Cyclamen (Schoneveld)

Cultural Information for: Cyclamen (Schoneveld) Annual
Common Name: Cyclamen
Botanical Name: Cyclamen persicum
Optimum Germination Temperature: 64ºF / 18ºC
Optimum Growing Temperature: 58-62ºF / 14-17ºC

Plug Culture: 12 – 14 weeks (288 tray)

Germination: Single sow seed into 288 trays using a sterile and well-drained media with a pH of 5.6 – 6.0. Cover the seed lightly with vermiculite to aid in moisture retention. Water to a moisture level 5 (saturated). Cyclamen require dark conditions with high humidity. Completely wrap trays with black poly and place in a dark germ chamber with temperature and humidity controls.

Media: pH 5.6 – 6.0 / EC 0.5 mmhos (2:1 dilution)

Temperature: 64°F (18°C)

Light: Cyclamen require total darkness for uniform germination. Cover the plug trays with black poly to avoid any light exposure.

Moisture level: Saturated (level 5).

Humidity: 100%

Period after germination; plug bulking: Remove plug trays from the germ chamber when 25% or more of the seeds show radicle emergence – approximately day 21 – 28. Place on raised benches in the greenhouse for optimum air circulation.

Media: pH 5.6 – 6.0 / EC 0.5 – 0.7

Temperature: First 3 – 4 weeks after germination, maintain between 62-64°F (17 - 18°C). Then gradually allow the temperatures to decrease to 59 - 61°F (15 - 16°C).

Light: After germination, maintain light levels at 1500 foot-candles (15,000 lux), gradually increasing to 3500 foot-candles (35,000 lux). Use a whitening agent on greenhouse roofs if necessary.

Moisture level: If possible, only irrigate the plug trays in the morning hours to ensure a drying-out period before nightfall. Water up to a level 4 (wet), and dry down to a level 3 (moist).

Humidity: Immediately after placing plug trays on the bench, cover with cheesecloth and mist occasionally to ensure ~80% humidity levels. This will also aid in pushing off the seed coat from the emerging cotyledons and allow unhindered growth.

Fertilization: Before feeding young plants, always check the soil pH and EC levels. Begin fertilizing 4 – 5 weeks after sowing with a balanced feed of all elements with an N:K ratio of 1:1.

Growth regulation: Young plant growth can be controlled with higher levels of potassium, and low levels of phosphorous, depending on the growth stage and variety. Also, a temperature drop during the last two weeks of plug growth (negative DIF of 5 – 10°F (3 - 7°C) from one hour before sunrise to two past will aid in keeping plants well-toned.

Fungicides: Preventative fungicide applications for stem and root diseases are recommended. Always follow label directions.

Sanitation / Cleanliness: Cyclamen production requires a very clean and sanitary growing environment. Always utilize the best growing practices by using new trays, pots; wash and sanitize benches, floors and equipment; try to eliminate all sources of algae; initiate scouting techniques for damaging insects, especially fungus gnats, shore flies and thrips which are carriers of known diseases and viruses.

Transplant to finish: 17 - 20 weeks

Transplanting: Fill finished containers to the top of the rim, mounding over very slightly, with a well-drained organic media. Keep plugs sufficiently moist. Do not transplant dry plugs. Plants should have at least 3 leaves. Transplant Super Series Micro, Verano, Compact, Picasso, Allure and Rembrandt varieties with the corm sitting on top of the planting media. Do not bury the corm! Transplant Super Series XL and Mammoth varieties with the corm half-way into the planting media. Do not bury the corm! Avoid stressing the plants in the early stages of growth.

Media: pH 5.6 – 6.0 / EC 0.5 – 0.7 (2:1 dilution)

Temperature: For the first 3 weeks, maintain at 64°F (18°C). When roots have grown to the sides of the container, the temperature can be decreased to 58 - 62°F (14 - 16°C).

