

#

CONTROLLING POINSETTIA FLOWER BUD INITIATION

Schedule for controlling poinsettia flower bud initiation

<u>Date</u>	<u>Treatment</u>	<u>Night Temperature</u>
Sept. 15	Apply lights 11:00 p.m. to 1:00 a.m.	62°F.
Oct. 5	Discontinue lights. Apply shade 4:30 p.m. to 8:30 a.m.	Raise to 68°F.

If plants are shaded with black cloth:-

Oct. 19	Continue to shade	Drop to 62°F.
Oct. 26	Discontinue use of shade	Maintain 62°F.

If plants are not shaded with black cloth:-

Oct. 26		Drop to 62°F.
---------	--	---------------

When to begin light program - The application of light on September 15 will keep the plants in a vegetative condition and prevent any premature flower bud initiation. The night temperature should be kept as close to 60-62°F. as possible in order to slow down the vegetative growth and prevent excessive stem elongation.

Advantage of black cloth - On October 5, when the use of lights is discontinued, the normal daylength is short enough to cause the buds to initiate; however, bud set is more rapid and uniform when an 8-hour daylength is provided through the use of black cloth.

Higher temperature in early October hastens flower bud initiation and development - In raising the temperature to 68°F. on October 5, the poinsettia plant will initiate flower buds much more rapidly and much more uniformly than if the temperature remained at 62°F. and will insure a very good bud set. The reason for dropping the night temperature to 62°F. on the dates specified is that this lower temperature will slow down the development of the flower buds and result in a better quality plant. Actually, the flower buds become initiated at 68°F. within four days following the application of 8-hour daylengths; and within seven days of normal daylengths at this time of year when the long days are discontinued. The reason for keeping the black cloth on is primarily for insurance.

When long days were applied in our research after the plants had received seven days of 8-hour and normal daylength treatments, the primary cyathium aborted and the plant branched, producing two or sometimes three vegetative stems in place of the secondary cyathia.

The abortion and branching occurred when long days were applied following short days until the plants had been under 8-hour daylength conditions for at least three weeks or under the normal day conditions for at least five weeks.

Effects of extraneous lights - Once the secondary cyathia were well developed and showing early stamen primordia, the inflorescence of the poinsettia developed normally regardless of daylength. Therefore, in order to eliminate any danger of flower bud abortion, which can be caused by any extraneous source of light such as street lights, night watchmen, or other sources, the black cloth should be kept over the plants for at least three weeks. If shade is not used, care must be taken not to allow any extraneous source of light for at least five weeks.

Overcoming retailer resistance to late development of poinsettia plants - Most growers have been satisfied with the results of lighting their poinsettia crop. The greatest complaint has been the reluctance of the retail florist to accept lighted plants in early December. Several large poinsettia growers have solved this problem by lighting one-half or two-thirds of their poinsettia crop. The retail florist can then obtain enough well-developed poinsettia plants in early December to satisfy his needs, and plants of a later maturity date and thus better quality can be available to him in mid-December.

Schedule for late propagations (up to October 5) -

September 15	Light stock plants
October 5 (or earlier)	Take cuttings and apply lights to propagating bench
October 10	Discontinue lights and shade propagating bench from 4:00 p.m. to 8:00 p.m. daily.

Maintain a night temperature of
at least 68°F. throughout the
growing season.

-- George B. Goddard