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FRUIT TREES
See page 36 for tips on planting Bare Root trees and page 37 for an explanation of Chill Hours

APPLES


‘EIN SHEMER’—The Ein Shemer apple was developed in the 1950’s by Abba Stein a member of the kibbutz, or agricultural collective known as Ein Shemer in Israel. First imported to the United States in 1967. Very low chill requirements make it best for hot climates along the Atlantic and Gulf Coasts as far south as south Florida! It is a large Golden Delicious type with a slightly more tart flavor. Greenish-yellow apples in early summer. Great for baking or eating fresh. 100-250 chill hours. Self-fruitful, but produces large crop when planted with another low chill pollinator such as Anna or Dorsett Golden. Excellent pollinator for Anna.

3-IN-1 LOW CHILL APPLE—Can’t make up your mind? Don’t have much space? This tree has three varieties (‘ANNA’ ; ‘DORSETT GOLDEN’; ‘EINSHEMER’) grafted to a single rootstock. 100-200 chill hours. Self-fruitful. M-111 root stock.
AVOCADOS

‘BRAZOS BELLE’—Mexican. Type A. Medium to large shiny black-skinned fruit (6-8 oz) with rich nutty flavor. Vigorously growing tree; ripens August to September. Very cold hardy, down to 15-18F! Originated in Pearsall, TX. Similar to Wilma™.

‘DAY’—Hybrid Guatemalan x West Indies. The easiest avocado to fruit in a pot. Plants will fruit at about 3 feet in height. Day avocado is green, smooth skin and is shaped like a club. The fruit is of very good quality and has a nice buttery consistency. The slender tree is very cold tolerant into the low twenties. The fruit will hold on the plant for six months with ripening occurring from July to September.

‘DON JUAN’—Mexican. Type A. Sometimes called ‘Aravaipa’. Reported to be of unknown origin in the Aravaipa Canyon in Arizona. The mother tree is over 150 years old and stands 50 ft. tall by 50 ft. A nice-sized avocado with speckled green-brown skin and exceptional quality flesh. Flavor is described as like Haas. Hardy to the mid-teens (14 degrees F) and tolerates heat to 120 degrees F.


‘LILA’—Mexican. Medium-sized pear-shaped fruit that is very rich in flavor. Thin skin is green in color. Tight growing vigorous tree matures to ~10 –15 feet tall. Ripens August to September. From Uvalde, TX. and similar to Opal™.

‘MEXICOLA GRANDE’—Mexican. Type A. Seedling selection of ‘Mexicola.’ Tall spreading tree with fruit that is 15-25% larger than ‘Mexicola’ and somewhat rounder in shape with better seed to flesh ratio. Skin is paper thin and purple/black in color. High quality flesh with high oil content. Hardy to upper teens; ripens in August to October.
‘PONCHO’—Mexican. Type B. Originated as a seedling in Stuart Place, TX. Fruit is oval to slightly pear-shaped and is light green in color with very thin skin. Medium-sized fruit, cold hardy to the mid-teens, and ripens August to September.

### AVOCADO TIPS:
For the first few years after planting, avocados need protection from winter cold and from extended hours in direct sun. Avocados must be planted where they have good drainage. They generally grow about 25'-30' tall by 20' wide. West Indies rootstock.

Note: Avocados ripen AFTER picking.

Protection from the sun: Avocado trees have almost no brown, woody bark like other plants. The main branches and stems are bright green and photosynthesize to provide food and energy for your tree, just like the leaves. This green tissue is very susceptible to sunburn. Young trees do not have enough leaves to shade this bark and require special care during the first year or two.

One option is to paint the green trunk and main branches with a whitewash. This can be easily made by diluting a white latex paint with an equal part of water and painting it on the trunk and branches, but not the leaves. Reapply as needed until the tree grows enough foliage to shade itself, usually within a year or two.

Another option is to build a simple structure of metal, wood or PVC to which can be attached a cloth that will keep the mid-day and afternoon sun off the trunk. A burlap-covered cage about a foot higher than the tree is commonly placed around the tree in the Valley for both shading and wind protection.

### AVOCADOS—more than you ever wanted to know

Types (Races) of Avocado

**W - West Indian type** avocados produce enormous, smooth round, glossy green fruits that are low in oil and weigh up to 2 pounds. They are summer- or fall-ripening. They have leathery, pliable, non-granular skin. The leaves are not aromatic. Grown in Florida, West Indies, Bahamas, Bermuda, and the tropics of the Old World. Not grown in California.

**G - Guatemalan types** produce medium ovoid or pear-shaped, pebbled green fruits that turn blackish-green when ripe. Guatemalan avocados are primarily winter and spring ripening. Skin varies from thin to very thick and is granular or gritty. The flesh is rich in flavor and relatively high in oil content. Grown in both Florida and California.

**M - Mexican varieties** - the fruit of are small (6 - 10 ounces) with paper-thin skins that turn glossy green or black when ripe. The tender skin clings to the flesh. The flesh has a high oil content, up to 30%. Leaves have a pronounced anise-like scent and are favored for cooking. The tree is more cold-resistant.
Flowering and Pollination: Type A and Type B

The avocado has a ‘complete’ flower, but with an unusual behavior known as ‘protogynous dichogamy’. The avocado flower has both functional male and female organs in the one flower, but opens and closes twice over a two-day period — the first day as functionally female and the next as functionally male. Each opening stage only lasts about half a day.

In general, on a single tree all the open flowers will be synchronized. That means they will be all functionally male or all functionally female. The avocado pollen of one tree is compatible with itself and quite capable of pollinating its own flowers — known as self-pollination. The unusual flowering behavior is to reduce the likelihood of this occurring — by minimizing the amount of own-pollen about when female stages are receptive.

To further maximize the likelihood of cross-pollination some trees will open first in the morning as functionally female, close and then reopen the next afternoon as functionally male (type A flowering sequence). Other trees open first in the afternoon as functionally female, close and then reopen the next morning as functionally male (type B flowering sequence).

The timing of these stages determines the classification of varieties into either type A or B flowering.

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CHERRY of the RIO GRANDE

CHERRY OF THE RIO GRANDE (*Eugenia involucrate* Syn. *Eugenia aggregata*)—Beautiful large shrub/small evergreen tree has very attractive dark glossy-green waxy leaves and very ornamental bark. Matures to 12-15 feet high. White blooms for several weeks beginning in March followed in about 3 weeks by deep purple cherry-sized fruit. The 1” oblong fruit has a sweet juicy cherry flavor eaten fresh or can be picked at maturity, frozen for later use or used in jellies, jams and juices. Established trees are hardy to 20 degrees. Native to Brazil.
FIGS

*All on own roots*

‘IMPROVED CELESTE’ (also called O’Rourke)—Great for our area. Purplish brown skin, pink flesh, medium-sized fruit with excellent flavor. Closed eye and very cold hardy.

