Reasons to Shop the Harris County Master Gardener Association

2024 Fruit Tree Sale January 27, 2024

New Sale Location:

Alabonson Park
9650 N. Houston Rosslyn Rd., Houston, Texas 77088

1. A completely coordinated in-person sale with online catalog, plant list and planting instructions, ample adjacent parking, and convenient and assisted loading zone.

2. This year's sale will include many different citrus trees, dwarf citrus trees, non-citrus trees, avocado trees, pecan trees, figs, coffee, and berry plants. And we have the best prices in Houston.

3. Sales staff are all Harris County Master Gardener volunteers to assist customers in their selection of trees, plants and more. As well as advice for the proper planting, feeding and tending of all plants on sale.

4. "Ask a Master Gardener" members are available to discuss any questions gardeners may be experiencing in their yards, supported with published AgriLife Extension brochures and literature to guide them through fertilizing, planting, and garden and yard maintenance.

Harris County Master Gardener Association
13105 Northwest Freeway, #100, Houston, Texas 77040

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Harris County Master Gardener Association
2024 Fruit Tree Sale Catalog

Index

Pricing

Apple	3 gallon	$ 35.00
Avocado	3 gallon	$ 55.00
Blackberry	3 gallon	$ 25.00
Blueberry	3 gallon	$ 25.00
Coffee	3 gallon	$ 25.00
Dwarf Citrus	3 gallon	$ 55.00
Fig	3 gallon	$ 25.00
Grapefruit	3 gallon	$ 45.00
Lemon	3 gallon	$ 45.00
Lime	3 gallon	$ 45.00
Mandarin	3 gallon	$ 45.00
Nectarine	3 gallon	$ 35.00
Orange	3 gallon	$ 50.00
Peach	3 gallon	$ 35.00
Pear	3 gallon	$ 35.00
Pecan	7 gallon	$ 80.00
Plum	3 gallon	$ 35.00
Pomegranate	3 gallon	$ 30.00
Satsuma	3 gallon	$ 55.00

Availability may vary the day of sale.

List of Available Plants

Citrus, Non-Citrus, Avocado, Fig, Pecan, Berries, Miscellaneous

Availability may vary the day of sale

Citrus:

Location		Variety	Size
1	Grapefruit	Rio Red	3 gal
2	Lemon	Eureka Frost	3 gal
3	Lemon	Improved Meyer	3 gal
4	Lemon	Lisbon Seedless	3 gal
5	Lemon	New Zealand Lemonade	3 gal
6	Lemon	Variegated Pink	3 gal
7	Lime	Key (Mexican thornless)	3 gal
8	Mandarin	Page	3 gal
9	Orange	Republic of Texas	3 gal
10	Satsuma	Brown Select	3 gal
11	Satsuma	Seto	3 gal

Citrus - Dwarf:

Location		Variety	Size
12	Orange	Cara Cara (DWARF)	3 gal
13	Orange	Blood - Moro (DWARF)	3 gal
14	Satsuma	Brown Select (DWARF)	3 gal

Non-Citrus:

Location		Variety	Size
15	Apple	Anna	3 gal
16	Apple	Ein Sheimer	3 gal
17	Apple	Golden Dorsett	3 gal
18	Nectarine	Panamint	3 gal
19	Nectarine	Snow Queen	3 gal
20	Peach	Tropic Snow	3 gal
21	Pear	Hosui	3 gal
22	Pear	Keiffer	3 gal
23	Pear	Shinseki	3 gal

Non-Citrus (continued):

Location		Variety	Size
24	Plum	Methley	3 gal
25	Pomegranate	Parfianka	3 gal

Avocado:

Location		Variety	Size
26	Avocado	Brazos Bell ™	3 gal
27	Avocado	Fantastic	3 gal
28	Avocado	Mexicola Grande	3 gal

Fig:

Location		Variety	Size
29	Fig	Celeste	3 gal

Pecan:

Location		Variety	Size
30	Pecan	Choctaw	7 gal

Berries:

Location		Variety	Size
31	Blackberry	Big Daddy (PPAF)	3 gal
32	Blackberry	Caddo (PPAF)	3 gal
33	Blueberry	Misty (Southern Highbush)	3 gal
34	Blueberry	Biloxi (Southern Highbush)	3 gal
35	Blueberry	SnowChaser (Southern Highbush)	3 gal

Miscellaneous:

Location		Variety	Size
36	Coffee	Arabica	3 gal

Harris County Master Gardener Association
Fruit Tree Sale January 27, 2024

New Sale Location:

