds of apple varieties, and some varieties have several strains, each with its own characteristics. Spur-type (short shoot growth and abundant spur production) varieties do poorly on dwarfing rootstocks; they are best grown on seedling rootstock. Several rootstocks are available (see below), which impart dwarfing and pest resistance. Apple varieties exhibit considerable genetic diversity. Some require as few as 70 days to mature; others take 180 days or more. Some varieties are very cold hardy; others are tender. Apples require cross-pollination from another variety that blooms at the same time and produces abundant, viable pollen. Many varieties are self-unfruitful and have sterile pollen; others are partially self-fruitful (not all of their pollen is viable); a few are self-fruitful. It is best to plant apple trees in Jan-March.

Rootstocks

- **Seedling** - Used for non-irrigated sites, low vigor sites, and weaker varieties. Very vigorous, produces large, full-sized trees that come into bearing late (7-10 yr.). Susceptible to woolly apple aphid. Trees can fill a 30 x 30 ft. space and grow 20 ft tall.
- **M111** - Semi-dwarf rootstock. Usually produces a tree 80% the size of the same tree on seedling rootstock. Tolerates many soil conditions. Reported resistant to woolly apple aphid. Imparts earlier bearing fruit than seedling, not as early as more dwarfing stock. Requires irrigation.
- **M106** - Semi-dwarf rootstock. Usually produces a tree about 65-75% the size of the same tree on seedling rootstock. Provides good anchorage. Imparts early bearing fruit and is easily propagated. Reported resistant to woolly apple aphid. Requires irrigation. Tree spacing ranges from 10 x 18 ft to 6 x 12 ft.
- **M7a** - Semi-dwarf rootstock. Usually produces a tree about 60% the size of the same tree on seedling rootstock. Performs well in irrigated replant situations, but tends to sucker. Spacing is same as M106.
- **M26** - Semi-dwarf to dwarfing rootstock. Usually produces a tree 30-50% the size of the same tree on seedling rootstock. Performs poorly in most California locations. May need a support system.
- **M9** - Dwarfing rootstock. Usually produces a very small tree less than 30% the size of the same tree on seedling rootstock. Commercially, the most frequently planted rootstock worldwide. However, a poor performer if not adequately managed. Poorly anchored, has brittle root system. Must be trellised.
- **Mark** - Dwarfing rootstock. Relatively new. Similar in size to M9. Very precocious. Poor performer in all apple growing regions.

Standard Varieties

- **Fuji** - Round to flat apple with a very sweet yellow-orange flesh. Skin color is red if given enough sunlight and cool temperatures. One of the best sweet eating apples. Stores well.
- **Gala** - Small to medium-sized, conic-shaped red apple with excellent flavor and keeping qualities. The best variety for the early season. Will not cross-pollinate 'Golden Delicious'.
- **Golden Delicious** - Conic-shaped apple with a long stem, yellow to green skin, yellow flesh, and russet dots. Sweet, juicy, fine-textured. #1 on the North Coast for fresh eating quality and processing. Stores well but susceptible to bitter pit, bruising, russeting. Erratic in self-fruitfulness.
- **Granny Smith** - Round, green to yellow-skinned apple that is quite firm. Keeps very well. Crisp flesh. If harvested early, it is green and tart. Late harvested fruit are yellow-colored and sweet.
- **Gravenstein** - Medium large fruit with short, fat stem. Skin color is greenish yellow overlaid with red stripes. Excellent flavor when fully ripe. Crisp, subacid, and aromatic. A good sauce and pie apple. Stores and ships poorly. High percentage of windfalls. Sterile pollen.
- **Jonathan** - Round, red apple with pure white flesh. Crisp, juicy, and slightly subacid. Excellent for eating fresh, sauce, and juice. Highly susceptible to mildew, fire blight, and Jonathan spot.
- **Red Delicious** - Conic-shaped apple with tapered base and five distinct lobes. Skin color varies from solid red to a mixture of red and green stripes. Crisp, sweet, mild-flavored yellow flesh. Many strains. Used fresh. Stores well.
- **Rome Beauty** - Round fruit with a deep cavity, no lobes, and little russet. Several strains, including the old standard and several new, solid red-skinned strains, such as 'Taylor' and 'Law'. Stores moderately well. Tree leafs out late, flowers late, and produces flowers and fruit on long spur growth that requires modification in pruning. Good for baking.

