

## The Poinsettia Plant

Poinsettias are the most popular holiday plant with more than 50 million sold during the six weeks before Christmas every year. The traditional red poinsettia dominates the market but more than 100 other varieties are available. Hybridizers have expanded the range of colors from the familiar red to pink, white, salmon and marbled multi-shaded varieties. Growers also paint white poinsettias with watercolors to achieve blue, purple and yellow poinsettias.



Poinsettias are perennial flowering shrubs or small trees typically reaching a height of 2 to 16 feet with an open, somewhat expansive look. They are found in the wild in deciduous tropical forest at moderate elevations from southern Sinaloa down the entire Pacific coast of Mexico to Chiapas and Guatemala.

They are also found in the interior of Mexico in the hot, seasonally dry forests of Gurrero and Oaxaca.

The Aztecs used the poinsettia bracts to make a reddish purple dye for fabrics, and used the sap medicinally to control fevers. The plant's association with Christmas began in 16<sup>th</sup> century Mexico, where legend tells of a young girl who was too poor to provide a gift for the celebration of Jesus' birthday. The child was inspired by an angel to gather weeds from the roadside and place them in front of the church altar. Crimson "blossoms" sprouted from the weeds and became beautiful poinsettias. A group of Franciscan priests who were settled near Taxco, Mexico in the 17<sup>th</sup> century are thought to have first used the flowers as decoration during the nativity procession called Fiesta del Santo Pesebre. The star-shaped leaf pattern is said to symbolize the Star of Bethlehem.



The plant received the name *poinsettia* in honor of Joel Roberts Poinsett, who introduced the plant in the United States in 1828. Poinsett was a botanist, physician and the first United States Ambassador to Mexico. He sent cuttings of the plant he had discovered in Southern Mexico to his home in Charleston, South Carolina. By Act of Congress, December 12<sup>th</sup> (the date of Mr. Poinsett's death) has been set aside as National Poinsettia Day.

The Ecke Family of California is primarily responsible for advancing the modern-day association between poinsettias and Christmas by heavily marketing the plant in the 1950s and 1960s. The family had a virtual monopoly on poinsettias for much of the 20<sup>th</sup> century owing to a technological secret which made their plants much more attractive. Paul Ecke Jr. had discovered that grafting two varieties of poinsettia together caused every seedling to branch which resulted in a fuller, more compact plant. In the 1990s, a university researcher discovered the method and published it. Competitors quickly entered the market, particularly in South America

and Europe. Still, in 2010, the Paul Ecke Ranch grew approximately 70 percent of all poinsettias purchased in the United States and about 50 percent of sales world-wide. In August 2012, the Ecke Ranch was acquired by the Dutch-based Agrificio Group. The Paul Ecke Ranch had been family run and operated for more than 100 years.



### Description

Botanically, the plant is a species of the diverse spurge family and is known as *Euphorbia pulcherrima*. The colored petals of the poinsettia are modified leaves called bracts. The colors of the bracts change from normal green to brilliant colors in response to temperature and day length. Called photoperiodism, the plants require darkness (typically 12-14 hours at a time for at least five days in a row) to change color. The actual flower, called a cyathia, is a greenish yellow cup-shaped structure arranged in a cluster in the very center of the colored bracts. The cyathia contains both male and female flowers:

the red stamens, which become visible as the plant matures, are the male flowers; the female flowers are hidden within the capsule. The flowers of the poinsettia are unassuming and do not attract pollinators.

### Selection Criteria for Buying a Holiday Plant

The poinsettia should look full, balanced and attractive from all sides. The plant should be 2-1/2 times taller than the diameter of the container. Do not choose plants with fallen or yellowed leaves or plants that are drooping and wilting. Choose a poinsettia that has dark green foliage down the stem to the soil. A thick, sturdy stem is sign of a well-grown plant. The bracts should be a deep, rich, intense color that is not greenish or faded. Look under the leaves for aphids and whiteflies.

Do not purchase plants that are displayed in paper or plastic sleeves; these plants will deteriorate quickly. Crowding can also cause premature bract loss so stay away from plants that have been displayed or crowded close together. For the longest-lasting poinsettias, choose plants with little or no yellow pollen showing. Take care to protect the poinsettia from temperature extremes by having it sleeved or covered when you leave the store.



## Care

Immediately remove any paper or plastic sleeve when you arrive home.

Place the plant where it will receive a maximum amount of indoor sunlight. South, east or west facing windows are preferable to a north facing window. Poinsettias are tropicals and will appreciate as much direct sunlight as you can provide.

The plant needs to be kept out of warm or cold drafts from radiators, air registers or open doors and windows. Rapid temperature fluctuations will cause premature leaf drop. Even touching a cold windowpane can cause injury to the bracts. Night temperatures should be no cooler than 60° to 65° F. Day temperatures should not exceed 80° F. Avoid exposing the plant to hot or cold drafts. If you've ever see a gangly poinsettia in bloom, with only a few tired looking leaves hanging on, it was probably exposed to temperatures that were too cool or experienced extreme shifts in temperature.

The soil must be kept slightly moist but not soggy. Make sure the container and decorative foil both have at least one drainage hole. Examine the soil daily, and when the surface is dry to the touch, water the soil until it runs freely out the drainage hole. Use the table below for recommended watering amounts. Empty out any water that may be left in the pot saucer after watering; do not leave the plant standing in water. If your home tends to be dry and your poinsettia is in direct light, you may have to water frequently, possibly every day. If wilting does occur, immediately water with the recommended amount, wait five minutes and water again.

