

Curling of Poinsettia Bracts

Arthur Bing

Department of Floriculture

Ornamentals Laboratory, Farmingdale, L.I.

Occasionally poinsettia growers have shipments of poinsettia plants returned from retail shops because the plants are "asleep"—or look wilted. The plants do not recover when watered. The petioles of the red colored bracts on the top and sometimes the upper green leaves curled downward shortly after unwrapping. This is shown in figure 1. When returned to the greenhouse, the plants recover in several days, the time of recovery depending upon the severity of the petiole curling.

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FIGURE 1. Poinsettia plant showing "wilted" or "curled" bracts.

Some growers thought the curling was due to impurities in the tissue used to tie up the bracts. However, changing sources of tissue paper did not eliminate their problem. After changing paper, occasionally a lot of plants would still show up with curled petioles.

It was suspected that ethylene gas was generated by the plant and accumulated in the closed package in sufficient concentration to cause petiole bending. A series of tests tying up bracts with various sorts of tissue paper and wrapping the plants into, more or less, closed packages with wrapping paper or polyethylene film showed no correlation between method or degree of enclosure with petiole curling.

Later tests showed that the curling could be caused by tying the bracts together with string or tissue, leaving the plants in the greenhouse for 2 or 3 days and then removing the tissue or string (figure 2). The bracts fall into a horizontal position and then the petioles curl or twist within a 24 hour period. In several days they straighten out again. The reason for this behavior is not known. One thought is that under favorable conditions, a growth regulator may be formed or accumulated in the compressed side of the petiole. This may cause the bending when the bract is released.

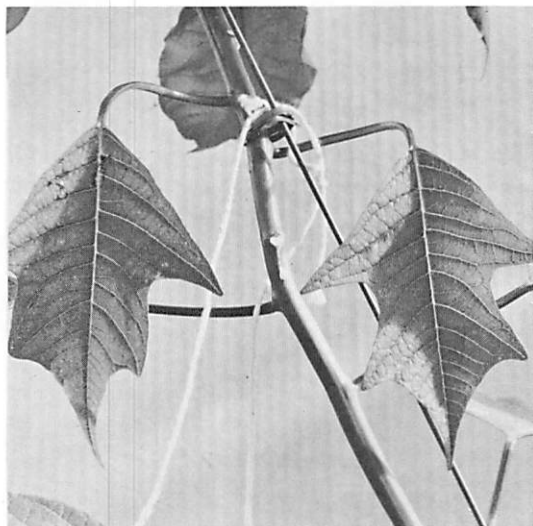


FIGURE 2. Leaves of Poinsettia after 2 days of being tied down.

Curling is the result of tying the bracts together for too long a period in advance of shipment. It is suggested that growers do not tissue the poinsettias too far in advance of shipment and once the tissue is applied, hold the plants in a cool greenhouse until shipped.