Alabonson Park
9650 N. Houston Rosslyn Rd., Houston, Texas 77088

Citrus Fruit Trees

Location	Fruit	Variety	Cold Hardy	Description
1	Grapefruit	Rio Red (Carrizo Rootstock)	to mid 20's	Large fruit with smooth, thin, yellow rind. Blushes red once mature. Deep red flesh and juicy with few seeds. Ripens mid to late November. Holds on tree until March.
2	Lemon	Frost Eureka (Trifoliate Rootstock)	to high 20's	Produces an abundance of fine, market-quality lemons year round. Large, juicy fruit with very few seeds. Attractive landscape or patio container specimen with bronze-purple new growth. Evergreen.
3	Lemon	Improved Meyer (Carrizo Rootstock)	to high 20's	A small tree with continuous crops of large, moderately seedy fruit from August–January. Thin skinned with smooth bright golden form. Tree is cold hardy in warmer parts of Houston, freezes to the ground in hard freeze (every 20 years) and produces again in 18 months. About 10' tall and 8'–10' diameter.
4	Lemon	Lisbon Seedless (Carrizo Rootstock)	to high 20's	Grafted on dwarf rootstock, so makes great container plant on porch, patio, or indoors. Blooms and fruits throughout the year, but main crop occurs in winter and early spring. Seedless. What you want if you're looking for the type of lemon found in the grocery store. Popular as a flavoring in foods and drinks.
5	Lemon	New Zealand Lemonade (Carrizo Rootstock)	to high 20's	One of our new favorites, this sweet, juicy fruit actually tastes like lemonade! It is a sweet lemon hybrid of unknown parentage with distinctive black colored branches. Mature trees set several heavy crops each year with very pleasant, sweet, lemonade-like flavor.
6	Lemon	Variegated Pink (Carrizo Rootstock)	to high 20's	Vigorous, open-growing tree with green/yellow/white variegation. Very attractive landscape plant. Fruit often ribbed and slightly smaller than Eureka. Young fruit is variegated yellow and pink, gradually fading to yellow. Interior flesh is light pink.
7	Lime	Key (Thornless) (Carrizo Rootstock)	to low 30's	Upright, thornless tree. Fruit is thin-skinned and has very few seeds. Makes a great container or patio plant. Not very cold hardy, but great for cooking or adding a special garnish to drinks. Use for key lime pie, or add to seafood and meat dishes. Ripens mid-September to early October. Can be used while still green. Produces sweet fragrant blooms.
8	Mandarin	Page (Carrizo Rootstock)	to low 20's	A cross between the Minneola tangelo and the Clementine mandarin. The round fruit is a deep orange, sweet and juicy, with numerous seeds. The rind is also deep reddish orange which is thin but easy to peel. The shiny, dark green leathery leaves compliment the abundance of early ripening small orange fruit. This is an excellent container plant because it is easily pruned to any size.
9	Orange	Republic of Texas (Carrizo Rootstock)	to low 20's	Documented back to 1847 near Angleton, Texas. Medium to large round orange. Very flavorful. Very cold tolerant. A great, sweet orange that everyone should grow. Ripens November through December.
10	Satsuma	Brown Select (Carrizo Rootstock) (DWARF also available)	to mid 20's	Medium sized, bright orange fruit with a slightly bumpy rind. The seedless fruit has an very sweet and sprightly flavor. They are very easy to peel and the fruits easily break off into segments.
11	Satsuma	Seto (Carrizo Rootstock)	to low 20's	Medium sized spreading tree with deep green foliage that is extremely cold hardy. Medium sized, flat, bright, red-orange fruit with a smooth thin rind. Fruit has an extremely sweet, sprightly flavor and is seedless. Very easy to peel and breaks off into segments. Ripens late September to early October and is often ready to eat when rind is still green. Fruit holds well on the tree until late December.

Citrus Fruit Trees - DWARF

Location	Fruit	Variety	Cold Hardy	Description
12	Orange	Blood, Moro - DWARF (Flying Dragon Rootstock)	to high 20's	A natural cross between a pomelo tree and a tangerine tree. The Dwarf Moro Blood Orange is the newest variety among the most common types of blood oranges. Produces medium-sized sweet, juicy, blood-colored oranges with few to no seeds. An evergreen citrus tree with round top and spreading growth habit.
13	Orange	Cara Cara - DWARF (Flying Dragon Rootstock)	to mid 20's	Bright orange exterior similar to other navels, but its interior is a distinctive pinkish red with an exceptionally sweet flavor with a tangy cranberry-like zing, and they're seedless. It's a cross between the Washington navel and the Brazilian Bahia navel.
14	Satsuma	Brown Select-DWARF (Flying Dragon Rootstock)	to mid 20's	Medium sized, bright orange fruit with a slightly bumpy rind. The seedless fruit has an very sweet and sprightly flavor. They are very easy to peel and the fruits easily break off into segments.

What's the Difference between Oranges, Mandarins, Satsumas, Clementines, Tangerines and Tangelos?

Oranges: Have a thick skin, are round in shape, and are the common sweet orange. Some types of oranges are called "navels" due to the belly button-like area on the ends of them.

Blood Oranges: A variety of the sweet orange. Red coloring is due to the high anthocyanin content.

Mandarins: A type of orange and the category that Tangerines, Clementines, and Satsumas fall into. They are generally smaller and sweeter than oranges and a little flatter in shape. They have a thinner, looser skin that makes them easier to peel.

Satsumas: A specific type of mandarin orange, originating in Japan over 700 years ago. They are a lighter orange, sweet, juicy, and seedless. They are also the easiest variety to peel. The most tender, easily damaged of mandarins, Satsuma mandarins are harder to find fresh in stores.

Clementines: The smallest type of mandarin orange. They are super sweet, seedless, and have red-orange skins that are smooth and shiny. The mandarins you see in grocery stores called *Cuties* and *Sweeties* are Clementines. They are easier to peel than Tangerines, but not as easy as Satsumas.

Tangerines: A specific type of mandarin orange. They are bright orange in color, with slightly tougher skins and a flavor a little less sweet and a bit more tart than

Tangelos: You may have seen tangelos at the grocery store and mistaken them for oranges. The sweet-fleshed, juicy fruit is a hybrid of grapefruit or pummelo, and any variety of mandarin orange. Tangelos can be the size of a normal orange, but may grow as large as grapefruits.

Non-Citrus Fruit Trees

Location	Fruit	Variety	Chill-Hours (See Page 5)	Description
15	Apple	Anna	200	Large crops. Sweet & crisp. Stores 2 months. Self-fruitful, but better production if pollinated by Golden Dorsett. Low chilling, yellow fruit w/slight red blush. Ripens late June, softens fast so handle carefully.
16	Apple	Ein Sheimer	100	Heavy-bearing, very low chilling requirement. Sweet, yellow apples in early summer. Excellent pollinizer for Anna. Self-fruitful.
17	Apple	Golden Dorsett	100	Large, firm, golden delicious type. Very low chill requirement. Picked with a pink slight blush. Flavor is sweet. Fruit is firm and will store several weeks in the refrigerator. Bloom period overlaps with Anna and the two varieties planted together provide good cross-pollination. Ripens mid to late June.
18	Nectarine	Panamint	100-200	Aromatic red-skinned yellow freestone fruit with fine balance of tart and sweet character. Very low chill, so best selection for warm winter climates. Use as fresh eating, desserts, pies, canning, and preserves. Self Fertile. Recommended Spacing: 12-16 ft. Mature Size: 12-16 ft. Summer prune to maintain 8 ft.

