

Azalea Culture in Harris County

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Azaleas are among the most popular plants in the Houston area, traditionally providing a breathtaking display of spring garden color. Their spectacular flower masses and colors, attractive plant form, evergreen foliage and relatively trouble-free cultivation are among the reasons for their popularity. With the recent development and marketing of the repeat-blooming Encore Azalea series, we can now enjoy these colorful plants into the fall.

Azaleas are members of the *Ericaceae* family and belong to the *Rhododendron* genus. Thousands of azalea species, hybrids and cultivars exist but only a few dozen are commonly sold in local nurseries. Azaleas provide a variety of plant habits, sizes, colors and bloom times to meet the landscaping needs or preferences of almost every Harris County gardener.

Site Selection

In their native habitat, azaleas grow in moist, loosely aerated, acidic soil containing organic matter with good drainage. Trees provide filtered sunlight and protection from strong winds. Azaleas planted in a simulation of their natural habitat will thrive in the Harris County garden.

The high humidity in the Houston area is ideal for azaleas, but Harris County soils are generally more alkaline than azaleas prefer. Soil for the azalea bed will probably need to be amended to adjust the pH level, and beds should be raised to provide good drainage.

Most azaleas prefer a site with light to moderate shade. If you want to plant an azalea in a sunny location, be sure to choose a variety that can adapt to more sunlight. The larger Indica varieties, such as Formosa, Judge Solomon, G. G. Gerbing, and George Tabor, will generally tolerate fairly sunny locations, but probably should not be planted in a location that receives 8–10 hours of full sun. Heavy shade, on the other hand, will reduce flower production and result in weak growth on all types of azaleas.

It is best not to plant azaleas near shallow-rooted trees or plants with invasive roots that may compete for moisture and nutrients. If azaleas are planted with other plants, be sure they have the same requirements as azaleas. Choose companion plants with flower colors, textures and leaf shape that will complement the azaleas.



Selecting and Buying Plants

Always buy azalea plants from a reliable nursery. They will provide healthy, accurately labeled plants suitable for the Harris County climate and may be able to help you with your selection.

Before selecting your azaleas, decide how they will be used in the landscape—mass plantings, hedges, foundation plants, borders, container specimen, etc. Consider the height and shape of the plant, the color and shape of the blooms, and the color and size of the foliage. Buying azaleas when they are in bloom will help to ensure that the color will complement your landscape design.

Choose plants at least 10 to 16 inches tall that are sturdy and have a good branch system and dark green, vigorous foliage. Check the roots to be sure they are healthy and completely fill the pot.

Site preparation

Proper soil preparation is necessary for successful azalea culture. The soil pH for azaleas should be 4.5 to 5.5. The only way to know whether the soil pH level needs correcting and what nutrients your soil needs is to have your soil tested. The Harris County office of Texas AgriLife Extension Service can provide soil test forms and instructions, or you can find information online at <http://soiltesting.tamu.edu/>.

Prepare the bed several weeks prior to planting to allow the added material to mix with the original soil. Clear the bed of any debris and loosen the existing garden soil to a depth of about 12 inches. Add equal amounts of organic matter and top soil to raise the bed 4 to 6 inches if the location drains well and 10 to 12 inches if the drainage is poor. Good organic materials are compost, peat moss, leaf mold, shredded pine bark or a mixture of these. Organic matter will increase the acidity of the soil and improve drainage of clay soils and improve water retention of sandy soils. Thoroughly mix the added material into the existing soil. Slope the edges of the bed down to ground level. Either edge the bed with bricks, rocks or some other permanent material or plant a low spreading or clustering groundcover near the edge to hold it in place.

Planting

The best time to plant evergreen azaleas is in early spring. They may also be planted in the fall or in January and February if the weather is favorable. Spring-blooming azaleas set their buds for the next season during the late spring and summer and may not flower well if they are disturbed during this time.

A wilted plant should be watered thoroughly before planting. If the plant cannot be planted immediately, put it in a shady location and keep the roots moist. Before planting, space the azaleas according to their mature size. If planted too close together, the plants will lose their character, will be harder to maintain, and will be more susceptible to insect and disease problems.

Carefully remove the azalea from the container; never lift or drag the plant by its trunk. The container may be submerged in water for 10–15 minutes to loosen it from the soil. If the plant is in burlap, cut the string around the ball and pull the burlap away from the top of the ball. Burlap does not need to be completely removed as it will rot quickly. Plastic and other nonbiodegradable material must be removed.

If the azalea is growing in peat moss or clay, the matrix must be removed for the plant to grow properly. Gently wash the medium from the roots with a garden hose or soak the ball in a tub of water. Clay is easily removed with a stream of water, but peat moss will need to be removed using your fingers or a clawed garden tool. This step is not necessary if the material around the root ball is a good quality soil.