‘ISCHIA’—Also called Verte. Ripens about the same time as LSU Purple. Very sweet and good for drying. Since they ripen with their outside color green, they may fool the birds. The dark red flesh is in total contrast to the green skin. Strawberry is used to describe the inside color of the fruit. Harvest Ischia when the fruit has a soft give when squeezed. Compact growth habit, a natural semi-dwarf tree. Closed eye.

‘ITALIAN BLACK’—A broadly spreading shrub or small tree with a height of 25 feet and similar width. Produces very large-sized almost jet-black fruit with sweet deep red pulp in two distinct crops, an early crop on old wood and a late summer (July) crop on new wood. Closed eye.

‘ITALIAN HONEY’—Also called Lattarulla. This fig is known in Italy as Figo Bianco. Compact trees mature to about 12-15 ft tall and wide and are very productive of both breba and fall crops. The mid-size greenish yellow fruit has very sweet amber flesh. Second crop ripens late July-early August. It is very good dried and eaten fresh. Excellent during dry harvest seasons but will have some spoilage due to wet or humid weather. Adapts well to growing in a container. Slightly open eye.

‘LITTLE RUBY’—Slow growing, dwarf fig tree matures to ~3-6 feet high. Little Ruby’s small, bite-sized, sweet ruby red to maroon figs are tasty and attractive on the tree. Great container fig and very unique. Produces an early, strong breba crop on the previous year’s shoot growth.
‘LSU GOLD’—Large, light yellow, very sweet figs on a rapidly growing tree. Heavy producer with excellent resistance to splitting. Closed eye.

‘LSU PURPLE’—Delicious mild flavor with high sugar content. Medium-sized purple fig with strawberry pulp. Ripens in early July and is a heavy producer. Very cold hardy. Note: Preserves made from this fig taste great, but the almost black color can be off-putting. Closed eye.

‘OLYMPIAN’—*Ficus carica* “Olympian”. Introduced in 2014, the Olympian Fig produces huge fruit—sometimes as large as a tangerine. Skin is purple with a very sweet red to purple flesh. Produces an early breba crop. Fruit can withstand temperatures into the teens. The plant itself is hardy down to zero degrees once well established even though it will freeze to the ground only to return in the spring and bear the following summer.

This fig was discovered in Olympia, Washington, by Denny McGaughy and is a choice variety for cool climates as well as warmer regions. This is an heirloom that had been growing in a protected site for over 100 years. Olympian was confirmed to be a distinct cultivar via DNA testing when compared with the 270 varieties at the USDA ARS Germplasm Repository in California.

‘TEXAS EVERBEARING’ (BROWN TURKEY)—Medium to large-sized, yellowish-brown, sweet fruit with amber flesh, mostly without a neck. Cold hardy. The tree is vigorous, very large, and productive. The crop starts ripening in mid-July and bears well into the fall. It fruits on new growth if winter killed. Often bears two crops a year. Closed eye.

‘WHITE MARSEILLES’—This is a spectacular old variety from Southern France, brought to the U.S in the 1700s by fig enthusiast and US president, Thomas Jefferson. These figs are especially suited for southern climates, Jefferson noted that he had to protect plants from the cold at his home in Virginia. These are a gorgeous white fleshed fig with a green-yellow outside. Jefferson, who really knew his figs, claimed that they were the best he had ever eaten. The connection with Jefferson seems to be confirmed through documents on file with The Jefferson Foundation.
What’s in a name? With honey sweet amber flesh and a lightly tart yellow green outer skin the **Blanche** Fig (its original name according to Dr. Ira Condit) has long been a favorite for fresh eating or drying. A vigorous fig that produces even in areas with short growing seasons it is known to produce two good crops where summers are longer. In the Southern US it is known as the **Lemon** Fig and is popular in the Northwest and California for home orchards where it is known as **White Marseilles** or **Lattarula**. A compact tree which can be adapted for container production.

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**Did you know...**

Figs made their first commercial product appearance with the 1892 introduction of Fig Newtons® cookies.

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**LOQUAT**

**LOQUAT (Japanese Plum)**—Large evergreen shrub or small tree with a rounded crown, short trunk and woolly new twigs. The tree can grow 20 to 30 ft. high, but is usually much smaller than this--about 10 ft. The boldly textured foliage adds a tropical look to the garden. Small, white, sweetly fragrant flowers appear in fall or early winter. Fruit grows in clusters, and are oval, rounded or pear-shaped, 1 to 2 inches long with a smooth or downy, yellow or orange, sometimes red-blushed skin. The succulent, tangy flesh is white, yellow or orange and sweet to subacid or acid, depending on the cultivar. Good eaten fresh or used in a variety of recipes. Each fruit contains three to five large brown seeds. The loquat is normally pollinated by bees.
MULBERRY

‘PAKISTAN’—Long (3 inches), firm, red to black, sweet fruit. Non-staining juice. Month-long early summer harvest. Fruit can be used fresh and for pies, jams, and jellies. Large, vigorous, disease-resistant tree. Usually grows 15’-20’ tall.

OLIVES

‘ARBEQUINA’—Spanish variety. Compact tree matures to 12-15’ tall with weeping growth habit and usually bears fruit at 3 years old. Black fruit has excellent flavor and can be used for oil or table fruit. Ripens in mid-fall. Frost resistant. Requires excellent drainage and full sun. Self-fruitful, but higher yields when paired with a pollinator. Own root.

PASSIONFRUIT

PURPLE PASSIONFRUIT (*Passiflora edulis*)—shallow-rooted, tendril-climbing, evergreen vine that typically grows to 10-15’ long and to 3-5’ wide and produces extremely showy bowl-shaped fragrant purple-white passionflowers (each to 3” wide) followed by edible, ovoid, purple passionfruits (to 2” across). Each fruit has a rough rind with as many as 250 tiny seeds inside, each seed being surrounded by an orange sac containing juice. Ripe fruits are edible off the vine or incorporated into a variety of food products such as beverages, jellies, fruit salads and sherbets. Native to southern Brazil through Paraguay to northern Argentina.
**PEACHES**

2-in 1 Low Chill—Tree will have a combination of two of the following: ‘May Pride’, ‘Desert Gold’, ‘Mid Pride’, ‘Flordaprince’, or ‘Eve’s Pride’. Nemaguard root stock.

‘AUGUST PRIDE’—Large, all-purpose yellow freestone for mild-winter climates. Sweet, aromatic, rich flavor, one of the very best. Good for fresh fruit, preserving, baking and dehydrating. Ripens 3-4 weeks after Mid-Pride. Chilling requirement less than 300 hours. Self-fruitful. (Zaiger)


‘BONANZA’ MINIATURE—A very special, true dwarf peach tree with good tasting fruit. Beautiful miniature tree with a full, lush growth habit, and it only grows 5’-6’ tall. Profuse pink blooms followed by heavy crops of fruit with sweet yellow meat. Works well in a container. Ripens in June. Self-fruitful. 250 or fewer chill hours. Lovell root stock.