Non-Citrus Fruit Trees (continued)

Location	Fruit	Variety	Chill-Hours (See Page 5)	Description
19	Nectarine	Snow Queen	250	One of the sweetest and juiciest of all nectarines, featuring snow white flesh and freestone fruit. It is a consistent taste test winner and constantly astounds the uninitiated with its bright white flesh. Snow Queen is early ripening but prefers a warm climate. Self pollinating
20	Peach	Tropic Snow	225	White flesh, semi-freestone peach. Low acidity, extremely sweet flavor. Self-fruitful.
21	Pear	Hosui	450	Cold hardy, drought resistant and heat tolerant. Fruit is sweet like a pear and crisp like an apple with lots of juice. Ripens in late August. Self-pollinating. 18 - 20' tall x 12 - 13' wide
22	Pear	Keiffer	350	Tree grows rapidly, lives long, is disease resistant, and bears a large crop The Kieffer pear is the most widely planted pear in the South. Golden yellow fruit has white flesh that is crisp and coarse in texture, excellent for canning, baking and preserves. Produces fruit late September to October.
23	Pear	Shinseki	250-450	Round, medium to large, yellow smooth-skinned fruit with little or no russet. Crisp, creamy white flesh; mild, sweet with a hint of spice. Moderate fireblight resistance. Often requires multiple harvests during the season. Height: 12-16 ft.
24	Plum	Methley	250	A deep red plum with red flesh. Medium sized. Mild flavor, excellent for fresh eating or jelly. Ripens early June. Self-fruitful. An excellent pollinator.
25	Pomegranate	Parfianka	100-200	Glossy-leaved, ornamental and long-lived tree with showy orange–red blossoms in late spring. Can reach 20'-30' in maturity, but is more commonly seen at 12'-16'. Self-fruitful. Ripens in September.

Avocado Trees

Location	Fruit	Variety	Description
26	Avocado	Brazos Belle	This purple-black fruit is an elongated pear shape, has creamy flesh and high oil content. The skin is shiny and paper thin. A large, upright, somewhat spreading tree. Very cold hardy. Ripens from September to October.
27	Avocado	Fantastic	Ripens August to October, usually 6-8 oz. in size, with a dark green, bumpy skin. Reaches 15'-30' tall. Very cold hardy to 15º F.
28	Avocado	Mexicola Grande	Tall, spreading tree similar to the Mexicola. The fruit is 15-25% larger and somewhat rounder shape with a better seed to flesh ratio. The skin is paper-thin and purple to black in color. High quality flesh with a high oil content. Hardy to the upper teens, ripens in September.

Fig Trees

Location	Fruit	Variety	Chill-Hours (See Page 5)	Description
29	Figs	Celeste	100	Very productive, vigorous tree. Ripens before most other fig varieties. Fruits without pollination. Fruit is small and pear-shaped with ribbed sides. Color ranges from purple to brown, tinged with bronze. Pulp is white or amber. Very sweet with a rich, fresh flavor. Can reach 25 feet. Ripens in July.

Pecan Trees

Location	Fruit	Variety	Chill-Hours (See Page 5)	Description
30	Pecan	Choctaw	300-500	Not just a source of delicious pecans. Also a visual treat with its vast canopy. Adaptability to different soil types makes it a versatile choice for orchards. Originated from a cross between 'Success' and 'Mahan'. Large, round nuts and robust growth. Scab and disease resistant. Wood used in furniture making. 130' tall by 75' wide at maturity. Self fertile but yields increase with a pollinator.

Berries

Blackberries :

Blackberries have roots and crowns that are perennial, meaning they will live many years. But the life cycle of the canes is just two years. A blackberry plant has two types of canes: **Primocanes** and **Floricanes**. Primocane means a new cane, or a cane in its first year. Floricane means a cane in its second year.

Primocane-fruiting plants produce two crops a year: on floricanes (from the previous year) in early summer, and on primocanes (new canes from the current season) later in the growing season. Floricane-fruiting plants produce one crop of fruit per year on previous year canes.

The Blackberries we are offering this sale are **Floricanes**-fruiting plants.

Blueberries :

There are two classifications of blueberries that will perform well in the Houston area: **Southern Highbush** and **Rabbiteye**.

The Blueberries we are offering this sale are **Southern Highbush.**

Southern Highbush varieties are generally smaller and are self-fertile, and will be more productive if two or three varieties are planted in proximity.

Blueberries prefer acidic soil (pH 4.5 - 5.0). A near fail-safe way to grow blueberries in almost any soil is to incorporate peat moss into the planting medium. For planting directly in the ground, work up a planting area approximately 2½ feet in diameter and 1 foot deep for each plant. Remove 1/3 to 1/2 of the soil. Add an equal amount of pre-moistened peat moss and mix well. (One 4 cubic foot compressed bale will usually be sufficient for 4-5 plants.) For raised beds, mix equal volumes peat moss with bark (not cedar or redwood), compost or planting mix.

Blueberries will generally begin to produce the second year after planting, but will take 4 – 5 years to reach full production. Depending on the variety of plant, you will probably get 1–2 pints of blueberries the second year. The third year you might expect 2–3 quarts, and the fourth year you should get at least 1 gallon, perhaps more, depending on the size of the fruiting canopy.

Location	Fruit	Variety	Chill-Hours (See Page 5)	Description
31	Blackberry	Big Daddy (PPAF) (Floricane)	400	A new variety of thornless blackberry bush that produces massive, mouth watering berries. Disease resistant. A perennial plant but will only produce new growth and fruit biennially. A self-fertile specimen one plant can produce 10 to 15 pounds of fruit each growing season.
32	Blackberry	Caddo (PPAF) (Floricane)	300	Thornless, erect-growing, high quality, productive floricane-fruiting black berry. Large, high-quality flavorful berries with excellent post-harvested fruit durability. Excellent plant health; disease-free, no orange rust, anthracnose, or cane/leaf rust in all research trials. Plant 18-36” apart, in rows 6-8’ apart. Performs best in full sun with well-drained, fertile soil.
33	Blueberry	Misty (Southern Highbush)	150	Vigorous tree, grows well on the coast or inland areas. Thrives in mild winters and hot summer climates. Produces large fruit.