Harvest Period

Standard Varieties	San Joaquin Valley	Sacramento Valley	Central Coast	North Coast	Sierra Nevada Foothills	Southern California
Fuji	Oct.-Nov.	Late Oct.-Nov.	November	November	Late Oct.-Nov.	NA
Gala	Late June	Late June	Early July	Late July	Early July	Late June
Golden Delicious	Late August	Late August	September	Late Aug.-Sept.	September	NA
Granny Smith	Oct.-Nov.	Late Oct.-Nov.	November	November	Late Oct.-Nov.	NA
Gravenstein	Late June	Late June	Early July	Late July	Early July	NA
Jonathan	August	August	Late Aug.-Sept.	Mid Aug.-Sept.	Mid August	NA
Red Delicious	Late August	Late August	September	Late Aug.-Sept.	September	NA
Rome Beauty	Oct.-Nov.	Late Oct.-Nov.	November	November	Late Oct.-Nov.	NA

NA = Not Applicable due to chilling requirements

Spur Type Varieties: Strains (mutations) of the original varieties that have shorter internodes and are naturally dwarfing. Best on seedling rootstock.

Golden Delicious Spur: Nugget Spur, Goldspur, Yelo Spur, and Starkspur. Red Delicious Spur: Silverspur, Crimson Spur, Skyspur, Bisbee Spur, Spured Royal, Oregon Spur, Wellspur, Scarlets spur, Cascade Spur, Starkspur, Spur McIntosh, Granny Smith Spur, Greenspur & Granspur, Rome Beauty Spur, Law Spur & Spuree, Winesap Spur, Arkansas Black Spur.

Low Chill Varieties: These varieties are adapted to the low latitudes of Southern CA because they have low winter chilling requirements (<300 hr).

Anna, Beverly Hills, Dorsett Golden, Einshemer, Gordon, Tropical Beauty,

Antique Varieties: These varieties do well in much of California if there is adequate chilling and summer heat is not too intense. They are hard to find because they lack commercial value. Many have excellent flavor and perform well in home gardens.

Arkansas Black, Black Twig, Wagner, Baldwin, Cox's Orange Pippin, E. Spitzenburg, Winter Banana, Northern Spy, Winesap, Smith Cider, Red Golden, Newtown Pippin, Rhode Island Greening, Staymen Winesap, McIntosh, Sierra Beauty.

Early Summer Varieties: These varieties do not have the quality characteristics of standard varieties but ripen early when no other fresh apples are available. They are excellent for eating fresh right off the tree and make a good cooking apple.

- **Akane** - similar to Jonathan but earlier, good solid red color, white flesh, good for eating fresh and juice
- **Jerseymac** - large, good red color, excellent flavor, firmer than McIntosh, stores 4-8 wk
- **Jonamac** - similar to McIntosh but has better color, firmness, and storage life
- **Paulared** - high quality, white flesh, stores fairly well, tree requires thinning
- **Vista Bell** - terminal bearing habit, white-fleshed fruit, stores well

Disease Resistant Varieties: There are several scab resistant varieties developed in breeding programs for the Eastern States where this disease is quite severe due to summer humidity and rain. Some have received limited testing here under California growing conditions. In growing districts with extended spring rains, organic growers should experiment with some of these varieties to see how they perform in their orchards.

- **Enterprise:** A large fruited, late maturing, dense, crisp variety that has good keeping qualities. The color is dark red over a yellow green background. This is one of the best of the scab resistant varieties.
- **Florina:** A promising scab resistant selection from France, this variety has large, round-oblong, purple-red colored fruit. It ripens late and has a mixed sweet tart flavor.
- **Freedom:** Is a late season variety with large fruit and mild flavor; not completely immune to scab.
- **Goldrush:** A scab immune selection with Golden Delicious parentage, this fruit is late maturing, large, firm textured and tart with an excellent flavor. It stores well.
- **Jonafree:** A mid season apple compares with Jonathan, with soft flesh and uneven coloring.
- **Liberty:** One of the best quality apples of the disease resistant varieties, Liberty is very productive and requires heavy early thinning to achieve good size. It ripens in mid-season, has an attractive red color with some striping and a good sweet flavor.

- **Prima:** Is an early season, uneven ripening, moderate quality variety.
- **Priscilla:** Is a late season variety with small fruit, soft flesh, and mild flavor.
- **Pristine:** This moderate to large tart yellow apple is immune to scab and resistant to fire blight and mildew.
- **Red Free:** Is early July maturing, heat sensitive, a small-fruited variety that is susceptible to water core, sunburn and russet.
- **Williams Pride:** An early maturing, scab immune variety that is also resistant to fire blight and mildew. The fruit is medium too large with a round-oblique shape. It has an attractive red striped color on a green-yellow background