‘EVA’S PRIDE’—Medium to large-sized yellow freestone. Delicious, fine flavored peach with very low chilling requirement ripens 2-3 weeks before Mid-Pride. Recommended as early season peach for moderate climates. 100-200 chill hours. Citation root stock.

‘MAY PRIDE’—Very early peach for warm winter climates. Ripens in May. Delicious, sweet and tangy, semi-freestone when fully ripe. Very large for such an early peach. Large, showy pink blossoms. Self-fruitful. 150-200 chill hours.
‘MIDPRIDE’—Exceptional flavor and dessert quality. Best yellow freestone for warm winter climate of Houston area. Blooms early season. Mid-season ripening, self-fruitful, 250 chill hours. (Zaiger) Citation root stock.

PEARS

‘ACRES HOME’ (or Akers Home)—Acres Home is precocious, bearing at about 3 years. It has a naturally spreading shape. The chill hour requirement is only 300 to 350. Acres Home occasionally gets some fire blight but it does not seem to descend down the limb. The fruit is very large with a traditional pear shape and with a red blush on the exposed side. It bears heavily every year. Great landscape tree. Pollinate with Southern Queen, Southern Bartlett, Meadows, Tennessee or other pear. An outstanding pear for the Houston area. Consistent taste test winner.

‘HOSUI’—Asian. Consistently rated the best tasting Asian pear at fruit tastings. Large, juicy, sweet, flavorful, refreshing, apple-crisp fruit. Brownish-orange russeted skin. Will produce without a pollinator, but better yield with a pollinator. Pollinated by Shinseiki, Shinko, or 20th Century (also called Nijisseiki) or an early blooming European pear. 300-400 chill hours.

‘PINEAPPLE’—This popular large golden-russet colored pear has crisp flesh with a sweet-tart pineapple flavor. The tree is very productive and bears at an early age. Ripens July-August. The Pineapple pear is self-fertile but does much better with a pollinator. 200 chill hours. Great for eating fresh, canning, or preserving.

‘CHOCOLATE’—Pollination-variant. Also called ‘Maru’. This unique Japanese persimmon, when pollinated, has seeds that make the flesh turn a chocolate brown in color. The medium size, conical shaped fruit develops a rich, complex flavor and is best when slightly soft. Sweet, nutmeg, spicy flavor and juicy! Technically speaking, the Chocolate Persimmon belongs to the obscure class of “pollination-variant, nonastringent” persimmons. If the flower from which the fruit arose was not pollinated, no seeds occur, meaning the flesh remains yellow-orange and stays mouth-puckeringly astringent until it turns soft, like the familiar Hachiya. Even stranger, fruits that have been only partially pollinated can be brown and sweet on one side, pale and puckery on the other. It is difficult to tell from the outside if a fruit has been pollinated. Chocolate acts as a good pollinator for other varieties that require pollination to set consistent crops. Ripens late October to early November.


‘HACHIYA’—Astringent. Large, acorn-shaped fruit with deep red-orange skin and deep orange flesh. Sweet, flavorful, astringent until soft-ripe. A ripe Hachiya is sweeter than Fuyu. Excellent for eating fresh scooped like pudding straight out of the skin and for drying or baking. 200 chill hours. Virginiana root stock.

‘SAIJO’—Astringent. Old Japanese variety that is ranked as the best tasting persimmon by gourmets—small orange plum shapes balls of honey. Excellent fresh (allow to ripen off the tree until soft) or dried and stores well. The sweet, yellow flesh of this fruit has very few seeds, making
it perfect for fresh eating. In late fall, the leaves turn orange, yellow and red. Upright growth habit with tree maturing to 14-20 ft. tall. May prune to maintain 8 ft. tree. Harvest from September into October. Virginiana root stock.

**TIP:** There are generally two types of persimmon fruit— astringent, which should be left to soften and ripen on the tree to avoid bitterness; and non-astringent, which can be eaten while still firm.

Captain John Smith wrote famously in 1607 of his encounter with an unripe American persimmon: “It will drive a man’s mouth awry with much torment.”

*Diospyrus virginiana* root stock, the common American persimmon, is an excellent rootstock for the cultivated oriental persimmons grown in the South and in Texas.

**PLUMS**

2-IN-1—For gardeners who want the most fruit from the least space, multi-grafted trees are great. Each tree has two different plum varieties selected for the gulf coast area and for their ability to cross-pollinate. Check tree tag for specific varieties: ‘Methley’, ‘Beauty’, ‘Santa Rosa’, ‘Burgundy’, or ‘Golden Nectar’. Semi-dwarf tree. Citation root stock.

2-IN-1 CHERRY-PLUM—Don’t have the space for 2 trees? This tree has both ‘SPRITE’ and ‘DELIGHT’ grafted to a single rootstock. ‘DELIGHT’ produces 1 1/4 inch purplish-black fruits with amber flesh and a rich, tart flavor. Heavy bearing. Ripe fruit holds on tree for 3-4 weeks or longer. ‘SPRITE’ produces 1 1/4 inch fruits which are freestone and sweet, with a mild, pleasing flavor. Heavy bearing like ’Delight.’ Ripe fruit holds on tree for 3-4 weeks or longer. About 400 chill hours. Citation root stock.
‘BEAUTY’—Sweet, flavorful plum with good production in coastal climates. Red over yellow skin, amber flesh is streaked red. Ripens in late May. Partially self-fruitful, but better yield with pollinator. Pollinate with Santa Rosa, Methley or any other low chill plum. 250 chill hours. Myro 29C root stock.

‘BURGUNDY’—Medium-sized with maroon-colored skin with semi-freestone deep red, mellow, sweet flesh. This self-fertile Japanese plum is good for mild winter areas, yet is cold hardy. Ripens early July, but keeps well on the tree until mid-August. Tree has narrow, upright growth habit and is a good pollinator for other plums. 250-350 chill hours.

‘METHLEY’—Juicy sweet, red flesh with mild flavor. Attractive tree, heavy bearing and vigorous. Ripens in June-July. 250 chill hours or less. Self-fruitful.

POMEGRANATES

Eat arils (seeds and seed coating) whole – add to salads and other dishes. High in vitamin C and an excellent source of antioxidants. Unless otherwise noted, they form small 10’-12’ multi-trunked trees or large shrubs with the ornamental bonus of gorgeous trumpet-shaped orange flowers giving way to the delicious fruit. Pomegranates are easy to grow, like full sun and a moist-well drained soil. They respond well to pruning. On their own roots. Note: Most cultivars are self-compatible, and set fruit without a pollinator, but fruit setting can be improved with pollinators.