Berries (continued)

Location	Fruit	Variety	Chill-Hours (See Page 5)	Description
34	Blueberry	Biloxi (Southern Highbush)	150	One of the earliest ripening Southern Highbush blueberries, and produces medium size fruit that is light blue in color, very firm, and has a small stem scar. Biloxi has a wonderful, distinct flavor, and is noted as one of the best tasting Southern Highbush varieties. grows vigorously to around 5 feet tall and 3 feet wide, with a spreading habit and bushy appearance.
35	Blueberry	Snow Chaser (Southern Highbush)	100-200	Medium sized fruit. Good berry quality. Known to flower in fall. Requires frost protection. Susceptible to stem blight. 4' to 6' high. Requires full/partial sun. Easy to grow, cold hardy. Spring fruiting.

Miscellaneous

Location	Coffee	Variety	Chill-Hours (See Page 5)	Description
36	Coffee	Arabica		Easily grow your own coffee, no matter where you live. Plant produces colorful beans against a background of glossy, dark green foliage. Harvest your beans when they ripen. They go from green to yellow, to orange, then finally to deep red. In addition to the coffee aroma, you will also love the spring flowers that smell like jasmine. Dry the beans in your oven or roaster. Once cooled, they are ready to grind and percolate into a delicious brew.

Chill Hours Average

Everyone who is interested in growing their own fruit will eventually be faced with the issue of “chill hours”, or chill units (CU) – the terms are interchangeable.

How to determine your Chill Hours Average

There is an ongoing debate about (CU) definitions and which model to use. We are going to leave that debate to others and use the most commonly accepted mode

A Chill Unit is an hour of air temperature between 32ºF and 45ºF, minus all hours above 60ºF.

It is generally accepted that temperatures below 32ºF do not contribute to CUs and that temperatures above 60ºF detract from CUs. Therefore an hour is subtracted for every hour above 60º F and hours below 32º F are not counted.

The total number of CUs accumulated in an area during an average winter determines the *Chill Hours Average* for that area. Chill Hours do not have to be continuous. They are an accumulation of hours within these temperature parameters.

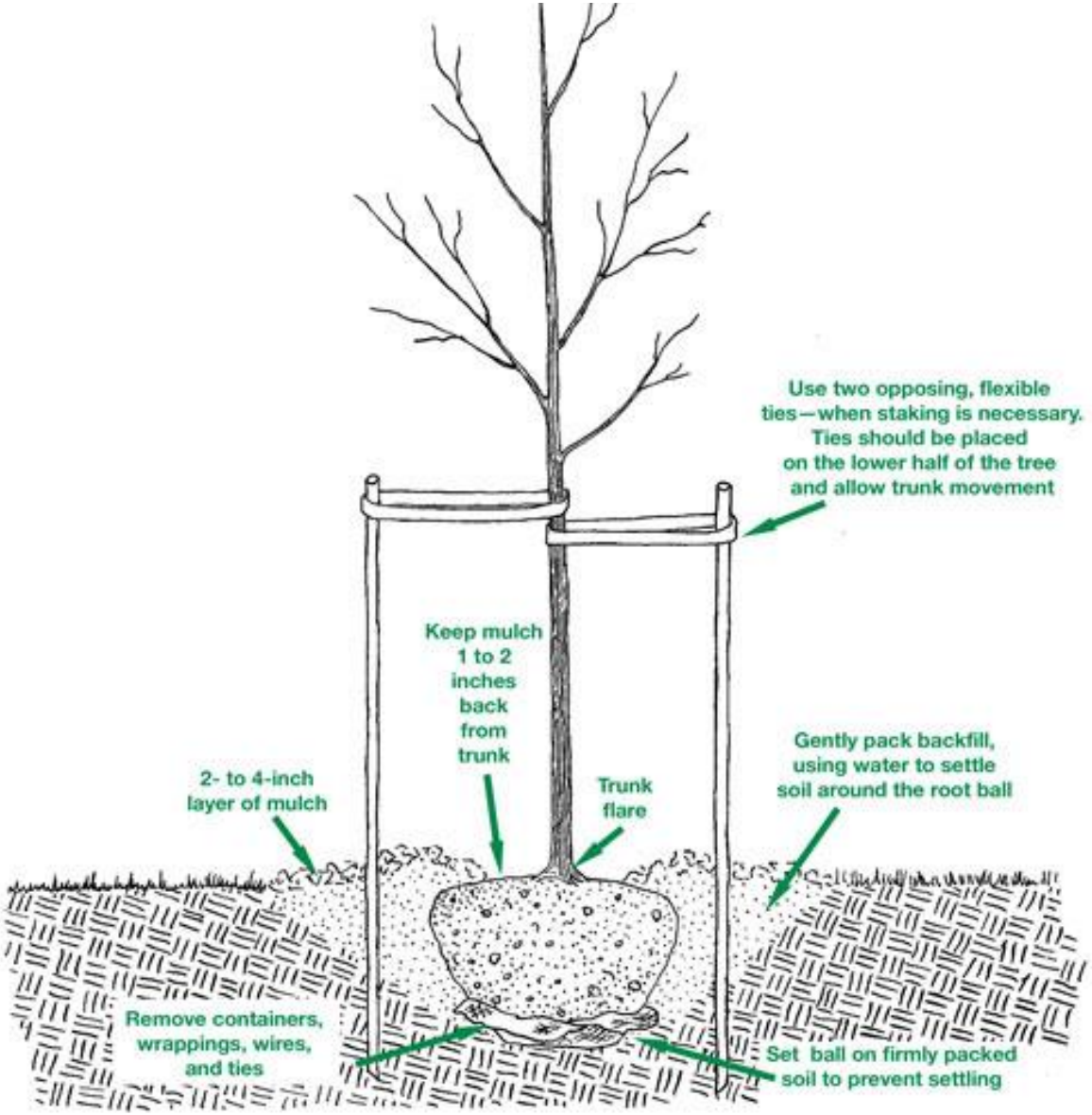
Some averages in our area:

Gulf & Bay Area	≤300	Harris County (other than areas shown)	400 – 600
Hobby Area	≤300	Fort Bend County	400 – 600
Inner City	≤300	Cypress-Bear Creek	≤600
Pasadena-South Bay	350 – 450	Counties north of Harris	600 – 900

Accumulated chill hours can vary from year to year. Unfortunately, one of our best tools to monitor the yearly CU reported by our closest weather station is no longer available and internet charts are largely unreliable. Until a new calculator is developed, we will need to rely on the averages closest to our general location to

The above chill hour information is from The Garden Academy, complements of the owner, Angela Chandler. Among her long list of accomplishments, she is a Harris County Master Gardener, Precinct 2, Retired Status. For additional information regarding chill hours, and to read more about The Garden Academy and Angela Chandler, please go to TheGardenAcademy.com.

How to plant your new tree in the ground



Plant where your fruit trees will receive at least six hours of sun a day during the growing season.

Sun should not be blocked by buildings, fences or other obstacles.

Plant at least three feet from sidewalks and driveways and eight feet away from buildings, as roots will spread wider than the tree crown.

Allow ten to fifteen feet of space between fruit tree

Dig the hole a little deeper than the root is tall — and make it wide enough to accommodate the longest roots without bending.

Loosen the sides of the hole. Roots sometimes do not readily penetrate a slick interface.

Backfill with native or slightly amended soil until the bottom of the hole is at the right planting depth for the tree.

Prune off any broken, rotted or twisted roots, making a clean cut. Use a clean and sanitized pruning shear.

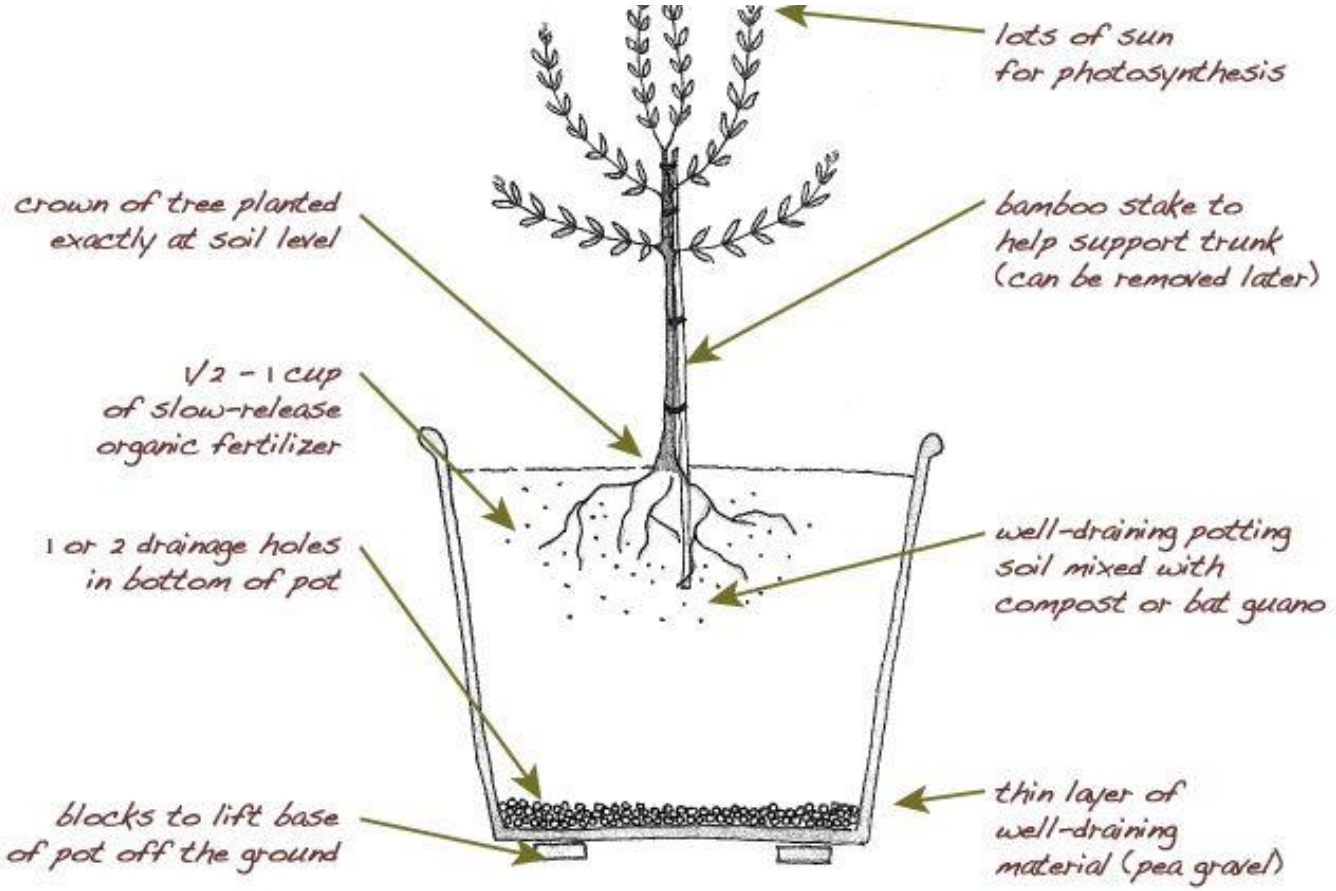
Position the tree, spread the roots and refill the hole, tamping the soil around the roots as you go.

