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POINSETTIAS

care and handling



Cooperative Extension Service
Michigan State University

Typical non-pinned, three-plant poinsettia in 6-inch pot. Variety — Barbara Ecke Supreme

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POINSETTIAS are traditional Christmas flowers, whose red, pink, or white bracts (which are the main part of the 'flower') help to brighten up the home more than can any artificial decoration.

The poinsettia (*Euphorbia pulcherrima*) was first introduced to the United States by Joel Robert Poinsett in 1825. As first U. S. Ambassador in Mexico, he was a keen botanist, and he distributed this native Mexican plant to friends in the United States.

In 1902 Albert Ecke started farming in California — since then he and his sons have developed the main poinsettia varieties which are grown today.

Care at Christmas

The length of time your poinsettia will give you pleasure in the living room is dependent both on (1) the maturity of the plant, (2) when you buy it from the florist, and (3) on how you treat the plant. The usual life-expectation for poinsettia blooms is from two to four weeks.

Maturity: — To see how mature a poinsettia plant is, look for yellow pollen on the true flowers, which are situated at the base of the colorful bracts. If the flowers are green or red-tipped and fresh-looking (Fig. 1, page 2) the bloom will "hold" longer than if pollen is covering the flowers (Fig. 2, page 2). Florists generally offer poinsettias for sale when pollen is just showing around the edges of the flowers.

Position and temperature: — The florist has grown the plants at temperatures of 60° to 70° Fahrenheit, with a high relative humidity and the maximum sunshine available in the greenhouse. Therefore, as far as possible, you should try to simulate these conditions in your home.

Place the pot in the sunniest position, but avoiding temperature fluctuations and drafts. The temperature of your living room will probably be somewhat higher than that at which the poinsettia was grown, and its life will be slightly shorter as a result.

Keep the plant from touching the cold window, and place it away from radiators or air registers. If you can, move it to a cooler room at night.

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Figure 1. — Immature flowers at base of colorful bracts. Mature stamens (from which pollen develops) are seen on one of the center flowers.



Figure 2. — Mature flowers with pollen showing on every flower.

Watering: — Examine the plant regularly and water it whenever the soil looks and feels dry. Frequency of watering will increase with the temperature at which you keep your poinsettia. Fill up the pot to the top with water, and allow it to soak into the soil. Repeat, until water begins to trickle out of the base hole of the pot, showing that the soil is wet to the bottom. Discard all excess water.

A 20-0-0 nitrogen fertilizer at the rate of $\frac{1}{4}$ teaspoon to one pint of water should be applied every 5 to 7 days after receiving the plant from your florist. Ask a florist where to obtain this grade of fertilizer.

Summary for Christmas Care

1. Place near a sunny window; do not let plant contact cold window pane.
2. Temperature above 70° will cause shorter bloom life.
3. Avoid cold or hot air drafts; keep away from radiators and air registers.
4. Move to a cool room at night (55 to 60° F.).
5. Examine soil daily; water when soil is dry to the touch. Always water to soak soil to bottom of pot.
6. Discard excess water.

If the plants wilt

Wilting may occur through:

Dry soil: — Immerse pot to the rim in water and leave until air bubbles stop rising from the soil. Drain.

Wet soil: — This can be due to overwatering, leaving the pot standing in excess water, or a heavy potting soil, which retains too much water. Drain off the excess water at once. Too much water will quickly kill your poinsettia.

Draft: — Sudden or continual air drafts will cause the bracts and leaves to curl. Put the plant in a more sheltered position.

Leaves may yellow and drop prematurely due to:

Insufficient light,

Overwatering or too much water around the roots, killing them,

Drafts,

And insufficient nitrogen fertilizer

Care After Christmas

You can keep your poinsettia and bring it into flower again for next Christmas by treating it in the following way:

As the flowers pass maturity, the leaves and bracts will fall. When about half of them have fallen off, gradually reduce the amount of water you give the plant, until the soil is completely dry. The plant is now in a state of dormancy and can be stored in the basement or a dark room at 50° F. without watering.

Spring and Summer

When new shoots begin to grow on the old stems, or when frost danger is over and temperatures are above 50° F. out of doors (whichever is first), start to water again. Cut back the stems to approximately 4 inches and repot the plant in fresh, clean soil. This soil should be porous to allow free drainage and so avoid waterlogging. (You will notice that there are usually three or four separate plants which make up one poinsettia plant.) Leave a space of ½ to 1 inch between the top of the soil and the rim of the pot for watering. If the night temperature outdoors still falls below 50° F., keep the plant indoors in a sunny position.

When the danger of late spring frosts has passed, plunge the poinsettia pot into the ground in your garden, in a place that receives full sunlight all day.

