



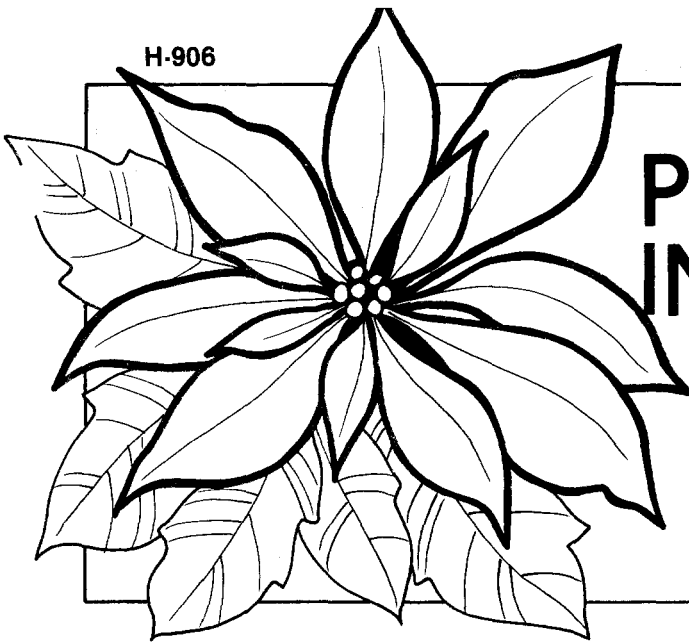
# POINSETTIA CARE IN THE HOME

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**COOPERATIVE  
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Nothing adds more to the atmosphere of Christmas than poinsettias (*Euphorbia pulcherrima*) in full color. The name poinsettia is correctly pronounced "poin set ē a", even though many choose to treat the "i" as silent. Poinsettias are native to Central America and Mexico where they are often referred to as Mexican flameleaf. Poinsettias bloom in the winter in their native environment. Poinsettias will bloom when grown under greenhouse conditions in our northern climate providing all light is eliminated during the night period.

Greenhouse operators, who make a living growing poinsettias for Christmas sales, follow a rigid schedule to obtain the colored bracts or leaves at their height of color by the Christmas holidays. The grower accomplishes this by shading his poinsettia crop two to three months before Christmas to achieve a short day condition. A short day, for poinsettias in general, is a light period of less than 12½ hours and a dark period of greater than 11½ hours. For the commercial grower, this period starts between September 23 and October 10.

## How Dark Is Dark?

Inducing poinsettias to flower may appear to be a simple case of noting when the normal daylength begins to be less than 12½ hours. However, commercial growers found certain inconsistencies in that all poinsettias did not set colored bracts by Christmas. In some parts of the greenhouses, the bracts colored up and the flowers bloomed, while in other parts, the plants did not show bract color or bloom. Later on, very low light intensities, roughly three to 10 times the intensity of a full moon on a clear night, 0.02 foot candles, were found sufficient to interrupt the dark period. The mystery was solved! The night watchman coming in with a flashlight to check temperatures, the adjacent street lights or the lights from passing vehicles all could cause this loss of bract and flower initiation. Once this became common knowledge, growers adopted the practice of systematically covering their entire crop with a lightproof cloth to artificially create a short daylength. This insured consistent flower bud initiation and subsequent development in time for Christmas.

## Other Factors Involved

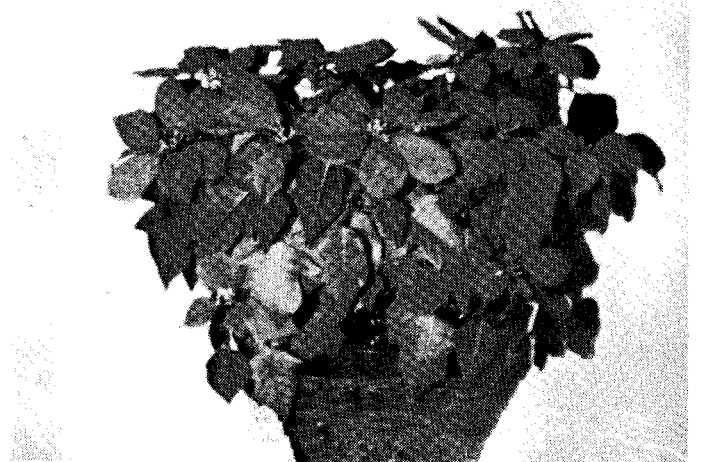
Growing attractive poinsettias involves more than a basic understanding of the requirement for short days.

Plants must be free of disease and insects, planted in clean, well drained soil and properly fertilized. Keeping the plants at cool temperatures, especially at night, also contributes to an attractive and timely bract setting. Generally, a temperature range from 80 to 85 degrees F during the day and 62 to 65 degrees F at night (27-29 degrees C and 16-18 degrees C) are the desirable temperature ranges for optimal poinsettia flowering. This often necessitates moving the plant to different locations day and night. Commercial growers have time-tested routines to meet this successful requirement.