If planting in fast-draining soil, water thoroughly in order to finish settling the soil around the roots. In slower-draining soils, water a little at a time - over several days if necessary.

Mulch a “Bagel”…..not a “Volcano”……

Build a watering ring (Bagel) atop the ground around the tree, about 2 to 4 inches high and 6 to 8 inches thick. The ring should be slightly wider than the planting hole. If adequate soil isn’t left over from planting, borrow some from the garden. Fill the water basin with water. When the water soaks in, it may be necessary to add a little soil to the holes made as the soil settled around the root system.

How to plant your new tree in a container



How to care for your tree the first couple years

1. Once your trees are planted, there will be some maintenance required. The amount will depend on what kind of trees you have planted. Watering, of course, will be the most important task. Mulching will help to retain soil moisture and reduce water needs. Fertilizing with a good organic fruit tree food is also recommended. Follow the directions on the package for application amount and frequency. Most fruit trees will require some pruning, if only to remove any dead or damaged wood. Since pruning differs with each type of fruit tree, we strongly recommend researching the type of pruning to assist you in making the most out of each tree.

Water young fruit tree once every other week. Most fruit trees require that you apply enough water to moisten the soil to a depth of 3 to 4 feet. This is the depth at which most fruit trees extend their roots.

2. Do not apply fertilizer until the tree begins new growth after planting. Fertilize monthly through October. Scatter fertilizer on the ground at least a foot from the tree trunk and promptly water it in thoroughly. Nitrogen is usually the only fertilizer element required in most Texas soils, but additional elements should not do any harm. Consult your local county Extension agent. Available fertilizers may vary in terms of the percentage of nitrogen, but the following is a general rule regarding the quantity to apply:

Amount of fertilizer per tree, applied monthly, February-October.

Nitrogen Content: 8-13% First year 1 cup Second year 2 cups Third year 4 cups

Nitrogen Content: 17-21% First year ½ cup Second year 1 cup Third year 2 cups

3. Keep your young fruit tree pest- and disease-free using preventive orchard care. Weed regularly, because weeds often harbor pests and disease while stealing soil nutrients and water. Additionally, always pickup and discard any fallen fruit, rake and remove fallen weeds often, and trim off any dead branches as those often attract rot-related diseases.

4. Treat the fruit tree if pests or disease occur. There are dozens of such potential problems, depending on your region and the type of fruit you have. In most cases, a standard 50 percent concentration copper spray, available in most garden stores and nurseries, resolves most common fruit tree diseases. Meanwhile, insecticidal soap treats most common pests like aphids and mites. Apply such products according to their manufacturer-specific guidelines, as toxicity varies widely by product.

How to protect young fruit trees from frost and cold spells

There are two types of protection for your young fruit trees Passive and Active.

Passive protection

Passive frost protection can minimize risk, decrease the probability or severity of frosts and freezes, or cause the plant to be less susceptible to cold injury. These practices include site selection, variety selection and multiple cultural practices.

The best time to guard your fruit tree from frost is before it is planted, and proper site selection is the best and most effective passive risk-avoidance strategy, use wind breaks, planting on south & east sides of a building, avoid hill tops or deep valleys. Avoid planting at the bottom of a slope — where frost accumulates — or on cold hilltops. Good site selection for frost protection includes good air movement.

Active protection

Active frost protection is getting more attention now with greater numbers of people planting and enjoying growing fruit trees. Active frost protection comes in three basics; the addition of heat, the mixing of warmer air from the inversion layer under radiation frost conditions, or the conservation of heat from the plant.

You can take several simple steps to reduce the risk of frost damage to buds, blossoms and fruit without using heaters, commercial wind machines or overhead sprinklers. If possible, choose fruit varieties less susceptible to frost damage in order to find varieties that bud and bloom later, when frost is less likely to occur. When this is not an acceptable factor like with certain citrus trees other remedies may be necessary.

For existing fruit trees, put off pruning until winter but before approximately February 15th around Harris County. If frost is in the forecast when trees are in bloom and the soil has been dry, water the soil a day or two beforehand to a depth of 1 foot (wet soils radiate more heat than dry soils do). To trap extra warmth, cover the wet soil around the bases of the trees with clear plastic until the danger of frost has passed. Bare soil — or soil covered with clear plastic — stores and radiates more warmth. Be certain to also wrap the base of the trunk up to and slightly above the root graft.

Frost blankets can provide frost protection for fruit trees and small fruits. When you place frost blankets around tree trunks, be sure to anchor them on the ground to trap the soil's radiant heat.

The biggest danger comes in the late winter/ early spring when the tree starts to break dormancy. The young leaf buds and shoot growth can be damaged by extreme cold, a late frost can mean a harvest-less year for a tree in bloom. Unfortunately, there is no cure for frost damage; a tree affected during its spring growth and bloom will have to wait until the next year to fruit. Prevention is key to protecting your tree from frost damage.

Know what your fruit tree cold hardiness is before planting and choosing. The first step to preventing frost damage is to select a variety of tree that is cold hardy and has the correct chill hours for your climate. This will reduce or, if you're lucky, eliminate the need to take further steps to protect your tree in the spring.

If your fruit trees are damaged by a late frost, you won't necessarily lose your harvest for the year. Apples, pears and peaches can lose up to 90% of their flower buds without a decrease in harvest.

If temperatures are expected to drop too low once your tree begins budding or blooming, or if sleet or snow is predicted, it's time to take action. If your tree is small enough, you can wrap it in frost blanket bags for the duration of the cold snap. Decorating with non-LED mini Christmas lights or non-LED C-9 or C-7 Christmas lights will add significant warmth around the tree. On especially colder nights and longer periods of deep chill light and cover with a canvas or large tarp. Uncover when temperatures reach near freezing or slightly above.

Using a large garbage can and putting can over your young and smaller citrus tree the first year and putting three 5-gallon buckets next to the trunk the second year to support the same garbage can because the tree was taller than the garbage can. After that, the tree was on its own.

