

Amaryllis¹

Sydney Park-Brown and Robert J. Black²

Many tropical and subtropical bulbs thrive in Florida, and one of them is the hybrid *Hippeastrum*, commonly called amaryllis. A favorite among gardeners, hybrid amaryllis are considered a tough, reliable plant that requires little care. In early spring a bulb typically produces one to three leafless flower stalks (scapes), each with two or more trumpet-shaped flowers. Varieties are available that produce miniature to large flowers (Figure 1). Single and double flowers are also available in bold colors of red, bright pink, and orange. Other cultivars produce blooms in subdued shades of pink, rose, and salmon as well as pure white. Still others are spectacularly striped and multi-colored. The handsome, strap-shaped leaves are 1.5 inches wide and up to three feet long. The foliage persists much of the year in Florida but becomes reduced in late summer and may be killed back by frost in northern counties. Amaryllis bulbs are produced in North America, Holland, Israel, Brazil, and South Africa.



Figure 1. Amaryllis is a low maintenance, reliable bulb for Florida.

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Landscape Uses

In most regions of the United States, amaryllis must be grown as potted plants in the home or greenhouse. However, in Florida they are grown outdoors all year and make excellent garden plants.

Amaryllis is impressive in the landscape when grown in clumps of 10 plants or more of the same color. Use them as a foundation planting against nearby evergreen shrubbery. Bright flower colors should be used against dark house colors and shrubbery; dark flower colors display best against white or light backgrounds. Other uses for amaryllis include plantings in terraces, in tree islands, on slopes, near a gate entrance, in borders, or scattered throughout the landscape as individuals (Figure 2).



Figure 2. Amaryllis has many landscape uses.

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Planting

Amaryllis can be planted anytime, depending on the source, but is best transplanted during the winter months. Amaryllis is sun- and shade-tolerant but does best in light shade such as under pine trees. In heavy shade, they flower poorly; leaves may yellow in full sun.

Amaryllis requires well-drained soils. If the site does not drain properly, create a raised bed to provide improved drainage. The bulbs are very hardy and can be planted with a minimum of effort by just digging a hole deep enough to plant the bulb neck-deep. However, for best performance, till the soil and amend with a 3- to 4-inch layer of organic matter such as peat or compost and 2 to 3 pounds of 6-6-6, or an equivalent amount of other complete fertilizer per 100 square feet of bed. Slow-release forms of mineral or organic fertilizer are best to minimize leaching of nutrients into water resources. The amended soil should be leveled and moistened.

Once the site has been prepared, place the bulbs over the bed area in neat rows or in naturalistic drifts for an informal garden effect. Plant the bulbs 12 to 15 inches

apart with the neck of the bulb protruding above ground. Water newly planted amaryllis and keep them moist but not waterlogged until the plants are well-established.

General Care

Provided with adequate conditions and care, amaryllis plants will produce beautiful blooms year after year. The bulbs may be left in the ground for years. It is not necessary to dig, separate, and replant each year, but if the bulbs are crowded, doing so will encourage uniform flowering and larger blooms. Digging also provides an opportunity to discard unhealthy bulbs, to remove young offsets (bulblets), and to amend the bed with organic matter.

Control weeds by spreading a 2-inch layer of mulch over the bed at planting time and remove any that appear. Though tolerant of neglect, amaryllis greatly benefit from at least one fertilizer application in early spring when they emerge. During the growing season (March through September), two or three light applications of fertilizer may be applied. A balanced (10-10-10 or similar) slow-release fertilizer with micronutrients is recommended; follow label directions. Keep soil moist during times of growth and flowering. Frequency of watering will depend greatly on soil type, time of year, and weather conditions. However, once established, amaryllis are drought-resistant and may only need to be irrigated during prolonged drought periods.

Remove the flower stalks after the flowers have died and before seed pods are produced. If not, flowering the following season may be greatly reduced. Removing dead blooms also helps to maintain the aesthetic value of the planting and may prevent disease problems.

Growing Amaryllis in Containers

Amaryllis can be grown very successfully in containers indoors or in greenhouses. When purchasing an amaryllis bulb, keep in mind that, in general, the larger the bulb, the larger the flowers. Large bulbs also typically produce more flower stalks. Plant bulbs in containers soon after purchasing or transfer them from garden beds into pots during the dormant winter months. Pre-forced amaryllis will typically flower about 3–6 weeks after planting (Figure 3).



Figure 3. Amaryllis can be grown in containers.

Credit: Dmitri Ejov/iStock/Thinkstock, © Dmitri Ejov

Amaryllis flower stalks may get top-heavy when in bloom; make sure the container is substantial enough that it will not tip over or add a 2- to 3-inch layer of gravel to the bottom of the pot to add weight. The pot should also have drainage holes and be large enough to allow 2 inches of space between the bulb and the sides of the pot. Cover the drainage holes with pebbles or pieces of broken clay pottery and fill the pot with several inches of potting soil.

Center the bulb in the container and press the potting soil around the roots and bulb base. Leave 1/4 to 1/3 of the bulb above the soil to keep water from entering the top of the bulb. Water the soil and place the container in a warm, bright location. No further watering should be necessary until the bulb begins to sprout.

When growth begins, move the container to a location where it will receive several hours of direct sunlight and temperatures between 75°F to 80°F. Allow the soil to dry between watering to avoid conditions that may favor rot. Fertilizer is not necessary at this point. Once the flowers open, remove the plant from the bright sunlight to prolong the life of the flowers. Flowers will open in succession, and each will last about two weeks.

