

Amaryllis¹

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Many tropical and subtropical bulbs thrive in Florida and amaryllis is a favorite among gardeners. Two or more large trumpet-shaped flowers appear in spring on leafless, 2- to 3-foot-tall stalks. Single and double flowers are 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 1/2 inches wide and 18 inches long. The foliage persists much of the year in Florida, but becomes reduced in late summer, and is killed by frost in northern counties. Amaryllis bulbs are available from North America, Holland and South Africa. Dutch hybrids have the largest flowers. Amaryllis (*Hippeastrum x hybridum*) is native to South Africa and belongs to the Amaryllidaceae family.

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 has the greatest landscape impact 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, and in borders.

Planting

Plant amaryllis bulbs anytime between September and January. Amaryllis does best in light shade such as under pine trees. In heavy shade, they will be thin and spindly and flower poorly.

Amaryllis requires well-drained soils. If the site does not drain properly, create a raised bed to provide improved drainage. 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

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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 the ground. Water newly planted amaryllis and keep them moist but not waterlogged until the plants are well-established.

General Care

Provided with good conditions and care, amaryllis plants will produce beautiful blooms year after year. The bulbs may be left in the ground for several years or dug and reset every September or October. It is not necessary to dig, separate, and replant each year, but 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. Apply two or three light applications of fertilizer during the growing season (March through September). Use a low-nitrogen, general, slow-release garden fertilizer and 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.

Remove dead blooms before seeds are produced. If not, flowering the following season will 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 the larger the bulb, the larger the flowers. Large bulbs may produce an additional flower stalk just as the first flowers fade. Place bulbs in containers right after purchasing or transfer them from garden beds into

pots from September through January. Amaryllis can be forced to flower about 6 weeks after planting.

Amaryllis flower stalks 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 firm the medium around the roots and bulb base. When forcing amaryllis, pot them with 1/2 to 2/3 of the bulb above the soil to induce early flowering. Water the potting medium thoroughly and place the container in a cool, 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 close to 75°F. Keep the soil consistently moist, but not over-watered. Fertilizer is not necessary. 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 2 weeks.

When the flowers fade, place the plant in light shade and water and fertilize 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 to 5 weeks after the flower has been pollinated. Pick the pods as soon as they turn yellow and split open. Remove the black, papery seeds from the pod and plant them immediately 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.

Seeds do not always produce plants similar to their parents, so amaryllis are 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. Pot or plant them immediately; offsets will usually bloom within 2 years. Cut the leaves of the mother bulb about 1 1/2 inches above the top of the bulb and the roots to within 2 inches of the bulb. Replant immediately.

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 are "true bulbs" similar to onions and have thick, fleshy bulb scales attached to a basal plate at the bottom of the bulb. Cut the bulbs vertically into four or more sections making sure that each piece has at least 2 scales attached to a portion of the basal plate. The larger the piece, the faster it will produce a flowering plant. Apply a fungicide dust to the wedges to retard disease, and 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 or 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*). 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 over at an infected area or wither and dry up before the flowers are produced.

The fungus and spores of red blotch are carried on the bulbs. Consequently, the leaves and flower stalks which 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; disease-infected bulbs, plants or seedlings should be destroyed. Prevent disease by using sterilized potting soil when propagating and providing plants with the right growing conditions. Fungicides (like thiophanate methyl) can be applied, but they are expensive and hard to find. A hot water treatment is sometimes

suggested. Dig up the bulbs, remove excess soil and soak them for 30 minutes in water kept at a constant temperature of 104-114°F (40-46°C).

Insects and other Pests

Occasional chewing insects, such as caterpillars and the eastern lubber grasshopper, may be encountered. Control by handpicking and destroying the insect(s). Pesticides should only be used when the infestation can't 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 county Extension office: <http://solutionsforyourlife.ufl.edu/map/>

References:

McRitchie, J. J. (1976) Red Leafspot on Amaryllis. Plant Pathology Circular No. 162.

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