



## Go-Go™

### BEGONIA TUBEROSA

**Minimum Germination Rate:** 85%

**Seed Product Form:** Pelleted

### FLOWERING

**Time frame when plants are receptive to flower initiation:** From initial date of sowing.

**Flowering Type:** Obligate long-day plant – long days >13.5 hours are necessary for flowering.

**Specific Flowering Mechanism:** Tuberous Begonias are light accumulators. Supplemental lighting and daylength extension will hasten flower initiation.

### PLUG CULTURE

**Germination:** Optimum conditions for seedling development that begins the day the crop is sown until cotyledon expansion. Expect radicle emergence in 7 – 10 days.

**Cover:** No covering over the seed is required.

**Media:** • pH: 5.5 – 5.8

• EC: 0.5 – 0.75

**Light:** Light is necessary for germination. If utilizing a chamber, providing a light source of 10 – 100 foot candles (100 – 1,000 lux) will improve germination and reduce stretch.

**Temperature:** 73° – 75°F (23°C) until radicle emergence. Temperatures exceeding 80°F (27°C) will lower final germination. Reduce to 66° – 68°F (18° – 20°C) until cotyledon expansion.

**Moisture:** Saturated (5) from day 1 – 11. A saturated media and high humidity is critical to successful begonia germination. Beginning day 12, alternate between moisture levels wet (4) and moist (3). Allow media to approach level (3) before re-saturating to level (4). It is important to start drying back the media to avoid algae growth. Seedlings are sensitive to “heavy handed” watering, which will inhibit germination and uniformity due to the roots being disturbed as the seeds are rolled around. Use a water breaker with a gentle spray and low pressure to avoid disturbing the seed.

**Humidity:** 100%. Relative humidity levels need to be kept high to avoid desiccating the exposed roots.

**Plug Bulking/Flower Initiation:** Optimum conditions during the vegetative period, beginning at cotyledon expansion, needed for the root to reach the edge of the plug cell and to make the plant receptive to flower initiation.

**Media:** • pH: 5.5 – 5.8

• EC: 0.5 – 1

**Light:** This species of begonia wants to form tubers and single flowers when natural daylength is <12 hours. Provide interrupted nights for a 12- 14-hour day to suppress tuber formation, promote double flowers and produce a higher quality plant. During the early plug stages, extended days will encourage a higher quality seedling and increased growth rate. Provide 3,500 – 4,500 foot candles (12 – 15 total moles or 35,000 – 45,000 lux) to hasten flower induction. Supplemental lighting under low light conditions at 350 – 450 foot candles (35,000 – 45,000 lux) greatly reduce the time to flower. Do not exceed 4,500 foot candles (45,000 lux) to avoid marginal leaf burn.

**Temperature:** After radicle emergence maintain at 66° – 70°F (18° – 20°C). Leaf temperatures should not exceed 85°F (30°C) to avoid desiccation of young seedlings. After first true leaves emerge lower temperatures to 62° – 68°F (16° – 20°C). Temperatures below 60°F (16°C) will delay flowering.

**Moisture:** Alternate between moisture levels wet (4) and moist (3). Allow media to approach level (3) before re-saturating to level (4).

**Humidity:** On day 14 when all seeds have germinated decrease the humidity to 40%.

**Fertilizers:** Feed 1 – 2 times per week. Under high light conditions, apply an ammonium-based feed (17-5-17) at 50 – 100 ppm nitrogen. Under low light conditions, apply a calcium-based feed (14-4-14) at 50 – 100 ppm nitrogen. Under high light and long or extended days, an ammonium-based feed (20-10-20) at 50 – 100 ppm nitrogen is preferred.

### GROWING ON

**Transplant Ready:** 7 – 8 weeks from sow in a ‘288’ tray. 9 – 10 weeks from sow in a ‘72’ tray.

**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:** • pH: 5.5 – 6

• EC: 1 – 1.5

**Light:** This species of Begonia wants to form tubers and single flower when natural daylength is <12 hours. Provide interrupted nights for a 12- 14-hour day to suppress tuber formation, promote double flowers and produce a higher quality plant. Plants or plugs started under long days than transplanted and placed under short days will exhibit uneven growth. To avoid leaf burn, do not exceed 3,000 foot candles (30,000 lux).

**Temperature:** Grow new transplants on at 65° – 68°F (18° – 20°C) nights. Once established, night temperatures can be reduced to 60° – 65°F (16° – 18°C).

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

**Humidity:** 40 – 70%. Provide horizontal airflow to aid in drying down the media through evapotranspiration, allowing better penetration of oxygen to the roots.

**Fertilizers:** Alternate between a calcium-based fertilizer (13-2-13) and an ammonium-based fertilizer (17-5-17) at 100 – 150 ppm nitrogen every 2 – 3 waterings. Tall, stretched plants with few flowers indicate too much ammonium. Stunted, chlorotic plants with marginal leaf burn indicate a lack of calcium and magnesium.

**Growth Regulators:** If needed, begin Cycocel (chlormequat chloride) treatments two weeks after transplanting at 300 – 500 ppm. Cycocel will not hasten flowering, but will increase the number of flowers. A negative DIF of 2° – 3°F is also effective. If using DIF then no additional PGRs will be necessary.

**Common Diseases:** Pythium, Rhizoctonia, Botrytis Blight, Tomato Spotted Wilt Virus

**Common Pests:** Aphids, Thrips

#### PRODUCT USE

Pots, containers, hanging baskets, mass plantings

#### GARDEN SPECIFICATIONS

**Light:** Partial shade to filtered sun  
**USDA Hardiness Zone:** 11  
**AHS Heat Zone:** 12 – 1

	Garden Height	Garden Width
Go-Go	8 – 10" (20 – 25 cm)	8 – 10" (20 – 25 cm)

### BEGONIA SCHEDULING IN WEEKS

	Go-Go
<b>Total crop time</b>	15 – 18
<b>'288' plug crop time</b>	7 – 8
<b>'72' plug crop time</b>	9 – 10
<b>Transplant to finish crop time</b>	
<b>4" crop</b>	8 – 10 from a '288'; 5-6 from a '72', If grown cool at 62°F (17°C), add one week to finish
<b>6" crop</b>	10 – 12 from a '288'; 7 – 8 from a '72'
<b>10" basket</b>	11 – 13 from a '288'; 8 – 9 from a '72'

*Note: These suggestions are only guidelines and may have to be altered to meet individual grower's needs. Check all chemical labels to verify registration for use in your region.*