First, line the bottom of the hole with an inch or

two of gravel, to insure that the pot does not stand in a puddle of water.

Then place the pot in the hole and fill in with soil to the top of the pot (Figure 3).

Turn the poinsettia pot regularly to prevent rooting through the bottom holes: it is suggested that a quarter turn each week will effect this, and will also help to keep the plant growth even all round the pot. If the pot is not turned, one side may get more sun than the other.

Summer Pinching

If you prefer a short plant with many flowers, pinch out the growing shoots to encourage branching. This should be done at 3- to 4-week intervals, according to the speed of growth. Take out the top ¼ inch by hand or with a clean, sharp knife. Two large fully expanded leaves should be left below the pinch (Figure 4, page 4); this serves as a guide for knowing when the shoots are ready for pinching. Continue this way until mid-August, when the plant should have a satisfactory shape and number of shoots.

For a tall Christmas poinsettia plant, do not pinch the shoots.

Fertilizing

Give a soluble complete fertilizer (for example: 20-20-20) once each month, at the rate recommended by the manufacturer.

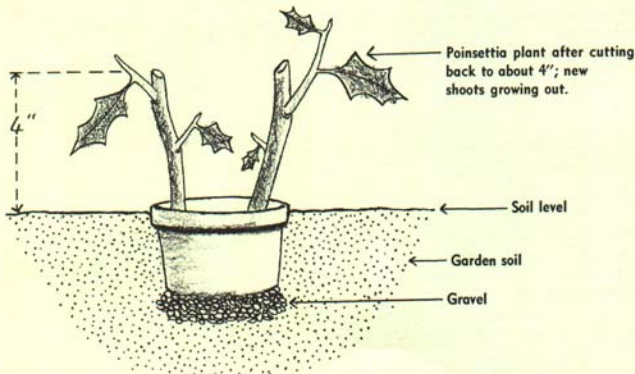
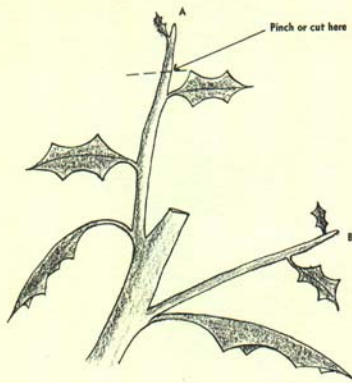


Figure 3. — Place poinsettia out-of-doors after danger of spring frosts has passed.

Figure 4. — Pinching — for a short, bushy plant. Shoot A is ready for pinching — two fully expanded leaves on the shoot. Shoot B is not ready for pinching — there is only one expanded leaf on the shoot.



Disease and Pest Control

Out of doors, your poinsettia will be exposed to a number of garden diseases and pests. Spray it regularly to prevent damage and subsequent death of the plant.

Diseases: — There are three fungi which attack the stem and roots of poinsettias, causing death. These can be avoided by using clean potting soil; if, however, your soil is not sterile, or if you are doubtful about it, give the soil a drench with *Captan* several days before potting the poinsettia. If you desire, nearly dry soil can be sterilized by baking in an oven at 180° F. for 30 minutes.

Bacterial diseases of the stem and leaves cause brown spotting on all parts of the plant, which may later become water soaked patches. Malformation of the younger leaves and growing points may also take place. The only way to eliminate these diseases is to dispose of severely infected plants.

Summary for Disease and Pest Control

For regular disease protection, spray *Captan* once at the rate recommended by the manufacturers, soon after bringing the poinsettia outside, and again just before taking it back indoors at the end of the summer.

For severe attacks:

Bacterial attack: — Dispose of severely infected plants.

Soil and fungi attacking stem and roots: — Replant in sterile soil, dip roots into *Captan-Dexon* solution.

Severe Graymold attack: — Spray with *Captan* every ten to fourteen days.

Scab attack: — Spray *Maneb* every ten to fourteen days.

For regular protection against pests, spray every 2 weeks with a *Malathion* containing insecticide, using it at the rates advised by the makers. For severe attacks, spray every 3 to 5 days, using a different insecticide if *Malathion* seems ineffective.

A spray containing both pesticide and fungicide can be used on your poinsettia. To mix your own, use DDT 50% wettable powder, 2 tablespoons; *Captan* 50% emulsifiable concentration, 1½ tablespoons; and *Malathion* 50% emulsion, 2 teaspoonsful, in 1 gallon of water. This can be used in place of any of the regular spray applications.

All of the above mentioned materials may be obtained from your nursery or seedsman.

Fall Care

About the end of August bring the plant indoors. Spray well for pest and disease beforehand, as all plant pests and disease organisms will multiply more quickly indoors or in a greenhouse, and will invade any other growing plants. Place the poinsettia in a sunny position at room temperature.