Gently spread any roots that are matted together by making several slits 1/2 to 3/4 inch deep with a sharp knife and gently loosening the roots. Dig the hole deeper than the root ball and twice as wide. Leave a mound of soil in the center to support the plant and to allow the roots to fall naturally into the hole. Set the plant on the mound so that the top of the root ball is slightly higher than the bed and fill the hole with the prepared soil, watering to settle the soil. Pack the soil firmly but gently under and around the root ball then mound the soil to the top of the root ball. Water thoroughly and slowly, using a root stimulator solution prepared according to label instructions.

Mulch the bed with shredded pine bark, pine needles, leaves or compost to a depth of about two inches leaving an inch around the stems without any mulch. You may repeat the application of root stimulator two more times, three to four weeks apart, but do not add additional fertilizer for one year. Keep the plants moist but not soaking wet.

Mulching

Mulching azaleas is very important to help maintain proper acidity of the soil, retain moisture, improve aeration, and protect the roots from heat and cold. It also discourages the growth of weeds and helps protect the roots.

Mulch after planting and twice each year or as needed to maintain a 2- to 3-inch thick layer, but do not cover the crown. Spread the mulch out beyond the outer leaves of the plant. Mulch at the beginning of cold weather to protect the roots and again at the beginning of summer to retain moisture and retard weeds. Pine straw, ground pine bark, compost, oak leaves, shredded leaves and leaf mold are good mulching materials.

Watering

Azaleas need moist but not wet roots. Newly planted azaleas are especially vulnerable, and it is especially important to maintain a careful watering schedule until the plants are established. A deep watering every three to five days during summer if no rain has fallen and once every one to two weeks during winter is usually sufficient.

The best way to water is to lay a garden hose on the bed and allow a thin stream of water to run until the water has soaked deep into the soil. Shallow watering will encourage shallow roots.

Occasionally mist the foliage to wash dust from the leaves and to rejuvenate the foliage. Spray the plants in the early morning and only when they are in the shade. Misting the leaves in the late afternoon encourages insects and diseases by allowing them to remain wet overnight.

When freezing weather is expected, a good soaking before the freeze will protect the plant from freezing. Do not water during a freeze.

Fertilizing

Azaleas are light feeders and, if properly planted, will not need to be fertilized the first year. The best time to fertilize is after the blooming season. Apply a light application of acid-type azalea-camellia fertilizer carefully following the directions on the label. Do not use more than the recommended amount and do not fertilize a sick plant. Fertilize again in four to six weeks, particularly if they are planted near trees that compete for nutrients in the soil. Do not feed before February or after the beginning of June. Feeding too early may encourage new growth that could be damaged by a late freeze. Spring-blooming azaleas set their blooms in the summer and the combination of extreme heat and fertilizer during this time can cause poor blooming the following year.

Applying chemical fertilizers without knowledge of any deficiencies in the soil may actually harm your azaleas. The best way to avoid over-fertilizing your plants is to have your soil tested every two to three years and follow the recommendations.

Pruning

Azaleas need to be pruned occasionally to remove dead or damaged branches, to shape the plant and encourage a symmetrical form, or to reduce the size of the plant. Prune long shoots on ever-blooming types when needed to maintain a shapely appearance. All other azaleas should be pruned immediately after spring blooming before the new growth and buds are set. Azaleas respond well to a light pruning every spring and can be severely pruned to reduce their size after blooming season.

Always use clean cutters and keep them clean as you work. The cutters can be sterilized with denatured alcohol or a mixture of 10 percent chlorine bleach and water. Look at the plant before you start. Branches that are shaded out often die back anyway, so remove these first. Older plants may have several tall branches that need to be removed. Removing two or three at a time over several years reduces the shock to the plant. Cut back to a side branch that is growing in the desired direction and is about a third the size of the branch being cut. Make the cut close to the side branch.

Propagation

Azaleas are either species or hybrids. A species is a population that interbreeds and is reproductively isolated from other populations. Seedlings from these isolated species will look like the parents or “grow true from seed.” Hybrids are crosses between other species or hybrids. Hybrids will not grow true from seed and may be faithfully reproduced only from cuttings, which are clones of the original plant.

Almost all the azaleas grown in Houston gardens are hybrids and are reproduced by stem cuttings, layering or grafting. The best methods are by rooting cuttings and by ground and air layering.