When the flowers fade, place the plant in light shade and irrigate with a water-soluble fertilizer solution to encourage the growth of new leaves. Bulbs can be left in their original containers for 2 or more years before repotting is necessary.

Propagation

Amaryllis can be propagated by seed, offsets, or cuttage. They are also commercially propagated through tissue culture.

Seed pods mature within 4–5 weeks after the flower has been pollinated (Figure 4). Pick the pods as soon as they turn yellow and split open. Remove the black, papery seeds from the pod and plant them in pots or flats containing a well-drained medium such as vermiculite or coarse sand mixed with peat. Cover the seeds lightly with additional medium. Keep the newly planted seeds in partial shade until they germinate. Then gradually increase the amount of light they receive until they are in full sun. Fertilize with a half-strength liquid fertilizer solution every other week. Seedlings are ready for planting in the garden after one year.



Figure 4. Immature seed pod.

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Seeds do not always produce plants similar to their parents, so amaryllis is usually propagated by offsets or cuttage. Offsets (small bulbs) develop on the "mother" bulbs during the growing season. Bulbs can be dug and divided in the fall after the leaves begin to yellow and brown. Offsets that are at least 1/4 to 1/3 the size of the mother bulb can be removed by simply breaking or cutting them off and will usually bloom within two years. Replant the mother bulb, taking care to retain as many roots as possible; amaryllis has a perennial root system and any roots that are cut off must regenerate from energy stored within the bulb (Figure 5).



Figure 5. When transplanting amaryllis bulbs, retain as much of the root system as possible.

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The best time to propagate amaryllis from cuttage (sometimes called "twin scale cuttage") is from July to November, after the bulbs have flowered and grown for several months. Bulbs cut earlier do not propagate as well. Amaryllis is a "true bulb" similar to an onion and has thick, fleshy bulb scales attached to a basal plate at the bottom of the bulb. Cut the bulb vertically into four or more sections, making sure that each piece has at least two scales attached to a portion of the basal plate. The larger the piece, the faster it will produce a flowering plant. Plant them basal plate down so that 1/3 of the piece is covered by a moist, well-drained medium such as vermiculite or a mixture of peat and sand. Keep warm, moist, and shaded. Small bulblets will begin to form between the scales of cut pieces in about 4–8 weeks, and leaves will begin to sprout soon after. Transplant into small pots when one to two leaves have formed. Plants will bloom within 2–3 years in Florida.

Failure to Flower

Amaryllis plants sometimes fail to bloom. This can be caused by a number of factors:

- Digging the bulbs too early, i.e., before the leaves yellow and die back.
- Too much shade, which reduces the plant's ability to manufacture food and results in loss of vigor.
- Too rich a soil, too much nitrogen fertilizer, or too much water, any of which can cause amaryllis to produce leaves at the expense of bulb growth and flowers.

Amaryllis can be forced to bloom in late winter by inducing a dormant period. Dig the plants in fall and place them in a dry, shaded area for 6–8 weeks. Remove declining foliage, replant, and provide normal care.

Diseases

Occasionally, amaryllis will be attacked by a fungus disease called "red blotch" or "leaf scorch" (*Stagonospora curtisii*) (Figure 6). It usually occurs on shaded plants that are frequently irrigated. Red spots appear on the flower stalks

and leaves and enlarge, elongate, and become sunken. Infected leaves and flower stems are characteristically deformed or bent at the point of attack. The flower stalks of heavily infested plants may break at an infected area or wither and dry up before the flowers are produced.



Figure 6. Red blotch disease of *Amaryllis*.

Credit: Bob Rutemoeller

The fungus and spores of red blotch are carried on the bulbs. Consequently, the leaves and flower stalks that push up from infected bulbs may become diseased. When purchasing or dividing amaryllis, avoid bulbs with dark reddish-brown spots or large rotted areas. Keep in mind that any injury to amaryllis tissue usually produces a red pigment, so red streaks, specks, or irregular patterns are not always indicative of red blotch, which usually shows definite margins and outlines.

Red blotch is difficult to control. The best way to manage the disease is to discard heavily infected bulbs, eliminate overhead irrigation, use sterilized potting soil when propagating, and provide plants with the right growing conditions. Fungicides can be applied, but they are expensive and hard to find. A hot water treatment is sometimes suggested on lightly infected bulbs. Dig up the

bulbs, remove infected scales and excess soil, and soak them for 30 minutes in water kept at a temperature between 104°F–114°F (40°C–46°C).

Insects and Other Pests

Occasional chewing insects, such as caterpillars and the eastern lubber grasshopper, may be encountered (see <https://edis.ifas.ufl.edu/publication/IN132>). Control by handpicking and destroying the insect(s). Pesticides should only be used when the infestation cannot be controlled manually. Aphids, mealy bugs, spider mites, and bulb mites are less common but should be watched for.

Amaryllis can be damaged by microscopic, transparent, wormlike animals called nematodes. Nematodes feed on the roots and may cause disintegration of the basal plate. Animals such as moles, pocket gophers, rabbits, and squirrels can damage amaryllis bulbs as well.

When disease and insect infestations are severe or where large numbers of plants are involved, chemical control may be needed. For information on pest management, contact your local UF/IFAS Extension office:

<https://sfyl.ifas.ufl.edu/find-your-local-office/>.

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² Sydney Park-Brown, associate professor emeritus, Department of Environmental Horticulture, UF/IFAS Gulf Coast Research and Education Center; Robert J. Black, professor emeritus, Department of Environmental Horticulture; UF/IFAS Extension, Gainesville, FL 32611.

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