Flowering is *photoperiodically* induced in the poinsettia. This means that flowers begin to form when

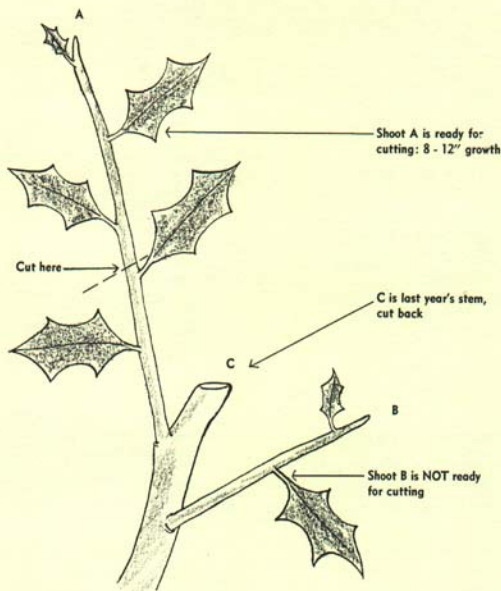


Figure 5. — Propagation — proper time for taking cutting.

the days are a certain length, or, more accurately, when the nights are long enough. Poinsettia is a short-day, or long-night plant. Flower initiation begins, in southern Michigan, in late September and early October.

Because flower initiation depends upon the length of the dark period, your poinsettia must be kept *completely* dark from 5 p.m. to 8 a.m. The time to give this treatment is from the end of September until Dec. 15. Once you can see the flowers developing in the growing points, i.e., when the floral bracts start to show definite color, it is not as important to continue giving the dark period, though it is advisable to continue until the bracts are almost fully expanded. If at all possible, do not spray the plant with chemicals after the bracts begin to develop color.

Temperatures should be no less than 60° at night, but not more than 70°. During the day give the poinsettia as much sunlight as possible.

Reduce the amount of fertilizer given after bringing the plant indoors. Growth is slower in the lower light intensity inside the house.

Propagation

The poinsettia can be propagated by taking cuttings from approximately July 1 to Sept. 1. For those that want to increase the number of plants and think they may have a green thumb, the following is suggested.

After approximately 8 to 12 inches of new growth has developed on the plant which was placed outdoors, 4- to 6-inch cuttings (top stem piece including the vegetative tip) can be taken from the plant (Figure 5). The cuttings should be made with a sharp, clean knife. These cuttings are placed in a clean, coarse medium which will permit a proper balance between sufficient water and a good supply

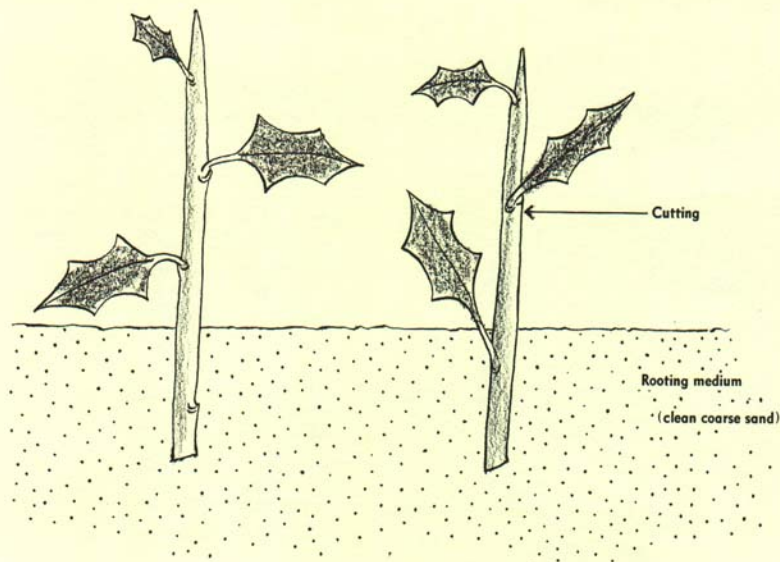


Figure 6. — Propagation — method of sticking cuttings.

of oxygen (Figure 6). Clean, coarse sand will fulfill this requirement.

Sprinkle cuttings frequently on bright days to prevent the sand drying out; if you are rooting the cuttings outdoors, some shade over them on bright days is also necessary to avoid excessive water loss. Finally, when further growth has occurred on the old plant, more cuttings may be taken.

When the cuttings have rooted (3 to 4 weeks) they are transferred to individual 2½-inch pots, planting in a good potting soil. When root systems are well-developed, the plants are repotted into 6-inch pots, with three poinsettia plants in each pot.

Treat this in the same way as you would a poinsettia held over from last Christmas (as described above).