Light: After transplanting and for the first 3 weeks, provide shade if light levels go above 4000 foot-candles (40,000 lux). Light levels below 2000 foot-candles (20,000 lux) may inhibit bud initiation.

Moisture level: To ensure good, early root development, maintain moisture level 4 (wet), and allow to dry to level 3 (moist) for the first week. Then gradually allow the media to dry to a level 2 (medium) before watering to a level 4. Irrigating is best done in the morning to allow the plants to dry down before night-time hours.

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Humidity: Maintain humidity levels between 50 – 60% with good air circulation over the Cyclamen crop. Maximum levels should not exceed 85%, especially at night.

Fertilization: One week after transplanting, fertilize with a well-balanced blend of all elements with an N:K ration of 1:1. After 2 weeks, more potassium may be added to an N:K ratio of 1:2, with the irrigation water EC of 1.0 – 1.8 (including the EC level of the water). It is recommended to fertilizer with potassium nitrate and calcium nitrate-based fertilizers with minor elements added to ensure steady, healthy plant growth.

***Note:** Regularly scheduled pH and EC soil tests will greatly assist in determining when and how much fertilizer should be irrigated over Cyclamen crops.
When plants begin to size up, fill the containers and begin reaching the outside container edges, do not increase the rate (EC) of fertilizer as this will cause excessive plant growth. Soil EC levels should be in the .75 – 1.25 range.

Flowering period: Cyclamen flowering depends on several factors, including variety, temperature and humidity levels, light intensity, pot size and the time of year. Cyclamen flower best 25 – 33 weeks after sowing. When temperatures becomes too high (>85°F, 30°C), or too low (<53°F, 12°C), flowering could be delayed by 2 – 4 weeks.

Growth regulation: Under certain environmental conditions, foliage stems may stretch, as will flower stems at finishing. Wide differences in day and night temperatures, combined with high humidity levels can cause this. A gradual increase of night temperatures, with a negative DIF one hour before sunrise, will help maintain foliage and flower stems at the desired length and the plants will remain more compact and toned. If managing fertilization, moisture levels, and temperature does not result in adequate control, growth regulators can be applied.

Spacing: Plants may be grown pot-tight until the foliage reaches the edges of the pots. Space pots once foliage begins to almost touch between plants, as this will allow for good air circulation and assist in preventing diseases.

Crop Protection:

Potential diseases: Botrytis**,** Colletotrichum acutatum, Cylindrocarpon destructans, Erwinia chrysanthemi, Fusarium oxysporum, Pythium, Phytophthora, TSWV/INSV

Potential insects: Broad mites, caterpillar (duponchelia) fungus gnats, greenfly, shore flies, thrips.

Other diseases and insects may also occur. We highly recommend weekly plant inspections (scouting). Consult your crop protections specialist for the correct diagnoses, recommended pesticides and rates. Always follow label directions.

Recommended pot sizes:

Series	Cool regions		Warm regions		Group
	inch	cm	inch	cm	
Micro	2.5-3	6-8	2.5-3	6-8	Micro
Verano	2.5-4	6-10.5	3.5-4.5	4-4.5	Mini
Picasso	3.5-4.5	9-11	4-5	10-12	Mini
Allure	4-5	10-12	4-5	10-12	Intermediate
Rembrandt	4-5	10-12	4-5	10-12	Intermediate
XL	4.5-6	11-15	5.5-6.5	14-16	Standard
Mammoth	5-7	12-17	5-7	12-17	Large

"All information given is intended for general guidance only and may have to be adjusted to meet individual needs. Cultural details are based on North American conditions and Sakata cannot be held responsible for any crop damage related to the information given herein. Application of recommended growth regulators and chemicals are subject to local and state regulations. Always follow manufacturer's label instructions. Testing a few plants prior to treating the entire crop is best."

SAKATA ORNAMENTALS
North America · PO Box 880 · Morgan Hill, CA 95038-0880 · 408 778 7758 · fax 408 778 7768
www.sakataornamentals.com