

A WORD OR TWO ABOUT GARDENING

Your Miami-Dade Guide to Holiday Plants

'Tis the festive season again, a time to decorate the home with cheerful, brightly colored **poinsettias**, though not forgetting other showy indoor plants such as **amaryllis** and **Christmas cactus**. Apart from their use as house plants, the first two can be grown year round in a Miami-Dade landscape. Indeed there is no shortage of holiday color for south Florida landscapes when we consider all the trees, shrubs and annual bedding plants that add to the enjoyment of being outdoors at this time of year.

The poinsettia (*Euphorbia pulcherima*) is arguably the showiest member of the spurge family (Euphorbiaceae), the red bracts and dark green foliage providing the two colors most associated with the holiday season. The Euphorbiaceae is a large group of plants many of which are adapted to dry climates. This is true of poinsettias which are native to semi-arid areas of southern Mexico. The plant was first introduced to the United States in 1828 by our first ambassador to Mexico, Joel Roberts Poinsett (from which the plant's common name is derived). By act of congress December 12th, the date in 1851 when Joel Poinsett died, was declared National Poinsettia Day.

Wild poinsettias grow as 10' leggy shrubs with infrequent branching and sparse foliage, the leaves oblong to elliptic with finely toothed margins. Like other euphorbias the true flowers are greatly reduced and form a specialized inflorescence, the cyathium. This consists of a small cup-like structure (involucre of tiny bracts with associated yellow nectaries) containing several red stamens (each represents a male flower) and a modified pistil (the female flower). In poinsettias the separate male and functionally female cyathia are clustered at the stem tips, surrounded by large colorful leaf like bracts (cyathophylls). Of little ornamental value, growers use cyathia that are just opening as a sign poinsettias are ready to ship to retailers. Plants that are not sufficiently mature when purchased are unlikely to realize their full potential outside the controlled conditions of a nursery.

Poinsettias were of only peripheral interest until the appearance of 'Oak Leaf' in 1923, the first cultivar to retain foliage whilst flowering. Further work by California grower Paul Ecke heralded our present day interest in poinsettias as container plants. Subsequently two 1968 introductions, Eckespoint C-1 (Ecke, California) and Annette Hegg (Thormod Hegg, Norway) laid the foundation for the modern free-branching plants we are familiar with today.

The contrast between the leggy wild poinsettias that first attracted Poinsett and today's fuller freely branching cultivars is as much due to the chance presence of a plant microbe as it is the efforts of various growers. In the late 1990's researchers from the USDA were able to demonstrate a strong correlation between branching in poinsettias (after pinching) and the presence of a phytoplasma. How or when poinsettias became infected is not known - insects (especially leafhoppers and plant hoppers) are the usual vectors, but so far none have been identified. Phytoplasmas are small bacteria that lack cell walls and can only be visualized with an electron

microscope. They infect plant phloem tissue causing a number of serious plant disease including aster yellows and, all too familiar in south Florida, lethal yellowing of palms. Apart from yellowing, other symptoms involve aberrant growth including stunting and a proliferation of new shoots. Through happenstance the 'symptoms' seen in poinsettias, far from being deleterious, have clearly added to their ornamental value.

Compared to the wild type, modern poinsettias are not only bushier and more floriferous, but have bracts available in many shades of red as well as pink, cream, orange and most recently purple ('Plum Pudding') and burgundy ('Cortez Burgundy'). Some cultivars are available with multi-colored bracts and at least one, 'Holly Point' has green and gold variegated foliage. From University of Florida poinsettia trials the following are some of the cultivars rated as excellent - those marked with an asterisk are also recommended as outdoor landscape items:

Red - 'Cortez Fire', 'Freedom Red'*,'Lilo', 'Orion Red'*,'Pepride Red' and 'Prestige'* (several others were rated good including 'Holly Point'*)

Pink - 'Cortez Hot Pink', 'Monterey Pink', 'Strawberry Punch' and 'Winter Rose Pink' ('Cortez Pink'* was rated good)

White - 'Cortez White'*,'Freedom White' and 'Pepride White' ('Sonora White'*,'White Christmas'* and 'Whitestar'* all rated good)

Speckled, Blotched or Marbled - 'Jingle Bells Series'*,'Sonora White Glitter' and 'Pepride Marble' ('Marblestar'* was rated good)

Multi-colored - 'Amazone Peppermint' (light/dark pink with margins suffused cream), 'Strawberries 'N Cream' (cream and dark pink) and 'Da Vinci' (cream with shades of pink). 'Monet Twilight'* (cream/rose/pink) was rated good.