To reproduce azaleas from stem cuttings, take cuttings from new wood of healthy, mature plants in June or July after the new growth has hardened. Cut four to six inches of new growth from the plant and remove the leaves from the cut end, leaving only the top leaves. Cut through the outer bark at the bottom of the cutting and treat the cut end with a rooting hormone powder. Make a shallow hole in a mixture of sand and peat moss or perlite and

peat moss. Insert the cut end into the hole, being careful not to disturb the rooting powder. Press the soil around the cutting, leaving some of the rooting powder above the surface. Cover the cutting with a jar or place in a plastic bag to increase the humidity. Raise the jar or open the bag occasionally to allow fresh air to enter. Keep the rooting mixture moist and place the cutting in a warm shady place until the new growth appears and the root system is well started.

Ground-layering is a slow process and may take up to a year for roots to form but is usually more effective than rooting from cuttings. Select a low, flexible branch long enough to bend and touch the ground. Make an upward cut one to twelve inches long along the underside of the branch and dust the cut with rooting hormone powder. Make a trench three or four inches deep in the soil and bury the cut section of the branch with the top bent upward. Anchor the buried part with wire or a rock and cover with mulch. Keep the area moist until roots are formed. Cut the new plant from the parent and plant in a container of acidic soil mixture. Allow the plant to remain in the container until it is at least 12 inches tall. It can then be planted in a properly prepared bed.

Air-layering is faster than ground-layering. Choose a branch of the current or preceding year's growth. Make a cut half way through the branch and 1 1/2–2 inches long. Dust the cut with rooting powder and place a pebble in it to keep the cut open. Wrap the cut with moist sphagnum moss and completely cover the moss with plastic. Tie the ends of the plastic to the stem with waterproof tape. Don't use wire ties, which will cut into the branch. Keep the moss moist until the roots are showing through the moss. Cut the branch below the rooted area and plant in a container of acidic soil mixture. When the plant is 12 or more inches tall it can be transplanted to the garden bed.

Note that some azaleas are protected by patents, legally preventing anyone, including the backyard gardener, from reproducing the protected plant variety by cuttings, tissue culture or any other method of asexual propagation without the written authorization or licensing of the patent holder. Patented plants will be labeled in some way at the nursery where they are purchased. Look for a patent number on the tag, or PPAF (plant patent applied for) or PVR (plant variety rights) after the name of the cultivar.

Pests, Diseases and Other Problems

Azaleas are relative healthy plants when they are properly planted and maintained. However, they are susceptible to problems caused by pests, disease, weather, over- or under-watering and nutritional deficiencies or over-fertilizing. The gardener should watch for symptoms, which will usually be exhibited in time to correct the problem.

Chlorosis is the most common problem seen in azaleas in the Harris County area. The plant will display dropping and yellowing or light green leaves whose veins remain green. Chlorosis can be caused by a number of improper conditions. Have a soil sample tested and correct any deficiencies in the soil. If the bed has poor drainage, raise the bed or replant the azalea in a location with good drainage. Do not over-water or over-fertilize.

The next most common problem in our area is petal blight. The flowers are attacked by fungal spores and the disease spreads rapidly. Two varieties of azalea petal blight have been identified. *Botrytis cinerea* appears as a brown to gray mold on the petals that spreads to other flowers

and leaves. Remove affected flowers and leaves from the plant and from beneath the bush. If necessary, spray with a recommended fungicide. *Ovulinia azaleae* appears as irregular-shaped spots on the petals, brown on white flowers and white on colored flowers. The spots turn to slimy, wet-looking spots on the petals and the flowers become soft and collapse but do not drop from the plant right away. Control by spraying with a recommended fungicide according to directions. Spray all parts of the petals and also spray the ground to kill any fungus in the mulch. Good sanitation prevents spread of the disease as the fungus lives in diseased fallen petals. Clean up the fallen petals and contaminated mulch as soon as possible. Disinfect tools.

Root rot is a serious problem caused by poor drainage. The *Phytophthora cinnamomi* fungus develops in warm, wet conditions and will attack and destroy the roots. Correct the drainage problem. Spraying with a recommended fungicide may help. If the plant dies remove both the plant and root ball and leave the spot exposed to sunlight for a time before replanting.

Lacebugs are among the most frequently encountered insect pests of azaleas. Nymph and adult azalea lacebugs (*Stephanitis pyroides*) suck the sap, and with it the chlorophyll, from azalea leaves. The tops of the leaves will show pale speckling and the undersides are marked with large, sticky, brown to black spots. The adult lacebug is about 1/4 inch long and has transparent lacy wings; the nymphs are dark and spiny. Both nymphs and adults may be present simultaneously from midspring through summer. Crush the insects by drawing a leaf between thumb and forefinger. Insects can be blasted off with a jet of water from a garden hose. If necessary apply horticultural oil, insecticidal soap, or other labeled material to control active stages. Lacebugs feed on undersides of leaves so if a nonsystemic insecticide such as horticultural oil or insecticidal soap is used, it must be applied on the undersides as well.

