### MINNESOTA GARDEN CHRYSANTHEMUMS AS FALL POT PLANTS

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The possibilities of using some University of Minnesota garden chrysanthemums as spring pot plants were discussed in the December, 1956, issue of the Minnesota State Florists' Bulletin. An additional study was conducted to determine the value of these varieties as fall pot plants.

# Treatment

Rooted cuttings of 16 varieties of garden chrysanthemums were planted in four-inch pots on July 1, July 10, July 20, and July 30. Twelve plants per treatment of each variety were grown. The pots were plunged in the field and placed pot to pot in the row. The plants were pinched a few days after potting. A soluble complete fertilizer was applied twice during the summer. Wanda, a University of Minnesota corden variety, was used as a control variety because its value as a fall pot plant had previously been studied.

# Results

Plants potted July 1 were generally of good size and in bloom by early October. The plants potted at the later dates were progressively smaller and later blooming for each 10-day delay in planting.

Seven of the University of Minnesota varieties, Mesabi, Minnpink, Wanda, 50-60-2, 52-313-13, 53-62-29 and 54-69-18, produced good pot plant specimens when potted July 1. These varieties bloomed early in the fall, were floriferous, and produced well proportioned plants. The varieties 53-327-2 and 54-85-85 were too short but were satisfactory in the other characteristics considered. Dr. Longley was early blooming but could only be considered as a fair pot plant because of excessively weak stems. Harvest Bronze and Minnbronze were the shortest of all varieties grown in the study and had very few flowers. Wenonah was too leggy to be desirable as a pot plant. It should be noted that the numbered varieties are not available at present, but they will probably be named by the Department of Horticulture in the relatively near future.

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#### Discussion

The plants which were potted July 10 and later gave evidence that these dates are too late in the summer to enable the grower to produce desirable flowering pot plants before frost. This conclusion is only based on one growing season, however. Plants of the varieties Dr. Longley and Wanda potted July 10, 1955, produced good four-inch pot plants. In the 1956 study, Dr. Longley was extremely weak-stemmed and the plant habit was undesirable. The plants potted July 10, 1956, did not bloom until October 24. This indicates the best date for potting may vary by as much as 10 days from year to year, and that Dr. Longley is a borderline variety for pot plant use.

Proper fertilization, regular watering, and insect and disease control are essential in the field to maintain good quality. A single pinch a few days after potting will be required. Plants in pots grow a little slower than those planted directly in the field and need more frequent watering.

If the plants were grown directly in the field and potted in the fall, the plants would not transplant well in a dry year and some leaf loss would occur in all years. In addition the plants would require special care for a period of five days to a week after potting. This would not be the case with the plants grown in four-inch pots.

### Conclusions

- 1. Good four-inch potted garden chrysanthemum plants may be grown in the field for fall bloom when the cuttings are potted July 1.
- 2. Recommended varieties include Mesabi, Minnpink, Wanda, 50-60-2, 52-313-13, 53-62-29 and 54-69-18.