Heavy frosts during or just after blooming can kill young fruits. In winter, or at any other time of year, if you expect severe frost for the night, cover the fruit trees to prevent damage. Trees that are only one to two years old are especially vulnerable to frost damage and benefit the most from covering

If you expect a long, cold spell, covering fruit trees every night can become tedious. An alternative to covering is to build a wooden framework covered in shade cloth, which protects trees against winter wind and helps keep the heat from the earth in place. Surrounding fruit trees with 5-gallon plastic pails of water also helps harness the heat to protect fruit trees from frost damage. These methods mimic the conditions that protect fruit trees when they are beneath building overhangs or near swimming pools or other bodies of water.

Why compost and rose soil mix

Composting is nature's way of recycling. It is a natural process of breaking down organic matter and turning it back into a rich nourishing substance. With this comes a lot of nutrition and benefits for your landscape and garden. Microorganisms produce a rich earthy substance called humus that is the key component in producing fine compost. Though most people think that compost is a fertilizer, it is a soil amendment. Fertilizers add nutrients to soil; while amendments improve the soil so that plants can make use of those nutrients. A simple way to distinguish the two is to remember that compost feeds the soil and fertilizer feeds the plant.

Why DS (Double Screened)?

DS is made from leaf mold, wood, vegetative debris. The raw materials are ground up and piles made by folding fruits and veggies into the piles. The juices from the fruits and veggie keep the compost with an optimum moisture content during the composting process. In addition, we also populate the piles with a microbe pack that allows for better composting. The piles then are turned and once the pile is mature and ready for processing, we screen a 1st batch with a 3/8" screen. How can you use our Compost DS?

Our compost DS is probably one of the finest fungal compost products you will see anywhere in the US. It's perfect for top dressing, amending, tilling, mulching, spot treating and as a general use compost.

Compost Tip:

Spread about a half-inch to an inch of compost around your trees, shrubs, and/or your lawn, and in your annuals and vegetable gardens. In established gardens, spread the compost on top of the soil, where it will eventually seep into the ground below; or you can lightly fork it over. This can help improve the first 6–10 inches.

In a nutshell all composting is, is just nature's way of recycling. It is a natural process of breaking down organic matter and turning it back into a rich nourishing substance. With this comes a lot of nutrition and benefits for your landscaping and gardening. Microorganisms produce a rich earthy substance called humus that is the key

component in producing fine compost. Though most people think that compost is a fertilizer, it is actually a soil amendment. Fertilizers add nutrients to soil; while amendments improve the soil so that plants can make use of those nutrients. A simple way to distinguish the two is to remember that compost feeds the soil and fertilizer feeds the plant.

Rose Soil Mix, it's not just for roses

Comprised of Composted Fines, Large Grain Angular Sand, Composted Pine Bark, traces of green sand and sulfur soil. This blend is made in Texas and is widely used for color, roses, azaleas, acid loving plants, fruit and veggies.

1. Why choose Rose Mix: loosens soil with organic materials, adds air, and allows water to easily reach roots. Rose mix is one of the best choices of soil for as this soil includes all these main elements and 50 percent of air, it is a perfect soil addition to raised beds, containers and when amending existing clay heavy soils. Rose Mix contains inorganic material such as sand, clay, and silt and organic materials this porous soil absorbs water adequately and quickly.

2. Maintaining the pH: Maintaining the pH of soil is equally important. The optimum pH to grow many vegetables and fruit trees is 6.5. If the soil pH is too alkaline or acidic, it can affect the growth. If you notice any foliage coloration or change in the plant growth, it could be because of the soil pH level.

3. Enriching the soil: Use peat moss to enrich the loamy soil if it contains more clay. Mix in organic compost, peat moss, dried leaf mold, and manure to amend the soil. If you are using a pot, then add the organic matter to the bottom before planting.

4. Keeping the soil healthy: The role of micro-organisms in the soil is very important. They keep the soil condition healthy by breaking down the organic materials and releasing nitrogen. You can help keep the soil microbes happy, by adding in alfalfa meal, decomposed organic matter, compost, kelp meal or fish emulsion.. These ingredients will provide nitrogen, phosphorus, amino acids, potassium, and necessary vitamins to the micro-organism population in the soil.

Top 10 Compost Reasons

- Supply nutrients for plants by providing surfaces where nutrients can be held in reserve in the soil
- Reduces the need for chemical fertilizers.
- Facilitate better drainage by loosening soil structure
- Use less water; Store water in the soil
- Help increase air drainage
- Increase the activity and numbers of soil microorganisms
- Encourage earthworms
- Enhances the ability of vegetables to stand up to common diseases and may improve their flavor and nutrition
- Compost can benefit year-round
- Helps balance the pH of your soil

Top 10 Soil Mix reasons

- Improved plant establishment and growth.
- Dramatically expand access to moisture and nutrients from the soil.
- Increased nutrient and water uptake.
- Increases efficiency of water use.
- Drought tolerance.
- Improved disease resistance.
- Assists in weed suppression.
- Improves soil structure and stability.
- Improves root growth.
- More blossoms and enhances nutritional value

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TEXAS A&M AGRILIFE EXTENSION

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
Texas AgriLife Extension Service

S 24

SOIL SAMPLE INFORMATION FORM

Please submit this completed form and payment with samples. Mark each sample bag with your sample identification and ensure that it corresponds with the sample identification written on this form. *See sampling and mailing instructions on the back of this form.

(PLEASE DO NOT SEND CASH)

SUBMITTAL AND INVOICE INFORMATION: This information will be used for all official invoicing and communication. **Sheet ___ of ____**

Name ______________________________

County where sampled ______________________

Mailing Address ______________________________

Phone ______________________

City ______________________ State______ Zip ______

Email* ______________________

CLIENT NAME: Client name will only be included with information above on result reports.

