GrowerFacts

Cyclamen Sierra

(*Cyclamen persicum*)

Germination

Optimum conditions for seedling development that begins the day the crop
is sown until cotyledon expansion.
Expect radicle emergence in 21 – 25 days.

Successful cyclamen plug production is dependent upon darkness and high humidity. Place the plugs in a dark chamber with fog where temperature and humidity can easily be manipulated. At day 14, begin checking the seed flats daily, to see if the radicle has emerged. Take care not to expose trays to light when inspecting. Once corm has formed, darkness is no longer necessary. To avoid seedling stretch, do not wait for all corms to throw up a leaf. When the radicle has emerged the seed has geminated and needs to be removed from the chamber.

Cover: Do not cover. Covering will make it difficult to inspect for radicle emergence.

Media:

- pH: 5.5 – 5.8
- EC: 0.5

Light: Complete darkness is essential for germination. Cover the seed flats with
black plastic to ensure constant darkness and to avoid accidental light exposure.

Temperature: 62° – 64°F (18° – 20°C). Temperatures >68°F (20°C) will inhibit
germination giving non-uniform stands.

Moisture: Alternate between moisture levels saturated (5) and wet (4). Allow media
to approach level (4) before re-saturating to level (5).

Humidity: 100%

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Plug Bulking – Optimum conditions during the vegetative period, beginning at cotyledon expansion, needed for the root to reach the edge of the plug cell.

Media:

- pH: 5.5 – 5.8
- EC: 0.5 – 1.0

Light: Increase light levels gradually during plug culture to 3500 foot candles (35,000
lux) maximum. Excessive light levels will burn the tender young leaves.

Temperature: After radicle emergence provide 62° – 65°F (16° – 18°C) nights; 65° –
68°F (18° – 20°C) days.

Moisture: Alternate between moisture levels wet (4) and medium (2). Allow media
to approach level (2) before re-saturating to level (4).

Humidity: 90%+ is essential to enable the mother leaf to throw off the seed coat. If
the seed coat dries out, the mother leaf may not emerge. After the seed coat is shed,

gradually reduce humidity to 85 – 90%.

Fertilizers: Initially feed at 50 – 100 ppm Nitrogen with calcium nitrate (15-5-15) every 2 – 3 waterings. After first true leaves have emerged, begin alternating ammonium (21-5-20) and calcium nitrate (15-5-15) at 75 – 100 ppm Nitrogen. Ammonium will help push leaf growth. Calcium nitrate will produce a sturdier young plant. If growth is soft, reduce frequency of ammonium applications.

Fungicides: A preventative fungicide program is encouraged.

Growing On to Finish

For all cyclamen, strict sanitation practices will increase the quality of a cyclamen crop. Always use new pots, sanitize the benches, and discourage algae growth anywhere in the greenhouse which may encourage fungus gnats and shore fly outbreaks (carriers of disease). Immediately rogue out diseased plants or isolate suspected diseased plants.

Transplant Ready: 10 – 14 weeks from sow in a '288' tray depending on time of year and variety. Containers too large for the plant habit will make the final product look out of proportion with the flowers. Transplant plug with corm above the soil surface directly into the finish container. Staging growth in intermediate sized containers will delay flowering.

Finish Bulking/Flower Initiation – Optimum conditions during the vegetative period, beginning at transplant, needed for the root to reach the edge of the container;AND to make the plant receptive to flower initiation.

Media: Select a porous media that drains well. This is particularly important during the cool season when temperatures and light levels are low, and media is slow to dry.

- pH: 5.8 – 6.2
- EC: 1.2

Cyclamen are sensitive to elevated soluble salt levels. Allow leaching to occur when fertilizing to avoid root problems due to high salt levels.

Light: Provide shade to allow a maximum of 4400 foot candles (44,000 lux). Flowers will not be initiated if light levels drop below 2000 foot candles (20,000 lux). Supplemental lighting at 300 – 500 foot candles (3000 – 5000 lux) for a 14 hour day will increase bud count.

Temperature: After transplant, maintain cool days, with 65°F (18°C) nights. Once rooted to the sides, drop nights to 62°F (17°C) to help facilitate flowering. When roots reach bottom of pot, reduce night temperature further to 58° – 60°F (14° – 16°C) to keep the crop compact the last month of finishing. Hold finished crops at 55° – 60°F (13° – 15°C) nights, and cool days. Night temperatures above 62° – 65°F (17° – 18°C) will decrease bud counts.

Moisture: Alternate between moisture levels wet (4) and medium (2). Allow media to approach level (2) before re-saturating to level (4).

Humidity: Minimum of 60% during the day and a maximum of 80 – 85% at night. Low humidity contributes to leaf yellowing and high humidity will produce elongated, weak foliage that is susceptible to fungus attack.

Fertilizers: Begin fertilization when roots push out of the plug. Feed weekly or every 2 – 3 waterings with a N:K ratio of 1:2. Fertilize at an EC rate of 1.5. On young plants, alternate between potassium nitrate and calcium nitrate fertilizers. An extra solution of potassium nitrate is given with an EC of 2.0 – 2.4 every two weeks. If new leaves do not expand fully, an occasional application of ammonium will promote leaf expansion. When plants reach the desired size, alternate between three applications of potassium nitrate to one application of calcium sulfate, at a fertilizer EC rate of 1.5 for finishing.

Fungicides: A preventative fungicide program is encouraged.

Spacing: Grow pot tight until foliage reaches the pot rim. Additional spacing is needed to allow for leaf growth but not so close that the plants touch each other. Good air circulation is necessary for quality growth. Crowding the plants will favor a climate for disease development and irreversible stretching.

Common Diseases: Botrytis, Fusarium, Erwinia, Cylindrocarpon (Nectria) and Gloeosporium

Common Pests: Aphids,Thrips and Cyclamen Mites. Shore Flies are disease vectors for Erwinia; Fungus gnats are disease vectors for Fusarium.

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SCHEDULING
‘288’ Plug crop time: 10 – 12 weeks depending upon the time of the year and series.

Transplant to finish crop times:

- Mini types: 4” crop: 14 – 16 weeks
- Intermediate types 4”crop: 15 – 17 weeks
- ‘Sierra,‘Winter Ice’ 6” crop: 16 – 18 weeks
- ‘Rainier’ 6” crop: 18 – 20 weeks

“60 – 72” plug crop time: Transplant a 8 – 10 week ‘288’ into “60 – 72” plug tray for an additional 5 – 6 weeks. (Some growers prefer a “50” size plug tray.)

Transplant from “60 – 72” plug to finish crop times:

- Mini types: 4” crop: 12 – 14 weeks
- Intermediate types 4”crop: 13 – 15 weeks
- ‘Sierra,‘Winter Ice’ 6” crop: 14 – 16 weeks
- ‘Rainier’ 6” crop: 16 – 18 weeks

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