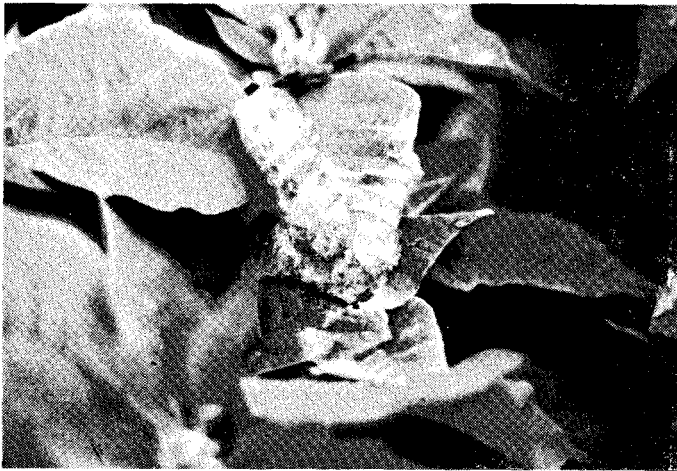
## Starting Point

First of all, purchase a healthy poinsettia and give it proper care during and after the holiday season. Inspection of plants is necessary to avoid purchasing a diseased or insect-infested plant. Certain diseases such as the initial stages of botrytis are not easily detected. Generally, a shop or greenhouse which follows good housekeeping practices will tend to have plants with fewer problems.

Although botrytis causes an injury which is typically observed as a burn, all such injury is not necessarily due to



This poinsettia was actually grown by a resident in Fargo, ND. She followed the directions outlined in this Extension Circular.



**Bract necrosis is a problem that often results from too much fertilizer or from the growing conditions being too wet and cool.**

the fungal disease. Severe bract burn has been encountered where extreme rates of fertilizer, particularly slow release, have been used. There is a theory that plant-absorbed fertilizer is diluted by active plant growth. New tissue development virtually stops during flowering and fertilizer salts accumulate in the youngest mature and most sensitive tissue - the bract. This accumulation causes cell damage, usually starting on the bract edges. Plants with bract burn should not be purchased.

Keep in mind the poinsettia is a tropical plant and is very sensitive to cold weather. In subfreezing temperatures, chill damage can take place in seconds and become visible in 24 hours, at which time your poinsettia will be flaccid. Poinsettias should be protected from cold with paper sleeving, plastic or both. Transport the plant into a preheated car as quickly as possible.

## Home Care

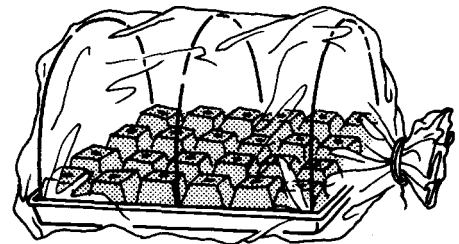
Care in the house is very important. Once in the home, place the poinsettia in a frequently viewed location. Incandescent light is better for showing poinsettias than fluorescent light. Poinsettia plants will look better in the home for a longer period if they are placed near a small incandescent light which is kept burning during the entire night.

Poinsettias sometimes will drop some leaves after a day or two in the home during acclimation or adjustment from the greenhouse environment to home conditions. Excessively dry air to low relative humidity is usually the cause of such leaf drop. To minimize this, occasionally mist the plant, use a humidifier, keep the soil evenly moist, and set the pot in a tray of moist pebbles.

Once the plant has passed its peak of beauty after the holidays, which could be anywhere from two to six weeks later, depending on home conditions and variety, cut the bracts back to the first set of leaves and keep evenly moist (not water logged) throughout the winter months.

During the frost free months, the poinsettia may be placed outdoors to encourage new growth. Monthly fertilization with a complete fertilizer plus iron will provide good healthy growth along with excellent foliage color.

Leafy cuttings 6 to 9 inches long may be taken during the summer months if desired. Place the cuttings into a sterilized media (sand/peat; peat/perlite or potting soil/sand, all 50/50 by volume) in sterilized containers in which they will be grown. If necessary, remove some lower leaves to assure good support in the growing media. The use of a low-strength rooting powder will be helpful in getting the cuttings established. Once planted, water the cuttings thoroughly and cover with plastic film (see sketch). Support the cuttings so that the leaf edges do not touch the plastic. After 4 to 6 weeks, the cuttings should have developed sufficient roots that the plastic cover can be removed.



At this point the rooted cuttings may be pinched. Remove the tip along with a fully expanded leaf. This will encourage two to three new shoots to develop, resulting in a nicer looking compact plant.

Well ahead of the arrival of any cold weather, make sure the poinsettias are brought inside and maintained at temperature of 75 to 80 degrees F (24 to 27 degrees C) during the day and 62 to 65 degrees F (16 to 18 degrees C) at night. Between September 15 and October 10 in North Dakota, flower bud initiation will take place. After September 15, be sure no artificial light reaches the poinsettias during the dark or night periods. To be on the safe side, place them in a closet or basement or cover with a cardboard box until morning.

If the original poinsettia was the variety Annette Hegg, which sets its bracts early, it will do the same in your home around Thanksgiving with a night temperature maintained around 65 degrees F (18 degrees C). To bring this variety into show for Christmas, keep the night temperature down to 62 degrees F (15 degrees C) and it will have good bract color around Christmas.

A more common flowering type are known as Eckespoint. With this variety, simply maintain the original day/night temperatures of 80/65 F (27/18 C) and keep the night periods from being interrupted by artificial light. They should flower by the Christmas holidays.

If you try and fail, take heart; many others have as well. Growing poinsettias to bloom is an art and science which commercial growers have worked long and hard to master.

NOTE: Although studies at Ohio State University have not found poinsettia leaves to be poisonous when force-fed to laboratory rats, plant parts should not be consumed since toxic substances from the growing operation may be present in the tissue. Also, people may react differently to the poinsettia leaves than laboratory rats.