‘EVERSWEET’—Very sweet, virtually seedless fruit. (Even immature fruits are sweet.) Red skin, clear (non-staining) juice. Harvest late summer through fall. Suitable for coastal or inland climates. 8-10 ft. arching shrub, or train as tree or espalier. Large, showy, orange red flowers. 150 hours. Self-fruitful. Soft seeds.
‘PARFIANKA’—Vigorous tree sets big crops of small to medium sized, yellow to blush red fruit, with sweet-tart flavor, soft edible seeds, and highly ornamental flowers. Can be grown as a shrub or tree and kept to any height. Parfianka pomegranate always receives the highest praise for overall flavor in taste tests. The Parfianka is naturally dwarf in habit and produces heavily and dependably, even at a young age. Great for juice or fresh eating. 150-200 chill hours. Self-fruitful. Soft seeds.

‘SHARP VELVET’—Large sized pomegranate with a very appealing, unique, mildly acid, refreshing flavor. Fruit has a dark red exterior and dark seeds the color of crushed red velvet. Upright growing plant sets huge crops of highly ornamental fruit and can be kept any height with summer pruning. Eat fresh or use in cooking. An excellent source of antioxidants. Requires 150-200 chill hours. Self-fruitful.

STARFRUIT

Starfruit are small, symmetrical, evergreen trees that fruit very prolifically after producing pink-lavender blooms. The star-shaped fruit is commonly eaten fresh, in salads, as garnishes, and in beverages. The flavor is sweet and citrus-like with hints of apple, pear, and grape. Protect young trees from freezing temperatures. Mature trees hardy to 28 degrees. Trees reach 12’-30’ high. Native to Malaysia, Indonesia, and southern China.

Thrive in subtropical and tropical climates. Zone 10 to 11, but can be grown in zone 9 with protection from frost. Older trees are more tolerant of frost, but growth stops at 55 to 60 degrees and prolonged exposure to temperatures below freezing could kill the tree.

Specific variety available unknown at time of publication.

Did you know...

Starfruit produces small, bell-shaped flowers arranged in clusters that grow from the axils of leaves. Flowers are lilac colored. They contain both types of reproductive organs (perfect flowers).

Starfruit blooms all year round. Flowers attract bees, which are responsible for the pollination of this plant.
GRAPEFRUIT

‘COCKTAIL’—Small to medium-size citrus, sweeter and less acidic than regular grapefruit. This hybrid has a dark, yellow, thin rind with a deep yellow flesh. Great for juicing. Carrizo root stock.

‘RIO RED’—Deep red flesh with the typical sweet-acid taste of a red grapefruit. Very few seeds, thick rind, and high juice content. Large size tree, early to mature. A Texas A&M release. Moderately cold hardy. Carrizo root stock.

‘RUBY RED’—‘Ruby Red’ discovered as a limb sport (a mutation of one limb which has different fruit characteristics than the rest of the tree) on a 'Pink Marsh' tree in 1929 by A. E. Henninger of McAllen, TX, who was granted a patent (U.S. Plant Patent No. 63) in 1934. The fruit is of excellent quality, seedless (i.e., 0 to 6 seeds), red-fleshed, oblate and thin skinned. The fruit usually has a red blush on an otherwise yellow peel. Carrizo root stock.

KUMQUATS

With kumquats, the sweet flavor is in the skin—eat the entire fruit!

‘CHANG-SHOU’—Larger fruit than Meiwa, fewer seeds and mild very sweet flavor. Grows into a small thornless tree 3’-5’ tall which is also suitable for container growing. Ripens late fall and is very cold hardy. Trifoliate root stock.
'MEIWA’—A great all around kumquat—sweet, acidic, relatively juicy, and bears heavily. Very cold hardy. Bushy growth habit and an ornamental landscape plant or container plant. May grow 10’-12’ tall in the ground, but smaller in container. Trifoliate root stock.

LEMONS

‘FROST EUREKA’—Classified as a true lemon (like Lisbon). *Frost* does not refer to special cold hardiness, but to the lemon’s developer, geneticist and breeder, H. B. Frost, at the Citrus Research Center, Riverside, California. Tree grows vigorously with a spreading and open form. Eureka lemon trees are slightly less cold-hardy and are less thorny than Lisbon lemon trees. The new growth and flowers are tinged with purple. Eureka bears multiple crops per year, but the main season is late winter, spring, and early summer. The fruits are borne on the outside of the canopy and are frequently held in clusters. Eureka lemons are medium-small, elliptical in shape, and sometimes longitudinally ridged. The fruits usually have a slight neck and a short nipple. The thick, soft rind is yellow at maturity, has sunken oil glands, and is slightly textured. The flesh is pale greenish-yellow, low-seeded, and very acidic. Excellent lemon for general use. Trifoliate root stock.

‘IMPROVED MEYER’—Classified as a hybrid since it is a lemon-orange cross. Produces a large, juicy, very good quality lemon. Cold tolerant to the low to mid 20s. May freeze to the ground in a hard freeze but if graft union is protected produces again within 18 months. Flowers in spring and fruits in fall. Can produce 2 crops a year if it’s in a protected area. Sometimes called Valley Lemon here in Texas.

‘IMPROVED MEYER’ DWARF—As above, but grafted onto dwarfing rootstock to reduce the size of the tree. Flying Dragon root stock.
‘IRANIAN’—Large fruit, similar to the Ponderosa, but more cold hardy. Thin skin. Very juicy. Juice is sweet when squeezed fresh; tartness develops as it sets.

‘LISBON’ SEEDLESS—Classified as a true lemon (like Eureka). Medium sized vigorous, dense growing tree with light green foliage and many thorns. Similar to Eureka, but hardier and more heat tolerant. Fruit grows more to the inside of the tree canopy and is medium to large size with thick, bright yellow rind. Very juicy and highly acidic. Ripens late September to early October and holds well on the tree. Great lemon for general use. Carrizo root stock.

‘NEW ZEALAND LEMONADE’—Parentage is questionable, but may be a cross between an orange and a Meyer lemon (or maybe a mandarin and another sweet lemon). First cultivated in the 1980’s, this is a popular variety in New Zealand gardens. Tree matures to about 10 feet high and has distinctive black colored branches. The fruit has the appearance and shape of a lemon and it is easily peeled and segmented. It is sweet and juicy with a low acid content, tasting of lemonade. Fruit is ripe when light green in color and is devoid of bitterness. It can easily be consumed fresh, juiced, added to mixed drinks, or used to make marmalades with other citrus. Carrizo root stock.

‘UJUKITSU’—A cross between an orange and a lemon (or maybe a grapefruit and tangerine), the fruit is sweet and juicy and tastes like lemonade. Thick rind peels easily like a mandarin and the sections separate easily. Shape of fruit is like a Minneola tangelo with more pronounced "neck." The flesh is yellow, somewhat seedy. Fruit often bigger than a softball. Tree grows slower than most citrus trees to mature height of 20’.