'Lemon Snow' with creamy yellow bracts was also rated excellent, but three other cultivars with novel colors were rated below average: 'Cortez Burgundy' (purplish red), 'Plum Pudding' (purple) and 'Peterstar Orange' (deep orange red). Leaf shape can range from thin and pointed to prominently lobed like an oak leaf. Some cultivars such as the 'Winter Rose' series have curly/ruffled bracts. A limited number of cultivars with especially strong stems are grown as standards (to a single stem) to produce 3-5' trees. These include the 'Success' series, 'Marblestar', 'Monet Twilight', 'Red Velvet' and the 'Winter Rose' series. The time and attention required to grow standards makes them far more expensive than regular container specimens. Miniature poinsettia standards, to 18", are also grown using cultivars such as 'Cranberry Punch', 'Pepride' series and 'Winter Rose' series.

After purchasing a poinsettia remove any paper/foil sleeve that may be in place - leaving it encourages leaf drop. Indoors place the poinsettia away from air vents in an area of bright light - exposure to full sun should be limited. Plants used on a screened patio or a balcony should not be exposed to constant wind as this can cause bracts to drop as will temperatures above 75°F. On nights when temperatures fall below 55°F bring your poinsettia indoors. Do not over water; remember poinsettias are found in semi-arid areas. Wait until the surface ½" of soil has dried out and do not allow the container to stand in water, e.g. a saucer. To maintain acceptable humidity indoors, the container can be placed on a tray of moistened gravel. Do not use fertilizer as this can shorten the time the plant

provides color. After the holiday season as the bracts begin to fade, you need not consign a poinsettia to the compost pile. Choose to maintain it either in a container or in the ground as part of the landscape.

If you keep the plant, remove the faded bracts, then re-pot in a slightly larger container (diameter no more than 4" wider than previous). If the original container held more than one plant, then each will have to be re-potted separately. Use a slightly gritty, free draining potting mix, containing organic material such as Canadian peat/composted pine bark. Do not use bagged top soil. Place the re-potted poinsettia out doors in bright light, then once new growth is seen gradually increase exposure to full sun. Use a liquid fertilizer, such as a 20/10/20 every 2 weeks or apply a slow release fertilizer such as a 10/10/10 every 6 weeks.

To ensure a compact, bushy plant cut the poinsettia back to about 6" in early spring, pinching new growth as it occurs to 3-4 leaves per stem. Cease all pruning after the first week in September. At this time, in response to shortening days, flower buds are initiated and continue to develop as nights lengthen. Increasing darkness is also needed for bracts to fully develop color. In practical terms this means that from the beginning of October until early December poinsettias must receive 14 hours of uninterrupted darkness each night. If there are street or security lights cover the plant with a large box, or take it indoors and place in a dark closet. Repeated failure to achieve a full 14 hours of darkness will delay or even prevent flowering and bract development. Optimum flowering also requires night time temperatures between 60-70°F followed by 6-8 hours of sunlight. In addition from the beginning of October withhold fertilizer, in particular nitrogen.

For landscape use first cut back the poinsettia as above then plant in late March. Choose a location with excellent drainage, full sun but away from outdoor lighting (see above). The soil should be moist but free draining and contain added Canadian peat. Mulch the plant to conserve water and inhibit pathogenic soil nematodes, and apply a complete slow release fertilizer every 2-3 months. On Miami-Dade's high pH soils look for possible nutritional deficiencies, especially magnesium. Apart from optimizing conditions for successful flowering, the other major challenge is ensuring the poinsettia remains free from disease during our hot wet summers, and controlling potential insect pests (hornworms, whiteflies and mealybugs). Contact the Miami-Dade Extension Office for further information. One final remark about poinsettias, they are not poisonous to either humans or pets (cats and dogs). At most consumption may induce mild vomiting in cats. Even so, in view of possible pesticide residues remember poinsettias are ornamentals not salad items!

The **holiday cacti (Thanksgiving, Christmas and Easter cacti)** belong to a group of epiphytic cacti (*Schlumbergera* spp. - most crosses involving *S. bridgesii* and *S. truncata*) endemic to tropical montane forests of SE Brazil. All make excellent hanging basket plants, their common names indicating when to expect flowers. Holiday cacti are available in many colors from white through pink, red, lavender, purple, peach and yellow. Like poinsettias, flower development is initiated by reduced day length but in addition requires cool nights. Indeed, a sufficiently extended period of cool growing temperatures (50 -59°F) will induce some flower buds to set. In order to have a profusion of blooms coincide with the holidays, both

cool temperatures and reduced day length are required. This means first withholding fertilizer beginning mid August, then from mid September provide 13 hours of uninterrupted darkness, a daily average temperature of 68°F and nighttime temperature of 55°F. Ideally flower buds should be visible after 3-4 weeks, but it will take longer the more these temperatures are exceeded. Once flower buds develop, resume fertilizer application and maintain soil so that it does not dry out but remains just moist. Day length is now less important and temperatures can be adjusted to speed up or slow down flowering.

After the holiday season allow the soil to dry out slightly, to mimic the cactus' normal dry season, and cease application of fertilizer. As new growth commences (about 4-6 weeks) gradually increase water, apply fertilizer and maintain in bright light at a temperature of 70-75°F. The cactus can be placed outdoors in summer but not if temperatures exceed 90°F, and never in direct sun. To propagate, remove terminal stem segments (twist 180° then pull) no later than early spring, dust with a broad spectrum fungicide then stick in just moist potting mix. Maintain at 74°F in subdued light for optimum rooting - after 3-4 weeks move to bright light.

