

Spring Flowering Poinsettias

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The production of poinsettias as a spring flowering crop may seem a far-fetched idea. Probably just as far out as the thought of flowering pot chrysanthemums all year round was at the time of its conception. However, if one considers the environmental requirements of the crop such as high light intensity and warm days, it may seem a practical crop to grow. Certainly the bright colors and different plant forms are desirable characteristics.

In the April 1966 issue of the Maryland Florist, Jim Shanks outlined a rather complete program of production from stock plants to flowering. He indicated some of the problems associated with rooting of cuttings, etc. during the dark winter months.

As part of the laboratory exercise of the floricultural crop production course, this spring we grew poinsettias as a bedding or spring flowering crop.

The treatments used were designed to compare production in clay versus styrofoam pots, with either a soil or peat-lite growing medium. The pots were either 5-inch clay or styrofoam.

The media used were composed of:

50% peat moss and 50% #4 (fine grade) vermiculite. This was amended with 5 pounds ground limestone, 1 pound 20% superphosphate and 6 pounds 5-10-5 per cubic yard.

A 1-1-1 by volume mix of soil, peat moss and perlite amended with 2½ pounds of superphosphate per cubic yard was used as a control.

The varieties Paul Mikkelsen and Mikkelpink were obtained from the originator as 2¼-inch rooted plants. The

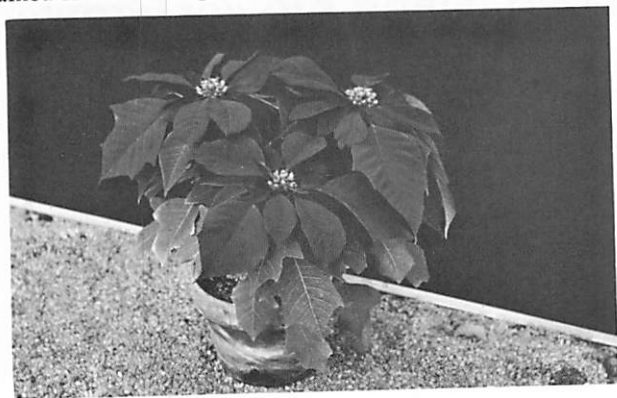


FIGURE 1. Paul Mikkelsen in clay pot, soil medium.
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plants were received February 18, 1966 and placed under long-day conditions at a minimum night temperature of 65°. On February 23 the plants were potted, 3 cuttings per pot, and placed immediately under a 9-hour day. Black cloth shading was applied daily at 5 pm and removed at 8 am.

One week after potting and every week from then on, the plants received an application of 20-20-20 fertilizer at a rate of 3 pounds per 100 gallons of water. No growth retardant treatments were used.

The variety Mikkelpink was planted to a styrofoam bedding plant container approximately 3 x 12 x 21½ inches dimensions. Three plants were planted to each container and grown single stem. The medium was the soil mix. Fertilization was the same as for the other plants.

On May 4, 1966 all the plants were in full bloom. Evaluation of the crop was made. General observations, height from the rim of the pot and bract diameter were among the data taken.

Handling the plants similar to a spring crop of Princess Anne mums, that is pot and start short days immediately, resulted in a well developed compact plant that did not require growth retardant treatment to keep them short.

The average height of the plants was approximately 7 inches regardless of the pot type used or growing medium. Bract diameter varied more so in the styrofoam pots than in the clay pots. There were no great differences as to the medium used.

One of the most interesting observations was that made of the root system. Within the clay pots the roots were found in a normal growth pattern associated with this pot type. The roots were of a thick diameter and had grown to the pot wall where they had circled and formed a large, visible root system.

In the styrofoam pots the root system did not follow this growth pattern. Only a few root tips were found at the surface of the medium ball whether it was soil or peat-lite mix. When the medium was washed from the root system, we found a large number of fine roots that were concentrated around the base of the stem. To say one root system was better than the other would be false. However, if a grower fertilizes poinsettias on the basis of the number of roots that are showing on the root ball, plants grown in styrofoam pots may suffer heavily from nutrient deficiencies.

Another problem observed was that of tip splitting. Almost 20% of the plants that developed had split tips and formed a triple inflorescence. This condition has been said to be caused by many factors. It is possible that temperatures were a few degrees too cool and contributed to the problem. The appearance of the plants was not too objectionable since there were many small flowers produced. However, for the critical grower he may not be pleased with the results.

Of the Mikkelpink grown in paks, the plants were outstanding. Large, showy bracts developed on all the plants. There was no tip splitting of this variety as with

the Paul Mikkelsen. Height of the plants was similar to that obtained in pots.

Figures 1 and 2 show finished plants of both varieties as they appeared at the time of flowering.



FIGURE 2. Mikkelpink, grown in styrofoam pak, soil medium.

Recommendations

A high quality spring flowering poinsettia may be grown in a shorter period of time than a Christmas crop. Potted as 2 $\frac{1}{4}$ -inch rooted cuttings in mid-February, short days applied immediately and heavily fertilized, the plants were in full bloom in time for Mother's Day sales.

Both clay and styrofoam pots that contained either a soil or peat-lite mix were satisfactory. Fertilization of the plants must be on a regular basis as the root system that develops in a styrofoam pot is contained within the soil ball and does not grow to the edge of the ball. Whether this condition is due to some toxic material in the styrofoam or other factors is not known.

Single stem Mikkelpink grown as 3 plants in a styrofoam pak were of excellent quality.

The practice of growing poinsettias in a bedding plant pak is a questionable one. The originator of these varieties has indicated that if planted out of the pak into soil the plants will revert to a vegetative stage of growth and thus lose their desirable characteristics. Maintenance of the plant by the homeowner in a small volume container is unsatisfactory since experience has shown that they require daily watering when placed outside.