‘VARIEGATED PINK’—Vigorous, open growing tree with green/yellow/white variegation. Makes a very attractive landscape plant. Often ribbed and slightly smaller fruit. Young fruit is variegated yellow and pink, gradually fading to yellow. Interior flesh is light pink.
LIMES

‘KAFFIR’—Often referred to as a Makrut Lime because Kaffir is considered offensive in some languages. The aromatic leaves of this attractive citrus tree are an extremely important flavoring in Asian and Middle Eastern dishes. The two-part leaves are glossy green and are used in a similar fashion to bay leaves. The bumpy green-skinned fruit matures to yellow and is mostly ornamental, but the zest and juice are used in some dishes. The flowers can be used in tea. Grows 8’-20’ tall and is mildly frost hardy, but should be protected from hard freezes. Does well in a large container and can be kept pruned and shaped. Full sun, well-drained soil.

‘KEY LIME’ (THORNLESS)—Sometimes called Mexican Lime. A small, ever-bearing, extremely productive tree of excellent quality fruit which is great for culinary use. Fruit has a thin skin, pale yellow color, strong lemon-lime aroma, and a sharp clean sour taste. Bears year round. A very attractive container plant, but it is not cold tolerant and requires winter protection.

‘PALESTINIAN SWEET’—Also called Indian sweet lime, features juicy limes virtually devoid of acidity. Sweet lime trees grow up to 7 feet in height, sporting lots of thorns and pale green foliage. While the tree produces fruit year-round, most trees feature fragrant white blossoms in late summer or fall followed by fruits that appear in August through May. Mature fruits turn a orangish-yellow color when ripe, featuring pale yellow flesh with minimal seeds. Great for growing in a container.

‘PERSIAN’—Persian limes are also known as Tahiti limes and is the variety most commonly found in grocery stores. Origins unknown but is suspected to be a hybrid of the
Mexican lime and citron, a huge, yellow-green, lumpy lemon. Botanists believe this variety was introduced to the Mediterranean area via Persia (now known as Iran). It was carried to Brazil by Portuguese traders and eventually made it to California in the latter half of the 1800s.

Handsome, compact, medium-sized tree matures to 20’ h x 20’ w with dark green leaves, which are bigger than the leaves of the Mexican (Key) Lime. Tree has none to very few small thorns. Fruit is somewhat larger and has thicker skin than the Mexican (Key) Lime and gradually turns light green then yellow at full maturity. Very aromatic, juicy, and acidic with few to no seeds. Ripens mid-September to early October. Can be used while still green. Doesn’t hold well on the tree after reaching full maturity.

MANDARINS

‘HONEY’—Previously marketed as Kinnow mandarins, but renamed to correctly identify their Honey Mandarin parentage, the Honey has a rich, aromatic, and distinctive flavor. They peel and segment easily, and are extremely juicy. The fruit is thin skinned, slightly flattened with no neck and are smooth, almost glossy, in texture. Dwarf tree makes it good for containers. Harvest in late October. Cold hardy to the mid 20s once established. Carrizo root stock.

‘KISHU’— Medium size, upright growing tree. High quality medium-sized fruit is seedless and easy to peel. Ripens early to mid-November and holds well on the tree until mid to late January. Cover when temperatures reach the mid 20s. Carrizo root stock.

‘PIXIE’—Pixie is a mandarin variety developed by H. B. Frost at the University of California Riverside Citrus Research Center. Pixie is the 2nd generation seedling result of an open pollination of Kincy (King x Dancy) that took place in 1927 and eventually released in 1965.
The tree is a vigorous grower with an upright growth habit maturing to only 5’-6’ high X 4’-6’ wide. The fruit is usually round to slightly oval, and sometimes has a neck. The rind is yellow-orange with a slightly pebbled texture that is easy to peel. The flesh is seedless, orange colored, and juicy. The flavor is mild and sweet. If you enjoy the flavor of juicy oranges, but don’t care for the sweet-tart taste that can make you pucker, you’ll like the Pixie. They have a mild, yet sugary-sweet flavor that you won’t get with other mandarins. Pixie matures in late winter and holds exceptionally late on the tree; in certain mild locations, the fruit is known to hold well into summer.

Grows well in the ground or in a large container.

Did you know citrus trees are host plants for the giant swallowtail caterpillar?

ORANGES

‘CARA CARA’ (Pink Navel)—Medium-sized, round-headed tree. Foliage is sometimes vaguely variegated. Fruit is a medium size, with deep orange rind and a small navel at the blossom end. Flesh is reddish pink with a good navel flavor. Very juicy and usually seedless. Moderately easy to peel and separate into segments. Ripens mid to late November and holds well on the tree until the end of January. Carrizo root stock.

‘MARRS’—Marrs' arose as a limb sport of 'Washington' navel in 1927 in Donna, TX. The tree is small by comparison to other oranges—usually maturing to 8’-12’ high X 8’-18’ wide. Its fruit are medium large, round to slightly oblate, with a thin, smooth, moderately thick peel that may be easily bruised during harvest. Marked tendency to bear fruit in clusters. Fruit can contain as many as nine seeds. The peel is yellowish, as is the juice. Sweet flavor with low acidity. Matures in early October or late September.
'MORO’ BLOOD’—Bears juicy medium-sized fruit with a very distinctive aroma and a hint of berry flavor. Nearly seedless with red to pink pulp, depending on the number of cool nights. It tends to bear heavily in alternate years. Moderately cold hardy. Trifoliate root stock.

‘N-33 NAVAL’—Medium to large tree, rounded with deep green foliage. Fruit is large with a moderately thick, orange rind and pronounced navel at blossom end. Rich flavor, with nicely balanced sugar and acid. Very juicy and seedless. Moderately easy to peel and separate into segments. Ripens early to mid-November and holds well on the tree until the end of January. Carrizo root stock.

‘REPUBLIC OF TEXAS’—The first citrus grown in Texas around the Santa Fe area, dating back to 1847. Considered the most cold hardy of all oranges, the fruit is very sweet, juicy, highly flavorful and slightly seedy. Mature size averages 15’ x 15’ if not pruned. Ripens November through December. Trifoliate root stock.

‘RHODE RED’ VALENCIA—(Sometimes spelled Rohde) Late season orange. The Rhode Red Valencia orange tree was discovered in 1955 at Sebring, Florida, as a limb sport in a Highlands County grove and was propagated by Mr. Paul Rohde and others. The Rhode Red produces more juice than the Valencia and is less acidic. Deep orange colored flesh and skin. Makes a wonderful tasting orange juice. Self fertile. Fruit ripens January through March.

