COOPERATIVE EXTENSION UNIVERSITY OF CALIFORNIA

FLOWER AND NURSERY REPORT

FOR COMMERCIAL GROWERS

LIGHT-COLORED PLASTIC POTS AFFECT POINSETTIA ROOT SYSTEM

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While investigating a chlorotic foliage condition in 'Annette Hegg' poinsettias at a Half Moon Bay nursery, we made a surprising observation. Plants growing in white and light-green plastic pots had a poor, greenish-colored root system visible on the outside of the soil ball. Plants growing in a similar location in dark-green plastic pots had excellent white root systems. Chlorotic foliage was most pronounced on plants growing in the white and light pots. Symptoms were minimal on plants in dark-green containers.

Although all plastic pots had walls of slightly uneven thickness, on close inspection it was found that the dark-green pots were opaque, and the light-green and white pots were translucent in varying degrees. Side walls of both light- and dark-green 6-inch pots were of equal thickness. Light transmission through the pot side walls was measured in the laboratory. Results are shown in table 1.

Growth of algae seemed to be the cause of the green coloration of roots and soil on the root-ball surface.

From these observations it appears that roots of 'Annette Hegg' poinsettia are sensitive to light. The economic importance of light transmission through plastic pot walls and its effect on root growth of this and other species will be investigated more thoroughly.

TABLE 1. Light Transmission through Plastic Pot Side Walls

Pot Description	Light Transmission (foot-candles)
White pot, 4¼" diameter, 4" high	1,050
Light-green pot, 6" diameter, 4¾" high	68
Dark-green pot, 5" diameter, 4¼" high	0.2
Dark-green pot, 6" diameter, 4¾" high	0.1
Maximum available sunlight	6,000

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