GrowerFacts

Primula Primlet®
(*Primula acaulis*)

Germination

Stage 1

- Germination: 7 to 10 days at 64°F (17°C)
- Recommended plug sizes are 512 to 72
- Cover seed lightly with coarse vermiculite to maintain moisture levels
- 10 f.c. (100 Lux) of light benefits germination, but is not required
- Provide high moisture but do not saturate (4+)

Plug Production

Stage 2

- Maintain light levels below 1,500 f.c. (15,000 Lux)
- Begin fertilizing with 14-0-14 at 100 ppm
- Maintain medium moisture (3 to 4)
- Maintain temperatures at 64 to 68°F (17 to 20°C

Stage 3

- Increase light to 2,000 to 2,500 f.c. (20,000 to 25,000 Lux)
- Increase fertilizer to 200 ppm, alternating 14-0-14 and 20-10-20
- Allow moisture levels to alternate between 1 (dry, not wilted) to 4 (moist)
- Keep media pH below 6.0
- Maintain temperatures at 64 to 68°F (17 to 20°C)

Stage 4

- Increase light to 2,500 f.c. (25,000 Lux), maintaining cool temperatures
- Maintain dry to medium moisture levels
- If pH is above 6.0, apply Iron Sulfate at 1 pound per 100 gallons as a soil drench
- Maintain temperatures at 64 to 68°F (17 to 20°C)

Important Plug Production Tips

- Maintain high light levels, but shade if necessary to avoid high temperatures
- Severe wilting can cause leaf tip burn
- Primula have a high pH sensitivity. Fe deficiency causes interveinal chlorosis on new growth and stunting. Maintain pH below 6.0.
- Watch for fungus gnats, especially if staying wet due to cool temperatures or shading
- Apply preventative fungicide for Pythium and Theileviopsis during late Stage 3 and early Stage 4

Growing On to Finish

Media

Use a peat-lite mix with good drainage; peat should be 50 to 60% of the mix. Maintain pH between 5.5 and 6.2. Plants in pots should be placed on a surface that allows good drainage.

Planting

Plant in moist growing media. Set the plant even or slightly above the soil line of the liner – do not bury the plug or liner.

Temperature

Weeks 1 to 4 after transplant (Establishing stage – goal is to establish 10 leaves)

- Nights: 55 to 60°F (12 to 15.5°C)
- Days: 60 to 65°F (15.5 to 18°C)

Weeks 5 to 10 (Bud initiation stage)

- Nights: 35 to 45°F (2 to 7°C)
- Days: 45 to 48°F (7 to 9°C)

Weeks 11 to 16 (Flower development and forcing)

- Nights: 56 to 58°F (13 to 14.5°C)
- Days: 60 to 62°F (15.5 to 16.5°C)

NOTE: Plants can be held at 40 to 45°F (4.5 to 7°C) for later forcing.

Light

Provide full sun at lower temperatures. Reduce light levels to avoid high temperatures. Excessive high light may lead to 'blind plants' or bud abortion. Optimum light is usually between 2,000 and 3,500 f.c. (20,000 and 35,000 Lux).

Humidity

Relative humidity between 60 and 70% prevents stress on the plant and reduces the water requirement. Provide good air circulation in the area to prevent condensation and Botrytis.

Water

Water quality should be good with alkalinity below 140 ppm. Maintain EC below 0.5 mmhos.

Fertilization

Primula is a cool crop and does not have a high fertilizer requirement. Start the plants with 20-10-20 at 200 ppm. When ready for cold treatment, change fertilizer to 15-0-15 at 50 ppm. Maintain media EC under 1.2 mmhos.

Common Problems

Insects: Aphids, whitefly, fungus gnats

Diseases: Botrytis on flowers, Pythium, Rhizoctonia

Other Problems:

Problem: Botrytis

Causes: Plants have wet foliage and flowers at night; Lack of circulating air which can prevent condensation; No fungicide control for Botrytis; Be sure to water early in morning and avoid high humidity

Problem: Premature bud set and small plants

Causes: Temperature too cold during growing-on period; Low fertility; Not enough weeks of warm growing-on temperatures

Problem: Flower stems too short

Causes: Cold temperature below 40°F (4.5°C) for too long; Forcing at high temperatures above 65°F (18°C) nights

Problem: Flower stems long and weak

Causes: Light levels too high; High day/night temperature above 70°F (21°C)

Problem: Chlorotic plants

Causes: Media too wet – poor drainage; High pH causing iron and nitrogen deficiency; Ammonium toxicity; Magnesium deficiency