CINERARIAS

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The cineraria is colorful, relatively inexpensive to produce and generates sales from January through May.

Cinerarias are started from seed. Timing is critical as it has a bearing on the flowering of the plant. Germinate seeds at $60-65^{\circ}F$. Young seedlings can be grown at $60^{\circ}F$. During this time, they are grown in 2 1/4" peat pots or Jiffy-7's. After plants are large enough, they are potted in 5- to 6-inch pots.

Seeding at various times will produce a flowering crop throughout the selling season. Seeds sown in July should produce 5- or 6-inch plants for February, while a late August sowing should produce plants in March, and a December sowing will produce 3- or 4-inch pots for April and May. Growing in smaller pots so that the plants become pot-bound will hasten flowering.

Cinerarias are a cool weather crop. Once the seedlings are established, they should be grown cool--45-55°F. Buds are initiated below 60°F. To delay flowering and increase plant size, grow them at 60-65°F, then drop temperatures to 50°F to initiate buds. Once buds are initiated the plant will flower regardless of greenhouse temperatures. The following table (Post) gives schedules for flowering. Dropping the temperature after January 1 gives less predictable flowering dates since growth is more dependent upon the weather.

A Time Table

Temperatures reduced from 60° to 50°:

November 10 at 50^o flowered February 26. December 1 at 50^o flowered March 12. January 1 at 50^o flowered March 25.

This plant has a fine, fibrous root system and prefers a light, well-drained soil. Overwatering will lead to failure in the crop.

The soil should be pasteurized or chemically treated to protect against Verticillium wilt which is the biggest problem with cinerarias. This disease usually hits the plants when they are marketable and full of flower buds. Overwatering may kill roots and produce symptoms similar to Verticillium wilt.

The potting soil should be amended with agricultural limestone and superphosphate according to a soil test. Liquid fertilizer (20-20-20 at 2 lbs./100 gallons) should be given to plants from seedling stage to flower bud. Once the blooms begin to open the fertilizer can be withheld to keep flower stems stronger.

Cinerarias tend to wilt on bright sunny days. This may be due to poor roots or excessive day-night temperature fluctuation. This may be alleviated by applying a light shade.

As mentioned, Verticillium wilt is the biggest disease problem with cinerarias, and treated soil,

flats and pots should be used. Botrytis and leaf spot can be controlled throughout the growing season with fungicide applications of zineb or benomyl. Powdery mildew can also be a problem--increase air circulation and/or use a fungicide.

Insects such as spider mites, aphids, or whiteflies can be controlled by using systemic insecticides, sprays, fogs or smokes. Systemic insecticides give the most satisfactory control with minimum effort.

A real splash of color is provided by practically all varieties. Festival has a rounded flower head with medium size flowers and good foliage. Ball Special Dwarf Mixture has dwarf selections mixed together with a wide range of color. Early Dwarf Mixture blooms early and is difficult to time. It has uniform flower size and is usually a dark or solid color. Siters Rainbow gives a multitude of color but often has erratic plant growth and is not being grown as much today by commercial growers.

The cineraria adds a bit of variety and color to our limited selections of pot plants. It lends itself to modern home colors. It is appropriately merchandized in high traffic areas to promote impulse buying. Since it is a cool crop, it should be placed in a cool location in the home which is often difficult to find. In the home, it must be kept watered. Many times this plant dies due to lack of water and high temperatures. If you sell this plant, some education of the consumer is necessary to keep it alive and blooming in the home. If given proper care, the flowers will last six weeks.

Trials were made using disulfoton (Di-Syston) at 1 teaspoon per 6-inch pot. It effectively controlled

mites, aphids and whitefly, the three most commonly encountered pests. This, however, is not a labeled use for the material so cannot be an Extension recommendation.

References:

- Post, Kenneth. Florist Crop Production and Marketing. Orange-Judd Publishing Co., New York. 1952.
- Ball, Vic (editor). Ball Red Book, 12th edition. Geo. J. Ball, Inc., West Chicago, III. 1972.

Laurie, Kiplinger and Nelson. Commercial Flower Forcing, 6th edition. McGraw-Hill Book Co., New York. 1958.

AMMONIUM NITHOLEN may be more toxic in acid or alkaline soils than in nearly neutral soils. In acid soils the nitrilying bacteria are inhibited and cannot convert ammonium to the less toxic nitrate form. In alkaline soils ammonia gas which is toxic to plants may be liberated. This may also occur at a lower pil when hydrated fime is applied.

PHOSPHOAUS is immobilized as ferrig aluminam pirosphates in acid soils. Incorporation of 0-20-0 at 5-7 lbs/eu, yd. will generally overcome this problem and supply adequote phosphores for six months to a year.

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