

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

**Paul M. Vossen<sup>1</sup> and Deborah Silver<sup>2</sup>**

<sup>1</sup>Tree Fruits and Nuts Farm Advisor

Sonoma and Marin Counties

University of California Cooperative Extension

<sup>2</sup>Technical Editor and Writer (free-lance)

## **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.

## Pear

(*Pyrus communis L.* and *Pyrus serotina L.*)

Of all the deciduous fruit tree species, pears are the most tolerant of wet soil conditions. But they perform best on deep, well-drained sites. Pears are the most pest-ridden of all fruit trees. They require the most sprays to keep clean. Pear trees get very large, requiring a 18x18 ft spacing, without dwarfing rootstock or summer pruning. Pear trees have a tendency to grow very upright and must be trained to develop a spreading growth habit. Most pear varieties are self-sterile and require cross-pollination by another variety to get a good crop set. One exception is the Sacramento River delta region where 'Bartlett' is self-fruitful, setting crops of parthenocarpic fruits. Fire blight (bacterial disease) is a serious problem in pear. 'Bartlett', which makes up 75% of the world's production and acreage, has a chilling requirement of about 1500 hr. Days from full bloom to harvest range from about 115 to 165 for European and Asian pears.

**Rootstocks:** Several different species are used for pear rootstocks, but they vary only slightly in their tolerance to "wet feet" (*Phytophthora* fungi) and size control.

- **Quince** (several strains) - Semi-dwarfing rootstock. Resistant to decline, root aphid, root rot, and most nematodes. Trees are 50% of standard size and are very productive. Compatible with Anjou, Comice, Flemish Beauty, and Swiss Bartlett. Graft incompatible with Bartlett, Bosc, Seckel, and Clapp; requires an interstem of Old Home. On poor sites trees tend to be runty. Fruit quality is lower than on other stocks. Quince is the only dwarfing stock available, and it is incompatible with some varieties.
- **Calleryana** - Moderately vigorous rootstock. Resistant to "wet feet" (*Phytophthora*), fire blight, root aphid, and most nematodes. Not the best stock for Asian varieties. Produces a tree a bit larger than French seedling.
- **French Seedling** - Seeds from Bartlett or Winter Nellis are used for this rootstock, which withstands both wet feet and dry conditions. This rootstock is resistant to oak root fungus but is very susceptible to fire blight. Good for general use.
- **Betulaefolia** - Best rootstock for most Asian pears. An oriental seedling. The most vigorous, producing the largest tree on the poorest site. Best tolerance of wet and drought conditions. Resistant to decline, blight, root aphid, and root rot. Poor stock for D'Anjou.
- **Old Home x Farmingdale** - A *P. communis* rootstock propagated by cuttings or layering. Somewhat dwarfing. Compatible with most varieties. Fire blight resistant.

### **European Pear Varieties** (*Pyrus communis L.*)

These varieties are mostly the traditional pear shape and are harvested green when they begin to drop off the tree. They are then stored at 33°F to 45°F for several weeks. As the fruit is brought up to room temperature it softens and turns buttery. If allowed to ripen on the tree certain cells within the fruit called stone cells develop and make the fruit gritty.

- **Bartlett** - The best quality pear fruit. Fruit are bell-shaped, have white flesh and excellent flavor. Tree is susceptible to fire blight. Fruit keep relatively well -- up to 2 months after maturing in August. 'Sensation' is a red Bartlett.
- **Bosc** - Mid-season variety that bears heavy crops regularly. Fruit are long, tapering, with a long neck and stem. Skin is golden russet brown.
- **Comice** - Non-consistent bearer. Excellent quality fruit, green color with red blush. Delicate skin, chubby shape. Very vigorous tree, which does best on Quince rootstock. Late maturing.
- **D'Anjou** - Good quality winter pear with excellent keeping qualities. A large, vigorous tree. Egg-shaped fruit with a small shoulder. Light green to yellow green color with a white flesh. French origin. There is a red strain called 'Red Anjou'.

- **Seckel** - A small, pear shaped fruit the is reddish green in color with a very dense sweet and flavorful flesh. Excellent quality for the home orchard. It is resistant to fire blight and pear scab.
- **Winter Nellis** - Medium-small, almost round fruit with light russeting over a green skin. Resistant to blight. Large tree. Regular producer but late.

### Harvest Period

Standard Varieties	San Joaquin Valley	Sacramento Valley	Central Coast	North Coast	Sierra Nevada Foothills	Southern California
Bartlett	August	August	Late August	Late August	August	NA
Bosc	October	October	October	October	October	NA
Comice	October	October	October	October	October	NA
D'Anjou	September	September	September	September	September	NA
Seckel	September	September	Late Sept.	Late Sept.	September	NA
Winter Nellis	October	October	October	October	October	NA

NA = Not Applicable due to chilling requirements

**Low Chill Varieties:** These pear varieties are adapted to the low latitudes of Southern CA because they have low winter chilling requirements (<300 hr). Baldwin, Carnes, Florida Home, Fan Stil, Garber, Hengsan, Hood, Kieffer, Orient, Pineapple, Seleta, Spadona

### Asian Pear Varieties (*Pyrus serotina* L.)

Asian pears are round-shaped fruit that remain very firm, crisp, and juicy when eaten ripe. Also known as salad pears or pear apples. The best rootstock for these varieties is Betulaefolia. Generally require cross-pollination. Fruit must be heavily thinned in May/June (*Pyrus serotina* L.) to size properly. Harvest by taste and pick exposed fruit first.

Unlike European pears, Asian pears ripen on the tree.

- **Chojuro** - Greenish-brown to brown russet skin. Coarse, tasty flesh.
- **Hosui** - Brown skin, juicy white flesh with a sweet aromatic flavor.
- **Kikusui** - Yellow-green skin. White flesh, excellent flavor. Fruit drop from tree when ripe.
- **Niitaka** - Very large fruit, juicy, with an aromatic flavor
- **Nijisseiki** - Also known as Twentieth Century. Excellent quality. Very popular variety with yellow-green skin.
- **Shinko** - Brown russet skin, firm crisp flesh, and very aromatic flavor.
- **Shinseiki** - Amber yellow skin. White flesh that is crisp, but softens rapidly; less flavor than other varieties.
- **Tsu Li** - Blooms early. Use Ya Li (see below) as pollinizer. Chinese type (pear shape). Light green color, crisp tasty flesh.
- **Ya Li** - Blooms early. Use Tsu Li (see above) as pollinizer. Chinese type (pear shape). Light, shiny yellow color, crisp tasty flesh.

### Harvest Period

<b>Standard Varieties</b>	<b>San Joaquin Valley</b>	<b>Sacramento Valley</b>	<b>Central Coast</b>	<b>North Coast</b>	<b>Sierra Nevada Foothills</b>	<b>Southern California</b>
Chojuro	Late July	Late July	August	early August	early August	August
Hosui	Late August	Late August	Sept.	Early Sept.	Late Sept.	Early Sept.
Kikusui	August	August	Late August	Mid Sept.	Late August	NA
Niiataka	Late Sept.	Late Sept.	Mid Oct.	October	October	Late Sept.
Nijisseiki	August	August	Late August	Mid Sept.	Late August	NA
Shinko	Late Sept.	Late Sept.	Mid Oct.	October	October	Late Sept.
Shinseiki	August	August	Late August	Mid Sept.	Late August	NA
Tsu Li	Late Sept.	Late Sept.	Mid Oct.	October	October	Late Sept.
Ya Li	Late Sept.	Late Sept.	Mid Oct.	October	October	Late Sept.

NA = Not Applicable due to chilling requirements