‘TAROCCO’ BLOOD—Tarocco blood orange, one of the major blood orange varieties of the world, was introduced from an unknown Mediterranean country to Florida about 1880 and taken to California soon after. The fruit is medium-large to large with few to no seeds. The distinctive flesh color is a natural mutation and is due to the presence of anthocyanin, the same plant compound that is responsible for the color of pomegranates although the rind of this blood orange gets very little to no coloration at all. The distinctive flesh color requires a chilly winter to develop properly. Excellent for juicing or cooking as well as eating fresh, its rich
juicy flavor is reminiscent of raspberry. It also has the highest vitamin C content of any orange variety in the world (at least when the trees are grown in Italy in the fertile volcanic shadow of Mt. Etna!). Ripens January to March. The largest of all the blood oranges. Ripens after 'Moro' but before ‘Sanguinelli’. Carrizo root stock.

‘VANIGLIA SANGUIGNO’ BLOOD—Sweet and juicy with tender flesh and a hint of berry flavor. Small to medium sized round fruit with seeds, with a smooth orange rind of medium thickness. Moderately cold hardy. An acidless sweet orange with a pink flesh pigmented by lycopene. The tree is small to medium-sized at maturity with a round form. Ripens in late fall or winter. Carrizo root stock.

‘WASHINGTON NAVEL’—Sometimes called ‘Bahia’ or ‘Riverside’. Exceptionally delicious, seedless, and easy to peel. Imported to the United States in 1870 from Brazilian city of Bahia, it’s the orange that started commercial orange growing in California. Ripens fall into winter. Holds well on the tree and stores well. Carrizo root stock.

SATSUMAS

**TIP:** Satsumas are generally cold hardy to the low 20s. Best when picked just after orange coloring begins to appear on the skin. Do not wait until they are fully orange or the best flavor may be lost.

‘BROWN SELECT’— One of the earliest satsumas to ripen—usually two to three weeks ahead of Owari. The Brown Select Satsuma tree originated as a selected seedling of Kimbrough Satsuma in Louisiana. The fruit are often seedless, they have a more acid flavor than other Satsuma, but sweeter than Owari. The trees are less weepy in form and bear heavily. Like all Satsuma’s they are known for their cold tolerance. Self fertile. Ripens late October and into November. Carrizo rootstock.
‘FROST OWARI’—Frost does not refer to special cold hardiness, but to the developer, geneticist and breeder, H. B. Frost, at the Citrus Research Center, Riverside, California. One of the most common of the many Satsuma mandarin selections grown in the United States. Owari Satsuma trees are cold-hardy, productive, and vigorous-growing, and mature to a small size with a spreading and somewhat drooping character. The fruit varies in shape depending upon the conditions where it is grown, but it is most commonly oblate with a smooth and thin orange rind that is easily peeled. The flesh is bright orange, tender and juicy, seedless, and mild in flavor. Ripens October into December. The fruit itself does not hold well on the tree, but it stores well after harvest. Hardy to 22 degrees or lower. Carrizo root stock.

‘MIHO’—Early maturing, high quality, cold tolerant Satsuma begins to color in late summer and early fall reaching maturity on or before Thanksgiving. Peel is smooth, thin, and leathery. Small tree will work well in large container. Carrizo root stock.


‘SETO’—Ripens in mid-season so it is ready on or before Thanksgiving. Very good flavor. The peel is notably smoother and thinner than other satsumas and the fruit shape is quite flat.

Did you know???
The United States Department of Agriculture stipulates that a “seedless” fruit can contain from 0 to 6 seeds.
TANGERINES

‘ALGERIAN’ (Clementine)—Tree is of medium size and almost thornless. Round to elliptical shaped fruit of medium size; peel when deep orange-red. Pulp is deep orange, juicy, and very sweet. Fruiting season occurs early, but is long-lasting, extending into the summer. Carrizo root stock.

BLACKBERRIES

**TIP:** Blackberries produce on last year’s canes. In the winter, spray the base of all of the canes with a brightly colored spray paint. After the harvest in May or June, cut to the ground every cane that was painted. The remaining unpainted canes will produce next year’s crop of berries. Repeat the process each winter. Own roots.

‘KIOWA’—Sweet, LARGE berries. Produces large quantities of berries for about six weeks. This fast-growing variety with erect canes grows 5’-6’ tall with a 4’-8’ spread. Has thorns, but the flavor more than compensates for the thorns. Blooms earlier and longer than other blackberries. Disease resistant. Patent #9861.


‘OUACHITA’—Upright thornless variety released by the University of Arkansas. Has very large sweet berries and a reliable fruit yield. Resistant to double blossom rosette, a fungal disease. Patent #17162.
BLUEBERRIES

**TIP:** All rabbit eye blueberries bloom at about the same time but ripen at different times depending on the variety. Blueberries require acidic soil (pH of 5), even moisture, and full sun. Two different varieties are required for pollination and three are better. Own roots.

‘CLIMAX’—Rabbit eye. An old variety that has stood the test of time. Has a very concentrated ripening period, and a dry scar when picked, making it an excellent variety for freezing. Medium-sized, dark berry with spicy sweet flavor. Highly regarded as a commercial variety. Ripens early in late May to early June. 400-450 chill hours for best production.

‘PINK LEMONADE’—Rabbit eye. A pink blueberry! The delicious berries add sweetness and delectable color to desserts. Taste quite different than a regular blue blueberry—they actually have a distinct tangy sweet taste just like pink lemonade. Developed in 1996 by the USDA, this beautiful fruiting shrub serves as an attractive ornamental with white-pink flowers in spring and crisp red-orange foliage in autumn. Pink Lemonade is self-pollinating, and berries ripen mid- to late season.

‘PREMIER’—Rabbit eye. Beautiful upright plants. Premier’s fruit is sweet and juicy with excellent flavor, light blue color, and a dry scar. Highly productive. Medium to large berries. Excellent for eating fresh or freezing. Released jointly by the USDA and North Carolina State University in 1978. It tolerates a higher PH than many varieties and is a vigorous, upright and taller grower, reaching 6 to 8 feet tall. Around 550 chill hours are needed for ideal fruit set. Ripens early to mid season.

‘TIFBLUE’—Rabbit eye. Hundreds of acres are planted with Tifblue. Many newer varieties have some Tifblue parentage, as it’s one of the most popular standards for breeders. The plants are tall, vigorous, and upright. Berries are large, very firm, highly flavored, and hold well on the bush. Ripens late-June through July. 550-600 chill hours.
GOJI BERRY

GOJI BERRY— Bright orange-red, 1/2- to 1-in. berries have a slightly sweet, mildly tangy flavor. Berries can be eaten fresh, made into juice, wine or herbal tea, or dried and enjoyed as a snack similar to raisins.

The Goji shrub will grow 8-10 ft. in full sun to partial shade, with emerald foliage on graceful, vine-like branches. Star-shaped blooms in shades of white, lilac and purple will appear in early summer, with fruit ripening in July. It will continue to fruit and flower until heavy frost. Own root.

Fort Bend County Master Gardener’s Hotline

Call with questions about:
  • plant problems,
  • insect concerns,
  • grass issues or
  • other gardening difficulties.