Holiday cacti should be grown in a gritty free draining soil – e.g., equal parts light potting mix, Canadian peat and Perlite. Use a high potash liquid fertilizer at half strength every 3-4 weeks. Flowering improves as plants become root bound, so re-potting is only required every 3-4 years. The main problem, rotting can be prevented by not over watering, especially in winter. Be on the look out for mealybugs – prompt control is essential if plants are to be saved.

Finally **amaryllis** (*Hippeastrum* spp.), by far the easiest to grow of all the holiday plants. Though native to S. America, most amaryllis now in cultivation are hybrids (usually involving *H. vittatum*) developed in The Netherlands. Recently U.S. bulb suppliers have also offered hybrids from S. Africa. Not only are these available earlier in the season than Dutch Hybrids, but they are quicker to flower (within 4-6 weeks of planting) so that African amaryllis can be in bloom by Thanksgiving. Compared to Dutch hybrids, African bulbs are smaller but still produce multiple flower stems. The stems are shorter (about 12") but sturdier and foliage is present at the same time the plant is in flower. Dutch hybrids don't usually produce foliage until after flowering ceases.

Amaryllis are available in a wide variety of colors (white as well as various shades of pink, red and orange), with many bi-colored and a few multi-colored cultivars. Flowers can range in size from dwarf (extremely floriferous) which make excellent bedding plants, to large with spectacular 8-10" flowers (take 7-10 weeks before blooming). There are cultivars sold as double, even triple flowering (12 and 18 petals respectively, stamens replaced by petals). Recent novelty introductions include the slightly fragrant trumpet amaryllis, such as Pink Floyd, with up to 6 small trumpet shaped flowers per stem, and the Cybister amaryllis. The latter were developed by a southern California grower and have unusually thin, brightly colored petals and at first glance could be mistaken for gaily colored spider lilies.

In south Florida amaryllis bulbs can be grown permanently outdoors as spring flowering bedding plants or used as indoor container plants during the holiday season. Choose a container with several drainage holes and a diameter no more

than 4" that of the bulb, cover the bottom with drainage aggregate and gently firm in a layer of fresh potting mix, Center the bulb on this layer of soil, firming in more of the potting mix so that the neck and shoulders of the bulb remain visible. Use soil formulated for container plants, not bagged topsoil (too heavy) or soil mixes intended for starting seeds (too light). After thoroughly watering (around not over the bulb) leave in a cool place with bright light. Do not water again until shoots appear, when the amaryllis should now be exposed to full sun for part of the day (3-4 hours) at a temperature of 75°F. The soil must not be allowed to dry out. While in flower move the amaryllis out of direct sun to prolong the quality of the blooms. Remove fading blooms before they set seed and cut back spent flower stems.

If you received an amaryllis as a holiday gift don't throw it out after flowering ceases. They are easy to maintain and will flower again, though in spring of the following year, not during the holidays. In addition with single amaryllis bulbs selling from \$9-20 they are an expensive proposition to discard after one season. With an end to flowering provide morning sun and dappled afternoon shade, water regularly and fertilize (half strength liquid 20/20/20) every 6-8 weeks. By late summer growth will slow and foliage will die back. At this time mature dormant bulbs are held for several weeks at 50-55°F before forcing for the holidays. This is not a practical proposition for most homeowners - it is much easier to purchase new bulbs. After 2-3 years you should repot an amaryllis, removing and potting up any offsets. These daughter bulbs will take about 3 years before reaching flowering size.

A group of 10 -15 amaryllis can be used as bedding plants for spring flowering. Plant in a free draining soil containing added organic matter or grow in a raised bed. Choose a site that receives light dappled shade throughout the day or at least partial shade from hot afternoon sun. For a holiday amaryllis that has finished flowering, carefully transplant in late January. New bulbs should be planted in the fall as soon as they are received. Plant at 12" intervals with the tops exposed (see above). Provide light applications of a slow release fertilizer when in growth— the 8/2/12 palm special should be adequate for local soils.

Occasional pest problems include aphids, spider mites and mealybugs but during summer, maggots of the narcissus bulb fly can be a far more serious threat. Bulbs can be lifted during late summer once foliage dies back and inspected - infested bulbs usually rot. Amaryllis leaves and stems can develop deep purplish red spots or steaks. This is usually due to some localized tissue injury – however if the spots enlarge and have a definite margin suspect red blotch a fungal disease due to *Stagonospora curtisii*. Contact the Miami-Dade Extension Office for further information.

As I stated in the opening, there need be no shortage of holiday color in a Miami-Dade yard, but I'm afraid we will have to wait until next year's holiday season to explore the topic more fully. By then you should be admiring this year's poinsettia as it re-blooms whether in a container or as a landscape feature.