The most likely cause of failure to bloom is too much shade. Sunlight is needed for the buds to form. Other causes of failure to bloom include pruning after the buds have formed, lack of adequate moisture during late spring and summer, and poor plant nutrition. A freeze may cause the buds to turn brown and not bloom.

Good garden practices such as removing badly infested or diseased plants, ensuring plants have adequate water and nutrients, growing plants and cultivars suitable for the local soil and climate conditions, and selecting cultivars with pest or disease resistance, are all part of an integrated control approach to limiting pest and disease problems. Picking off pests by hand at an early stage can prevent many problems from escalating. Some pests can be washed off with a strong stream of water from a garden hose. Removing diseased plant material from the area and using only clean, sanitized tools will help prevent the spread of disease.

If a pesticide or fungicide must be used, read the label carefully and follow the directions exactly. Use such applications only when needed, not as a routine treatment. Relying solely on chemicals to control pests and diseases can bring long term problems such as pesticide resistance. For more information on pest control or for any other landscape or garden question, please contact the Texas AgriLife Extension Service in Harris County at 281.855.5600.

Following is a list of some of the most popular and dependable azaleas for Harris County. A reliable nurseryman may be able to suggest other varieties suitable for your garden.

Cultivar Name	Color	Flower Size	Bloom Time	Growth Habit	Sun/Shade
Christmas Cheer	Red	Medium	Early to mid-season	Low to medium, spreading	Moderate to high shade
Coral Bells	Coral	Small, single	Early to mid-season	Dwarf, low and spreading	Moderate to full sun
Daphne Salmon	Salmon pink	Medium, single	Mid-season	Medium to tall, compact	Moderate to full sun
Duc de Rohan	Pinkish to red	Single	Early to mid-season	Medium	Moderate to full sun
Elegans	Lilac pink	Medium, single	Early	Tall	Moderate to full sun
Encore series	23 cultivars, wide variety of colors	Small to medium; some double, most single	Repeat bloomers; spring through fall	Variable	Light, filtered shade to full sun
Fashion	Red-orange	Medium	Mid-season, spring & fall	Medium, upright	Moderate to high shade
Fielder's White	White with chartreuse	Large, single	Early to mid-season	Medium, spreading	Moderate to high shade
Formosa	Magenta	Medium, single	Mid-season	Tall, upright	Moderate to full sun
George L. Tabor	Pale lavender-pink	Medium, single	Early to Mid-season	Tall, upright	Moderate to high shade
Gumpo	White, flecked with pink	Large, single, frilled	Late spring to early summer	Dwarf, spreading	Moderate to high shade
Hershey Red	Bright red	Medium, double	Mid-season to late	Low to medium, spreading	Moderate to high shade
Hexe	Violet-red	Medium	Early to mid-season	Dwarf, spreading	Moderate to high shade
Hinodegiri	Red	Medium, single	Mid-season	Low, spreading	Moderate to high shade
Judge Solomon	Deep pink with violet-red	Medium, single	Mid-season	Tall, upright	Moderate to full sun
Kate Arendall	White	Medium	Mid-season	Medium to tall, upright	Moderate to high shade
King's White	White	Medium to large, single	Mid-season	Medium to tall, compact	Moderate to full sun
Mrs. G. G. Gerbing	White	Medium, single	Early to mid-season	Medium to tall, upright	Moderate to full sun
Pericat Pink	True pink	Large, double	Mid-season to late	Medium, spreading	Moderate to full sun
Pink Ruffles	Rose-pink	Medium, single to semidouble	Mid-season	Medium to tall, spreading	Moderate to high shade

Cultivar Name	Color	Flower Size	Bloom Time	Growth Habit	Sun/Shade
President Claeys (Clay)	Orange red	Medium, single	Mid-season	Tall, upright	Moderate to high shade
Pride of Mobile	Deep rose	Medium	Mid-season	Medium to tall, upright	Moderate to high shade
Red Ruffles	Deep red	Large, ruffled	Early to mid-season	Medium	Moderate to high shade
Snow	White	Medium to large, single	Early to mid-season	Dwarf, upright	Moderate to full sun
Southern Charm	Pink, sport of Formosa	Large, single	Early to mid-season	Tall, upright	Moderate to full sun
Wakaebisu	Rich pink	Medium	Late	Dwarf, low spreading	Moderate to high shade



Gardening fact sheets are distributed by Harris County Master Gardeners, community volunteers trained in basic horticulture by the Texas AgriLife Extension Service. For information about Master Gardener volunteer training classes, call Extension's Harris County office at 281.855.5600, or send an e-mail to harris@ag.tamu.edu.