RECOMMENDED WATERING	
<u>Pot Diameter</u>	<u>Ounces of Water</u>
4 inches	6 ounces
5 inches	9 ounces
6 inches	12 ounces
7 inches	16 ounces
8 inches	18 ounces

*Source: Ohio State University Extension Service*

## Post-Holiday Care

What do you do with a poinsettia plant after the Christmas decorations are put back in the attic and your in-laws have gone home? Many people do not want to throw away a perfectly good plant. (Perfect that is if you choose the plant well, pampered it during the holidays and have luck on your side!)

Poinsettias are not frost-tolerant. They will grow outdoors in temperate coastal climates, such as Southern California beach communities, but not here in the Mid-South.

Many of the new poinsettia cultivars will keep their leaves and remain attractive even in summer. If the plant retains its leaves after the holidays, treat it like any houseplant and place it in a sunny location. Fertilizer is typically not needed for the first month because the potting mix includes a slow-release fertilizer. As soon as night temperatures reach a minimum of 60° F, the plant can be set outside. Place the plant in a shady location

for two to three weeks to allow for acclimatization and to prevent leaf sun scald. Bring it back in the house before the cold weather sets in.



### Re-Flowering

One of the most common questions people have about poinsettias is how to induce it to re-flower after the initial display. Poinsettias are short-day plants, meaning their bud set is affected by the length of daylight. To re-bloom, poinsettias need about 10 weeks with 12 hours or less of sunlight per day. You will have to artificially create these conditions and diligently adhere to the following specific care regimen.

From *January to March*, keep watering the poinsettia whenever the surface is dry.

Starting *April 1<sup>st</sup>*, gradually decrease water, allowing the plant to get dry between waterings. Be careful the stem does not begin to shrivel. This is a sign the plant is too stressed and is dying. In a week or two, when the plant has acclimated to this drying process, move it to a cool airy spot. Place it on its side or upright.

In *mid-May*, cut the stems back to about 4 inches and either replant in a pot 1 to 2 inches larger in diameter, or shake old soil off the roots and repot in the same container. Use a soilless mix or potting soil. Water it well, wait five minutes and water again. Place the newly potted plant back into the brightest window you have and once again keep it at a temperature of between 65° and 75° F. Continue watering whenever the surface of the soil feels dry. After new growth appears, fertilize every two weeks with a complete water soluble fertilizer at the rate recommended on the label for flowering plants.

In early *June*, move the poinsettia outside, pot and all. Keep it in a partially shaded location and maintain your watering and fertilizing schedule.

In early *July*, pinch each stem back about one inch. This is to encourage a stout, well branched plant. If left unpinched, the poinsettia will grow tall and spindly.

By *mid-August*, the stems should have branched and leafed out. Cut or pinch the new stems back, allowing three or four leaves to remain on each shoot. After this second pinch, bring the plant indoors and again place it near a window with a sunny exposure. Keep the plant at a temperature of 65° to 70° F at night and continue watering and fertilizing.

In *September*, continue regular watering and fertilizing. Make sure the temperature stays above 65° F.

Beginning *October 1<sup>st</sup>*, keep your plant in complete darkness from 5pm to 8am. Any exposure to light will delay blooming. Use an opaque box or material to block out light. A closet is a good option but the door cannot be opened during the time the poinsettia is inside. Move the plant back to the sunny window during the daytime and continue watering and fertilizing.

Around the last week of *November*, discontinue the darkness treatment and allow the plant to remain in the window. Once you can see the flowers developing and the bracts show color, it is not as important to continue the dark period, though it is advisable to continue until the bracts are almost fully expanded. Continue watering and fertilizing.

Stop fertilizing about *December 15<sup>th</sup>*. Care for your plant in the same way you did when you first brought it home.

### **Propagation**

If you want to propagate poinsettia, take leafy cuttings during early to mid-August. Cuttings should be about 4 inches long and may be rooted in any pasteurized media. Rooting compounds will increase your success. Place the pots where humidity is high such as a terrarium. Keep the medium moist but not saturated. The air temperature should approximate 70° F by day and 60° F by night. Cuttings should root in three to four weeks.

### **Toxicity**

The poinsettia's toxicity is relatively mild. It can be irritating to the skin or stomach and its latex can cause an allergic reaction in sensitive individuals. The most common side effects that have been reported from ingestions are diarrhea, upset stomach and vomiting. The leaves can be a choking hazard for children and pets.

Have you heard the old wives' tales that poinsettia plants are very poisonous? Research has proven this to be false. A study at Ohio State University showed that a 50-pound child would have to eat between 500 to 600 leaves to have any side effects. An American Journal of Emergency Medicine study of 22,793 cases showed no fatalities. However, if you are concerned about an incidence of ingestion, please call your local emergency service or poison hotline.

A more likely problem to watch out for is contact dermatitis. Euphorbias exude a milky sap when broken. Some people are sensitive to this sap, which can cause an itchy rash. Be especially careful not to rub your eyes after touching the plants. Sap introduced into the human eye may cause temporary blindness.

*By Barbara Culligan, Memphis Area Master Gardener*

### **References:**

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**Links:**

For a description of the 21 cultivars which were introduced in the National Poinsettia Trials in 2011 follow this link: [http://www.gpnmag.com/sites/default/files/14\\_Poinsettia\\_GPN0212%20FINAL.pdf](http://www.gpnmag.com/sites/default/files/14_Poinsettia_GPN0212%20FINAL.pdf)

Make a poinsettia tree: <http://www.southernliving.com/home-garden/gardens/cut-poinsettia-arrangements-00417000080627/>

New Poinsettias: <http://www.southernliving.com/home-garden/gardens/new-looks-poinsettias-0040000006655/>

Ellison Greenhouse: [http://ellisongreenhouses.com/poinsettia\\_celebration.asp](http://ellisongreenhouses.com/poinsettia_celebration.asp)