

PROPER POINSETTIAS

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The new hybrid poinsettias have a more formal or proper growth habit and appear to be more resistant to stress. Further, as of this date, most poinsettias are pinched (if so desired) and panned so the uninitiated may figure that the finished product is a "sure bet". NOT SO! New cultivars have new and specific requirements, and proper culture is every bit as essential right up to Christmas Day. Don't gamble on luck to provide your livelihood. Factors to consider include the following:

Light

Full light intensity during daylight hours is required in northern greenhouses.

1. Remove any shade on the glass.
2. Clean dirty glass.
3. Use your brightest houses for poinsettias.
4. Remove unnecessary sources of shade.

5. Don't have taller crops in the bench south of the poinsettias.
6. Don't grow poinsettias under shelves.
7. Space plants properly.
8. Remember that a poinsettia leaf located over the terminal of a neighboring plant delays flowering very significantly.

Fertilizer

New cultivars require adequate, frequent applications of fertilizer to reach their full potential. Equal applications of nitrogen and potassium are not usually adequate in this area. One or two supplemental applications of potassium may be required. (Editor's note: Fertilizer ratios suggested by Paul Ecke, Jr. in the August 1 issue of this publication do not provide adequate potassium for Minnesota growing conditions). Have your soil analyzed to insure the desired results. Remember that overfertilization can also be a serious problem.

Peat-lite mixes have somewhat different fertilizer requirements according to Jim Boodley of Cornell. He grew Paul Mikkelsen and New Ecke White cultivars and reported that the source of nitrogen should be a nitrate and not an ammonium source.

Late Bloom

Light. After September 20, infinitesimal quantities of light during the night can delay or prevent bud initiation and development. Consider light from neighboring crops, the boiler room, a neighbor's porch, automobiles, street lights, shopping centers, your own residence, etc. Visit your poinsettia greenhouses at least once a week after dark. Don't trust to luck. Use black cloth to insure an adequate dark period, if necessary. Example: Start black cloth October 1 (14 hour dark period) for Eckespoint C-1 for December 15 maturity.

Temperature. Excessively high or low night temperatures can delay or prevent flower bud initiation and development and adversely affect bract size. The higher the night temperature, the longer the dark period must be to initiate flower buds.

Annette Hegg cultivars can be grown at 60°-62° F. nights. A night temperature of 65°-68° F. may be required for late propagated plants, but even then 60°-62° F. for a week following propagation will facilitate flower bud initiation. Finish at 60° F. to insure good bract color.

Mikkelsen cultivars can be grown at 60° F. if propagated early

September panning: 60° September 25 to October 10
65° October 10 to November 15 or
68° (if held at 60° until October 15)

Finish at 60° F. once bract size is adequate to insure good bract color.

Jim Mikkelsen cautions that bud initiation is inhibited by high temperatures when poinsettias are propagated between September 20 and October 10.

Eckespoint C-1 cultivars can be grown at a night temperature of 65° F. from potting to maturity. Work by Roy Larson of North Carolina showed that excessively high or low temperatures caused the development of puckered, chlorotic foliage. Roy recommended 64° F. night and 72° F. day temperatures. Because Hegg and Mikkelsen cultivars require lower finishing temperatures in late November and December, Eckespoint C-1 cultivars should be grown in separate houses.

Sanitation

No matter what chemicals are available, disease prevention through proper sanitary methods is the safest and most effective approach when pathogens are considered. Observe key points such as the following:

1. Hang up the ends of watering hoses.
2. Sterilize benches, containers, soil, tools, conveyors, etc.
3. Keep feet off benches.
4. Remove suspicious plants quickly.
5. Wash hands thoroughly after handling diseased plants.
6. Spray or fumigate for insect control before insects become well-established.
7. Control animal life such as rodents, cats, dogs.
8. Eliminate weeds in the greenhouse.

White Fly¹

Treat your plants before the bracts are colored as a preventative measure. Spotting, fading, or injury to bracts is always possible if plants are treated after the bracts show color. The life cycle from egg to mature adults runs 5-6 weeks. Repeat applications of control chemicals at 8- to 10-day intervals are usually necessary.

Aerosol, smoke, or fog applications of parathion, Vapona, dithio, or Thiodan (resistance common) may be used, but are not as effective as spraying.

Sprays of Guthion or parathion are very effective. Be sure to spray thoroughly on the underside of the foliage, too. Guthion may be used at $\frac{1}{2}$ pound 50 percent wettable powder per 100 gallons of water. Vapona, Metasystox R, or Thiodan sprays may also be used, but some insect resistance to the last two has been reported. Combining two spray materials is not recommended because a spreader or wetting agent is usually included in each material. A double dose could cause injury to a sensitive poinsettia crop. If control is difficult, follow the first spraying with a different material about 4-5 days later. An organo-phosphate (Guthion, parathion,

¹ L.K. Cutkomp of the Department of Entomology, Fisheries, and Wildlife collaborated in the preparation of this section.

Vapona, Metasystox R) followed with Thiodan should be the most effective. Caution -- Because there are so many new cultivars in the trade, a grower would be wise to try an insecticide on a small portion of his crop first to determine whether the particular material is safe to use under his conditions.