Email: FortBendmg@ag.tamu.edu

Phone: 281-341-7068

Fax: 281-633-7070
CITRUS QUARANTINES—

CITRUS GREENING

Citrus greening disease, or Huanglongbing (HLB), is considered to be the most destructive disease of citrus. It is endemic in large parts of Asia and Africa, and has recently invaded the Americas. It is caused by a bacterium which is transmitted by insects called psyllids. There is no cure for greening, and the lengthy latent period after infection makes eradication almost impossible. The disease is now in Brazil, Cuba, Belize, southern Mexico and six US states (California, Florida, Louisiana, South Carolina, Georgia, Texas).

The list of host plants for citrus greening (HLB) disease is quite extensive and includes all species in the genus Citrus—all citrus types and all citrus varieties. The list also includes related genera such as Fortunella (kumquat) and Poncirus (trifoliate orange)—both of which are quite common in Texas.

CITRUS CANKER DISEASE

What is it?
Serious disease where there is frequent rainfall and warm temperatures during shoot emergence and fruit development—optimal temps 68 – 86. Disease causes leaf-spotting and fruit rind-blemishing, defoliation, dieback and fruit drop. The Asiatic form, Canker A, most widespread and severe form of disease.

How does it spread?
Bacterium enters plant tissue via wounds. Water/rain causes canker to ooze, picked up by wind, blown to next tree with a wound. Leafminer gallery is most common point of entry. Affects new growth and up to 90 days after petal fall. Also transmitted by tools, hands, clothing, machinery, and moving plants and fruit.

What you can do:
Sanitation Practices – rake up fallen leaves, branches, twigs, and fruit. Double bag and do not compost, send to landfill (NOT green waste collection).

Avoid Wounding – no unnecessary pruning or damage by landscape equipment. Minimize bird, rodent, or insect damage to trees and fruit.
Tree Health – Encourage overall tree health by following recommend-ed citrus tree care.

Chemical Prevention – Use approved insecticides to minimize common insect damage. Preventive bactericides common for citrus are copper products. Look for neutralized copper sulfate or copper hydrox-ide products. Each must be labeled for use on citrus.
What does this mean for the homeowner growing citrus?

DO NOT MOVE CITRUS PLANTS INTO OR OUT OF THE QUARANTINE ZONES

INSPECT YOUR TREES REGULARLY AND USE GOOD SANITATION PRACTICES

REPORT YOUR TREE IF YOU SUSPECT IT TO BE INFECTED
  *Texas A&M AgriLife Extension – Fort Bend…281-342-3034
  http://fortbend.agrilife.org
  *Fort Bend County Master Gardener Hotline – 281-341-7068
  http://FortBendmg@ag.tamu.edu
  *Texas Department of Agriculture…1-800-835-5832
  *TDA Gulf Coast Regional Office…713-921-8200

LEARN MORE ABOUT THE SYMPTOMS AND SIGNS OF CITRUS GREENING & CITRUS CANKER

For additional information:
  www.aggie-horticulture.tamu.edu
  www.citrusalert.com
  www.saveourcitrus.org
CITRUS RUST MITE

Have you noticed citrus fruit that is brown on the outer rind, primarily on one side but sometimes all over. This damage is caused by citrus rust mites (CRM). These arthropods are long, wedge-shaped and light yellow, measuring about 0.1 to 0.2 mm long, generally not visible to the unaided eye. The citrus rust mite feeds on the exposed surfaces of fruit, destroying the rind cells leading to the characteristic russeting of fruit. Although you may notice the browning as you are harvesting the fruit, the damage probably dates back to summer and early fall when the mites were more active--they multiply most rapidly in May/June, August/September. After September they tend to slow down. They overwinter on the tree then begin to multiply after bud break. The mites avoid the sunny side of the fruit, thus the tendency for the browning to be mostly on one side, unless the fruit was shaded on all sides by the foliage.

Since the rind damage is often superficial, doing nothing is an option because the fruit’s eating quality is not significantly affected. High populations of CRM may reduce tree vigor. Affected leaves develop a dull green color and show reduced turgidity. Rust mites pose a threat to the fruit crop from April to October, particularly during periods of warm, humid weather with frequent, light showers. If the latter conditions extend into early winter, fruit russeting may occur as late as December.

Mites are most active in the hottest months of the year and therefore treatments during the winter are not recommended. Use good housekeeping throughout the year to help decrease CRM numbers--pick up all fallen leaves. In early spring, when mite numbers are low, begin a regular application of horticultural oil spray continuing through September. Make sure and get good coverage of all foliage and fruit surfaces for best results. Oil should be mixed at a 2% concentration in water and the spray container should be shaken often to prevent separation of the oil and water mixture. To prevent burning tree foliage, avoid applying oil to trees that are drought stressed or when temperatures are above 95 degrees F. It takes three days for CRM eggs to hatch then seven to ten days to develop to adult. So consistent spraying is important. Note: horticultural oil was previously known as dormant oil and is available containing petroleum-based or plant-based oil.
Bare Root Planting Tips:
Plant as soon as possible after purchasing the tree. Plant in full sun with good drainage. Dig a hole that is wide and deep enough to accommodate the root system. Spread the roots out. The graft union, where the tree was grafted onto a hardy, disease-resistant rootstock variety, should be 2 to 3 inches above the soil when planting is finished. Use existing soil only—no amendments. Water in well, and water every day for a few days unless it rains. Use mulch to retain moisture, but keep it pulled away several inches from the trunk. It is very important to monitor soil moisture levels and provide water as needed, especially during periods of heat and drought.

If it is not possible to plant bare root trees immediately, heel them into the soil until they can be properly planted. Heeling in involves burying the roots in the soil and keeping the soil moist in order to keep the roots alive. It is critical that the roots not be exposed to the air or allowed to dry out.

Citrus Planting Tips:
Young trees can be susceptible to freeze damage so citrus trees that are purchased in fall or winter should be kept in the pots and protected until all danger of freezing temperatures has passed. Plant in an area that receives at least a half day of full sun. The more sun the tree receives each day, the better the production. If possible, plant trees on the south side of a house or building where they may get protection from winter winds. Plant in existing soil without amendments, and make sure the graft union is several inches above the soil line. When planted, water every day for a few days and then reduce watering to once a week unless it rains. Continue to monitor soil moisture levels and provide water as needed.
The dormant buds of many plants require a period of cold weather to grow, flower, and develop properly, but requirements vary widely by species. For dormant buds of fruit trees, this is commonly referred to as the chilling requirement. Chill hours are calculated as a tool for fruit producers to gauge whether their crop has been exposed to cold temperatures for a long enough time period. The calculation is based on high and low temperatures during winter dormancy months.

- Fort Bend and Harris Counties average 400-600 chill hours.
- The Gulf and Bay areas average ≤300 chill hours.
- Pasadena & south Harris County average 350-450 chill hours.
- Cypress and Bear Creek area average ~600 hours.
- Counties north of Harris average 600+ chill hours.

