GrowerFacts

Lobelia species cardinalis Queen Victoria

(*Lobelia hybrid*)

Germination

- Time of radicle emergence (4-6 days)
- Soil temperature 75-80°F (24-27°C).
- Keep media evenly moist but not saturated.
- Do not cover or bury the seed.
- Light is not necessary for germination until radicle emergence.
- Soil pH 5.5-5.8 and soluble salts (EC) less than 0.75 mmhos/cm (2:1 extraction).
- Lobelia is very sensitive to high salts, particularly high ammonium, during germination.
- Keep ammonium levels less than 10 ppm.

Plug Production

STAGE 1 - Time of radicle emergence (4-6 days)

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STAGE 2 - Stem and cotyledon emergence (7 days)

- Soil temperature 68-72°F (20-22°C).
- Reduce moisture levels once radicle emergence occurs! Allow the soil to dry out slightly before watering for best germination and rooting.
- Keep soil pH 5.5-5.8 and EC less than 0.75 mmhos/cm.
- Keep ammonium levels less than 10 ppm.
- Begin fertilizing with 50 75 ppm N from 14 0 14 or a calcium/potassium nitrate feed once cotyledons are fully expanded.
- Alternate feed with clear water.
- Irrigate early in the day so foliage is dry by nightfall to prevent diseases.
- Apply protective fungicides for damping off organisms once full stand is achieved.

STAGE 3 - Growth and development of true leaves (14-21 days)

- Soil temperature 65-68°F (18-20°C).
- Allow the soil to dry thoroughly between irrigations but avoid permanent wilting to promote root growth and control shoot growth.
- Maintain soil pH 5.5-5.8 and EC less than 1.0 mmhos/cm.
- Increase feed to 100 150 ppm N from 20 10 20 alternating with 14 0 14 or other calcium/potassium nitrate fertilizer.
- Fertilize every 2 3 irrigations.
- If using 15-0-15 supplement with magnesium 1 2x during this stage, using magnesium sulfate (16 oz/100 gal) or magnesium nitrate. Do not mix magnesium sulfate with calcium nitrate as precipitate will form!
- High light (greater than 2500 foot-candles) may cause burning or purpling of the leaves.
- Use DIF whenever possible, especially the first 2 hours after sunrise, to control plant height.
- Lobelia responds to A-Rest, Bonzi, and Bonzi. Most growers use B-Nine after first true leaf expansion and as needed.

STAGE 4 - Plants ready for transplanting or shipping (7 days)

- Soil temperature 60-62°F (16-17°C).
- Allow soil to dry thoroughly between irrigations.
- Maintain soil pH 5.5-5.8 and EC less than 0.75 mmhos/cm.
- Fertilize with 14 0 14 or calcium/potassium nitrate feed at 100 150 ppm N as needed.

Growing On to Finish

- Lobelia seedlings should be transplanted in clumps rather than single plants.
- Lobelia may be sowed direct to packs, reduces crop time 5-7 days and saves labor, but takes more space.

TEMPERATURE

Night: 50-55°F (10-13°C)

Day: 55-60°F (13-16°C)

LIGHT

Some shade should be provided, especially if temperatures are hot.

MEDIA

Use a well-drained, disease-free soil-less medium with a medium initial nutrient charge and a pH 5.5-6.0.

FERTILIZATION

- Fertilize every other irrigation with 15-0-15 alternating with 20-10-20 at 150-200 ppm nitrogen.
- Maintain medium electrical conductivity around 1.0 mmhos/cm (using 1:2 extraction).

CONTROLLING HEIGHT

- Once plants are rooted to the sides of the containers they can be allowed to wilt prior to irrigation to provide some height control.
- Height can also be controlled by withholding fertilizer, especially phosphorous and ammonium-form nitrogen.
- Lobelia are responsive to day/night temperature differential (DIF), and are shorter with a negative DIF.
- Lobelia responds to A-Rest, B-Nine, and Bonzi; however growth regulators are usually not necessary.

Post Production Care

TEMPERATURE

Optimum temperatures for lobelia:

Night: 50-55°F (10-13°C)

Day: 55-60°F (13-16°C)

- Optimum conditions may be difficult to maintain, especially if plants are displayed outside.
- Using a negative DIF will help keep the plants short and of high quality.

LIGHT

Lobelia will tolerate full sun if temperatures are below 80? F. Partial shading is preferred during retail display.

COMMON PROBLEMS:

Insects: Spider mites. Thrips, Whitefly

Diseases: Botrytis, Pythium, Rhizoctonia

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