GrowerFacts

Lisianthus Florida

(*Eustoma grandiflorum*)

Germination

Maintain soil temperature at 72° to 77°F (22° to 25°C). Keep media evenly moist but not saturated. Do not cover or bury the seed. Light is required for germination.

Plug Production

Note: Lisianthus are tender as seedlings and are recommended as a plug-purchased item.

Plug Tray Size

Lisianthus are best produced in 512-cell plug trays.

Stage 1 (10 to 12 days)

- Maintain soil temperature at 72° to 77°F (22° to 25°C).
- Maintain air temperature at 65° to 70°F (18° to 21° C) nights, 70° to 75°F (21° to 24°C) days throughout plug production.
- Keep media evenly moist but not saturated.
- Do not cover or bury the seed.
- Light is required for germination.
- Keep soil pH at 6.2 to 6.5 and soluble salts (EC) at less than 0.75 mmhos/cm (2:1 extraction).
- Lisianthus are very sensitive to high salts, particularly high ammonium during germination – keep ammonium levels less than 10 ppm.

Stage 2 (14 to 21 days)

- Maintain soil temperature at 68° to 72°F (20° to 22°C).
- Reduce moisture levels once radicles emerge. Allow the soil to dry out slightly before watering for best germination and rooting.
- Lisianthus are quick, deep rooters and will grow better if moisture is reduced once cotyledons have expanded.
- During Winter, supplemental lighting between 450 and 700 f.c. (4,500 and 7,000 Lux) reduces crop time.
- Keep soil pH at 6.5 to 6.8 and EC at less than 0.75 mmhos/cm.
- Keep ammonium levels less than 10 ppm.
- Begin fertilizing with 50 to 75 ppm N from 14-0-14 for a calcium/potassium nitrate feed once cotyledons are fully expanded.
- Since Stage 2 takes up to 3 weeks, it may be necessary to feed once or twice with 50 ppm 20-10-20 as long as ammonium levels stay low.
- Alternate feed with clear water.
- Irrigate early in the day so foliage is dry by nightfall to prevent diseases.

Stage 3 (28 to 35 days)

- Maintain soil temperature at 65° to 68°F (18° to 20°C).
- Allow the soil to dry thoroughly between irrigations to promote root growth and control shoot growth; avoid permanent wilting.
- Keep soil pH at 6.5 to 6.8 and EC at less than 1.0 mmhos/cm.
- Increase feed to 100 to 150 ppm N from 20-10-20 alternating with 14-0-14 or other calcium/ potassium nitrate fertilizer.
- Fertilize every 2 to 3 irrigations.
- If using 15-0-15 supplement with magnesium 1 to 2 times during Stage 3, use magnesium sulfate (16 oz./100 gal.) or magnesium nitrate. Do not mix magnesium sulfate with calcium nitrate as precipitate will form.
- Use negative DIF whenever possible, or drop temperatures the first 2 hrs. after sunrise, to control plant height.
- Lisianthus usually do not need chemical growth regulators during plug production; B-Nine can be used if necessary.

Stage 4 (7 days)

- Maintain soil temperature at 62° to 65°F (17° to 18°C).
- Allow media to dry thoroughly between irrigations but avoid permanent wilting.
- Keep soil pH at 6.5 to 6.8 and EC at less than 0.75 mmhos/cm.
- Fertilize with 14-0-14 or calcium/potassium nitrate feed at 100 to 150 ppm N as needed.
- Do not hold lisianthus plugs until rootbound, as basal branching will be inhibited. Rootbound plugs will also flower at shorter and non-uniform heights.

Growing On to Finish

Container Size

Container size varies by variety.

Media

Use a well-drained, disease-free, soilless media with a medium initial nutrient charge and a pH of 6.5 to 7.2.

Temperature

Nights: 60° to 65°F (16° to 18°C)

Days: 68° to 75°F (20° to 24°C)

Light

Keep light levels as high as possible while maintaining moderate temperatures. High light intensity is needed for flower bud initiation and short stem length. HID lighting on dark days during the early stages of growth will help accelerate the flowering response. Provide light shade when plants are in flower.

Water

Keep the media moist but not wet; allow to dry slightly between waterings. Lisianthus grow slowly at first, and therefore require little water. Do not allow the media to dry out when plants are in flower.

Fertilization

Fertilize every other irrigation with 15-0-15 alternating with 20-10-20, at 100 to 200 ppm N. Maintain medium EC around 1.5 mmhos/cm (using 1:2 extraction).

Growth Regulators

Once plants are rooted to the sides of the containers, water management can be used to provide some height control. Height can also be controlled by withholding phosphorous and ammonium-form nitrogen. Lisianthus are responsive to day/night temperature differential (DIF), and are shorter with negative DIF. A B-Nine spray at 2,500 ppm can be used to control height. Apply 2 weeks after transplanting, when breaks are 1 to 2 in. (2.5 to 5 cm) long. Additional applications can be made but will delay flowering. Always follow current manufacturer label instructions. Do not stress the plants to control height. Withholding water or fertilizer may stress the plants, can dwarf them and make them susceptible to disease.

Common Problems

Insects: Aphids, leaf miners, thrips, whitefly

Diseases: Botrytis, Fusarium, Pythium, Rhizoctonia

Other: Algae

Post Production Care

Lisianthus prefer full sun to light shade; however, during retail display, light shade may be beneficial.

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