Name ______________________________

Lab Use only

Payment (DO NOT SEND CASH)

☐ Check/ Money Order (keep your M.O. receipt)

Amount Paid $__________________ Check Number ______

Make Checks Payable to: **Soil Testing Laboratory**

☐ Prepayment on Aggie Marketplace Payment

Order Number _ _ _ _ _ _ _ $ amount_________

(Fill in last 7 digits of order number.)

☐ AG-257-Ipayments account number

55000000 _ _ _ _ _ (Fill in last 5 digits.)

***A $3.00 mail fee will be charged for all invoice and sample results mailed via USPS. Results and invoice can be emailed in PDF form for free.** ☐ **email results** ☐**Charge $3 for mailing**

Please email the laboratory at soiltesting@ag.tamu.edu prior to shipping your samples to insure a valid email address is on file you're the delivery of your results. Bounced emails will incur the $3 mailing fee, to be paid prior to mailing.

1. Routine Analysis (R) **$12 per sample**
(pH, NO_3-N, P, K, Ca, Mg, Na, S and Conductivity)
(This test is a base test for basic fertilizer recommendations.)

2. R + Micronutrients (Micro) **$19 per sample**
(Adds Zn, Fe, Cu, and Mn to test 1.)

3. R + Micro + Boron (B) **$26 per sample**
(Includes Test 1 plus micronutrients and boron)
(Recommended for individuals applying compost and manures.)

4. R + Micro + B + Organic Matter (OM) **$46 per sample**
(Includes Test 1 plus micronutrient, boron and organic matter analysis)

5. R + Micro + B + OM + Texture Analyses (TEX) **$66 per sample**
(Includes Test 1 plus micronutrient, boron, organic matter and textural analysis)

6. R + OM **$32 per sample**
(Includes Test 1 plus organic matter analysis)

7. R + TEX (determines % sand, silt, and clay) **$32 per sample**
(Includes Test 1 plus textural analysis)

8. R + OM+ TEX **$52 per sample**
(Includes Test 1 plus organic matter and Textural Analyses)

9. R + Detailed Salinity (SAL) **$37 per sample**
(Includes Test 1 plus detailed salinity analysis)
(Recommended for individuals using lower quality irrigation water.)

10. R + Micro + B + SAL **$51 per sample**
(Includes Test 1 plus micronutrient, boron and detailed salinity analyses)

11. R + Micro + B + OM + SAL **$71 per sample**
(Includes Test 1 plus micronutrient, Boron, organic matter and detail salinity analyses)

12. R + Micro + B + OM + SAL + TEX **$91 per sample**
(Includes Test 1 plus micronutrient, boron, organic matter, detailed salinity and textural analysis and provides the most comprehensive data needed for troubleshooting most plant/soil growing issues {does not address pathogen, pesticide or hydrocarbon issues}).

Hardcopy mailed to address listed above(1-100 samples) **$3 per shipment**

Pricing valid until 12-31-2024.

The latest form can be downloaded at the laboratory's website: soiltesting.tamu.edu

SAMPLE INFORMATION (Required)

Laboratory # (For Lab Use)	Your Sample I.D.	Acreage Represented	What are you growing? Crop, Yield Goal, Use	Select only one analysis suite/sample	Growing a forage? How is used?
				☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10 ☐11 ☐12	☐Grazing ☐ Hay ☐Grazing and Hay ☐Min. requirement ☐Establishment
				☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10 ☐11 ☐12	☐Grazing ☐ Hay ☐ Grazing and Hay ☐Min. requirement ☐Establishment
				☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10 ☐11 ☐12	☐Grazing ☐ Hay ☐ Grazing and Hay ☐Min. requirement ☐Establishment
				☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10 ☐11 ☐12	☐Grazing ☐ Hay ☐ Grazing and Hay ☐Min. requirement ☐Establishment

Procedure for Taking Soil Samples

Soil Sampling Area

1) Take one composite sample for every 10 to 40 acres. A separate sample should be taken for:
   a) Areas with different soil types
   b) Areas with different land uses or fertilizer application rates
   c) Areas with different cropping histories (species and yields)
   d) Areas with different terrain
2) Avoid sampling areas such as small gullies, slight field depressions, terrace, waterways, or unusual areas.
3) When sampling fertilized fields, avoid sampling directly in fertilized band and wait at least 2 months after last fertilization.

Taking a Composite Sample

4) Take a 0-6" sample.
5) Use a spade, soil auger or soil sampling tube.
6) Clear plants and plant residue from the surface (do not remove decomposed black material that no longer can be identified as a plant).
7) It is important to repeat steps 4-6 an additional 9 to 14 times for each area identified in steps 1-3. Place each collected core/sample in a clean plastic bucket or other non-metallic container and thoroughly mix the soil while removing any large roots/plant tissues that might have been collected.
8) Approximately ½ to ¾ full quart-sized freezer resealable bag or a full soil sample bag is required for routine analyses.
9) Additional soil is required for texture or detailed salinity (submit 2 sample bags, label bags as 1 of 2, 2 of 2, etc).
10) To improve the nitrate-nitrogen analysis, samples may be **air dried** before sending to the laboratory. **Do not use heat** to dry samples.

Payment and Shipping

Payment must be included with samples, prepaid on Aggie Marketplace or a completed AG-257 must be on file with Texas A&M AgriLife Backing and Receivables for samples to be processed. Go to the laboratory website for easy access to the Aggie Marketplace payment option. Please note that the *price is per sample*. For AG-257-Ipayments accounts complete the following for https://agrilifeas.tamu.edu/documents/ag-257.pdf/ (select Extension)

Address the package to the appropriate address:

Post Office only:

Soil, Water and Forage Testing Laboratory
2478 TAMU
College Station, TX 77843-2478

FedEx, UPS and Freight Only:

Soil, Water and Forage Testing Laboratory
2610 F&B Road
College Station, TX 77845
(979) 321-5960

Email: soiltesting@ag.tamu.edu Website: https//soiltesting.tamu.edu