Trifoliate Orange root stock is well adapted to heavy, poorly drained soils, extremely cold hardy and drought tolerant once established. It’s a great rootstock for the Houston/Gulf Coast area.

‘Flying Dragon’ Trifoliate Orange root stock is the dwarfing form of Trifoliate orange. It has all the same qualities of Trifoliate orange except that citrus grafted onto it averages only 6’-8’ in height. It is great for a small garden, in a container, or useful in ultra-density plantings. Very cold hardy.

Carrizo and West Indies root stocks are more tolerant of soil salinity, but less tolerant of cold temperatures. Trees on Carrizo are nematode resistant, faster growing, and produce higher yields and larger fruit.

Volkameriana is a Rangpur type, but with characteristics similar to Rough Lemon. Of Italian origin and thought to be a variant of a mandarin lime. Also known as ‘Volkamer Lemon’. Good vigor and drought tolerance. Produces larger tree with higher production than sour orange rootstock. Salt tolerant.
## RECOMMENDATIONS

Recommended Planting Distances, Time to Fruit, Pollination Requirements, and Pruning Systems For Texas Fruit Crops.

<table>
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<th>Fruit</th>
<th>Spacing between plants</th>
<th>Years to first fruit</th>
<th>Pollination requirements</th>
<th>Pruning systems</th>
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<td>Apples</td>
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<tr>
<td>Seedlings</td>
<td>25 ft.</td>
<td>5</td>
<td>Cross&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Central leader</td>
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<tr>
<td>Root stock</td>
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<td>3-4</td>
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<td></td>
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<tr>
<td>Apricots</td>
<td>18 ft.</td>
<td>4</td>
<td>Self&lt;sup&gt;2&lt;/sup&gt;</td>
<td>Open center</td>
</tr>
<tr>
<td>Blackberries</td>
<td>3 ft.</td>
<td>1</td>
<td>Self</td>
<td>Remove old canes and top new canes</td>
</tr>
<tr>
<td>Citrus</td>
<td>20-25 ft.</td>
<td>2-3</td>
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<td>Maintenance</td>
</tr>
<tr>
<td>Figs</td>
<td>12 ft.</td>
<td>2</td>
<td>Self</td>
<td>Bush or central leader</td>
</tr>
<tr>
<td>Grapes, bunch</td>
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<td>2-3</td>
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<td>Cane or spur</td>
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<tr>
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<td>10-20 ft.</td>
<td>2-3</td>
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<tr>
<td>Pears</td>
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<td>5</td>
<td>Cross</td>
<td>Central leader</td>
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<td>Pecans</td>
<td>40 ft.</td>
<td>4-7</td>
<td>Cross</td>
<td>Central leader</td>
</tr>
<tr>
<td>Plums</td>
<td>18 ft.</td>
<td>3</td>
<td>Cross</td>
<td>Open center</td>
</tr>
</tbody>
</table>

<sup>1</sup>Cross: At least two different varieties needed for fruiting  
<sup>2</sup>Self: Self-fruitful

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**Information sources for this publication:**  
*Dave Wilson Nursery*  
*Brazos Citrus Nursery*  
*http://aggie-horticulture.tamu.edu/galveston/publications/Ambrosia-Inside.pdf*  
*http://aggie-horticulture.tamu.edu*  
*Urban Harvest*
Calleryana for flowering pears and Asian pears. Preferred rootstock for warm winter/hot summer climates and for sandy soils. Also adapted to wet soils. Asian pear varieties slightly dwarfed, bear heavily at young age.

Citation will dwarf peaches and nectarines to 8 to 14 feet. Apricots and plums dwarfed to 3/4 of standard. Tolerant of wet soil, induces early dormancy in dry soil. Very winter hardy. Resists root-knot nematodes. Trees bear at a young age. (Zaiger)

Lovell is more tolerant of wet soils. Also more cold hardy. Susceptible to nematodes in sandy soils. For plums, peaches, nectarines, apricots.

M-111 is an excellent all-around root stock for apples. Induces early and heavy bearing. Tolerates wet soil, dry soil, poor soil. Resists woolly apple aphids and collar rot. Trees dwarfed to 85% of standard.

M-7 dwarfs to 65% of standard. Induces early and heavy bearing. Resistant to fireblight, powdery mildew, moderately resistant to collar rot. Good anchorage. Very winter hardy, widely adapted. Disadvantage: prone to suckering.

Myrobalan 29C has a shallow but vigorous root system. Tolerates wet soils, but good drainage is still required. Immune to root-knot nematodes, with some resistance to oak-root fungus. For apricots, plums.

Nemaguard is a standard root stock for nectarines, peaches, apricots, plums, prunes, almonds. Vigorous, resists root-knot nematode. Excellent for well drained soils. In heavy or poorly drained soil, plant on mound or hill. May not be winter hardy below 5°F. Unpruned tree height of standard varieties 15-25 ft., size can be controlled further with summer pruning.

OHxF333 will dwarf European and Asian pears to about 2/3 the size of standard, or about 12-15 ft. Widely adapted, disease-resistant.
For more information on varieties, planting and maintenance of your fruit and nut trees, Texas AgriLife Extension Service has a number of publications available including:

**Aggie Horticulture:**
http://aggie-horticulture.tamu.edu

**AgriLife Extension Bookstore:**
http://agrilifebookstore.org/

**Homeowner’s Fruit and Nut Spray Guide:**
http://agrilifebookstore.org/publications_details.cfm?whichpublication=206

**Vegetables, Fruits & Nuts**
http://aggie-horticulture.tamu.edu/extension/TCEHomeVegFruitNut.html

**Propagation Resources:**
http://aggie-horticulture.tamu.edu/propagation/propagation.html

**Texas Citrus Website:**
http://kcc-weslaco.tamu.edu/

**Citrus Greening:**
http://www.texascitrusgreening.org/
http://saveourcitrus.org/

For additional information or to receive printed copies of a Texas AgriLife Extension Service publication, please contact the Master Gardener Hotline at 281-341-7068 or FortBendMG@ag.tamu.edu.
Coming Soon

Fort Bend County

Master Gardeners

2018 Vegetable-Herb
Plant Sale

Saturday, March 10, 2018
9:00 a.m.-12:00 noon

1402 Band Rd.
Rosenberg, TX 77471

Visit http://www.fbmgs.org
for information
Fort Bend County
Master Gardeners

2018 Fruit and Citrus Tree Sale

Saturday, January 13, 2018
9:00 a.m.—12:00 p.m.

Visit www.fbmgs.org for directions to the sale.
Call the Master Gardener Hotline
with all of your gardening questions!

Fort Bend County Master Gardeners, Inc.
http://www.fbmg.org
281-341-7068
FortBendMG@ag.tamu.edu
Fax: 281-633-7070

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