

FAST CROP CYCLAMEN*
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Cyclamen sales are increasing nationwide. You can capitalize on this current trend by producing your own plants on fast schedule. Do not limit sales to the Christmas season. Plants that are attractive and well grown should find receptive markets from early fall to late spring. In some areas summer sales may also be feasible. Good plants in the proper environment in the home will outlast potted chrysanthemums several times over (1).

Cyclamen species are members of The Primulaceae family. Cyclamen persicum, or the florists' cyclamen, is a native of Lebanon, Syria, and Sinai peninsula, and Turkey, where it blooms during the cool, moist winters and then dies back to its corm at the start of their hot, dry summer. The corm functions as a storage unit for the plant during the stressful summer. The cyclamen has been cultivated for well over 250 years and was used by florists as early as 1800, becoming popular as a potted plant about 1850 (2).

The cost of producing a fast cyclamen crop is less than for the normal 15 month crop. It is more economical to grow a 7 1/2 month, 4-inch crop, or a 9 month 6-inch crop. Early flowering cultivars are used. Production of the 4-inch crop costs less than 1/2 of that of a 6-inch crop (3). There is a market for the smaller plants, and, if not sold in one month they may be shifted into larger pots and sold at the appropriate price. Plants in 4-inch pots are most appropriate for cash and carry sales. They don't replace, but rather supplement, the sale of larger plants for special occasions. When consumers are given a choice of large or small flowers on similar sized plants, they usually select the larger-flowered cultivar (4).

Two factors are essential for fast cropping: one must achieve rapid and even germination and all root disturbance must be avoided, particularly during the early stages of development. Desirable cultivars should flower early and have a compact habit of growth with medium to small sized leaves.

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Table 1. Cultivar Description

Non-hybrid medium and large flowered

Albadonna - early, large, white flowers; fast grower
Improved Bonfire - early, red
Cardinal - very early, rich red
Hallo - early, compact, scarlet
Rosa von Zehlendorf TAS - early, vigorous
Dark Salmon Red TAS - early, vigorous
Pure White TAS - early, vigorous

Hybrid medium and large flowered

Boheme - compact, fuchsia red
Carmen - very early, scarlet red
Finlandia - early white, prolific bloomer
Gypsy - salmon red
Manon - compact, large, rich pink
Pastourelle - early, large white; vigorous
Rosamunde - early, rose pink
Swan Lake - early white, dark stems
Tosca - early lilac

Minis - small flowered

Annelie - small, white with violet red eye; many flowers
Beautiful Helena - white, pink and red flowers
Brigitte - pure white*, larger flowers than Annie
Collette - medium early, good red, stocky
Mini-red - rich pink to light red, stocky
Mini-white - pure white, some variation in flower size
Steffi - pink to violet red with dark eyes, good flower count, crinkly leaf margins.

* Also listed as deep salmon in catalogs.

The fast crop works well for Christmas but because of decreased light, slower growth occurs and winter crops (January - March) take longer. In winter, lowering the night temperature to 62°F. for approximately 1 to 1 1/2 months prior to bloom will enhance quality and increase flower number. Supplemental CO₂ during winter will increase the growth rate. It was found that the shelf life of many cultivars was greater for those grown with a night temperature of 63°F rather than 55°F. Plants treated with gibberellic acid (GA₃) had more flowers and continued to flower longer (5).

No matter what crop schedule you use, germination of cyclamen seed does not vary that much. Always use fresh seeds. For a 7 month crop, sow seeds on May 1, if you have

a greenhouse that is bright. If you are using double poly you may need a few extra weeks. Use nutrient enriched peat (may have 10% soil added) corrected to a pH of 5.5 to 6.5 with dolomitic limestone (8 to 10 lbs. per 6 cu.ft. bale). If the limestone is not dolomitic add magnesium sulfate at 1 lb/yd³ as well as potassium nitrate (6 oz/yd³): superphosphate (0-20-0) at (10 oz/yd³): osmocote 14-14-14 at (12 oz/yd³); and Peter's fritted trace element mix at (1 oz/yd³). A peat-lite mix may be substituted.

The seeds should be placed in total darkness at 68°F. This is a critical temperature because the germination will be inhibited if the temperature is 72°F or above. A relative humidity of 70% should be maintained. Soaking the seeds in a dilute solution of sodium hypochlorite is no longer recommended. Although this may hasten germination, no benefit at flowering is evident (5).

The seeds should be covered 1/4 to 1/8 inch "x1" spacing in flats, cell paks, or plug trays and drenched with benomyl (1 oz/12 gal) if mold appears. When half of the seeds have germinated, move to a growing area to avoid stretching of the cotyledons (approximately 28-30 days after seeding). Continue 68°F night temperature and a maximum light level of 4000 foot candles.

At approximately 120 days, about September 1 when 5-6 true leaves have unfolded, transfer to 4-inch pots using the same enriched root medium as was used for the seedlings. Plant the corm flush with the medium to provide an "anchored" plant. Avoid planting too deep as it may result in the loss of plants (6). Lower the night temperature to 62°F to encourage earlier flowering. Temperatures of 60°F and lower will slow vegetative plant development.

Treatment with GA₃ on Oct. 1, will advance flowering by 2 to 5 weeks (cultivar dependent). Earlier application may be ineffective and late application may cause undesirable side effects. A 25 ppm GA₃ solution should be applied at a rate of 8 ml/plant for all but F-1 cultivars.. For F-1's use only a 10 ppm solution. The spray should be directed at the crown of the plant where flower buds are visible. Too much GA₃ may result in weak flower stalks and ruin the plant. However, cultivars do respond differently. If in doubt, make small-scale trials before treating the entire crop (7). In a more recent study by Lyons, it was found that higher concentrations accelerated flowering without excessively elongating the flower stalk (8). If the GA₃ is not applied, there is a good chance that half or more of the crop will not be flowering in mid-Nov. (at 7 1/2 months) or in time for Christmas.

Other notes of cultural importance are the use of: evaporative fan and pad cooling in the summer; 2) CO₂ injection in the winter months (1000 ppm) to increase growing rates (8); 3) Capillary mats which require half as much fertilizer as cyclamen that are top watered. Plants in 3, 4 and 5-inch pots grew equally well on the same mat, so watering was versatile and saved labor costs. Caution--leaching may be needed with mats to reduce soluble salt build-up. High salts slow growth rate, damage roots and may even kill plants. To be sure, monitor with periodic soil analyses (4).

Miniature cyclamen are excellent in 4-inch pots and have fantastic keeping quality in warm homes with decreased light levels.

Started plants may be purchased as small plants which are shifted into 4-inch pots and grown on for sale. Grow at 65-68°F for 1 to 2 months, then decrease to 62-64°F until they flower.

Consumer education is important. Stress the fact that these plants should be kept cool. Place them in as bright a location as is available during the autumn and winter, but move to an eastern exposure in the spring and the summer. Some cultivars are everblooming if dead blooms are removed.

References

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