

# GrowerFacts

## Petunia Sophistica

### Collection

(Petunia x hybrida)

#### Germination

Approximate seed count (pelleted): 33,000 S./oz. (1,200 S./g)

#### Media

Use a well-drained, disease-free seedling medium with a pH of 5.5 to 6.0 and EC about 0.75 mS/cm (1:2 extraction).

#### Sowing

Covering seed is not recommended. Water adequately after sowing to completely dissolve the pellet.

**Stage 1**– Germination takes approximately 4 days.

**Soil temperature:** 72 to 76°F (22 to 24°C)

**Light:** Lighting is optional for all varieties. Sophistica Lime Bicolor will benefit from light at Stage 1.

**Moisture:** Keep soil very wet (level 5) during Stage 1 for optimal germination.

**Humidity:** Maintain 100% relative humidity (RH) until radicles emerge.

#### Plug Production

##### Stage 2

**Soil temperature:** 68 to 75°F (20 to 24°C)

**Light:** Up to 2,500 f.c. (26,900 Lux)

**Moisture:** Start to slightly reduce soil moisture (level 4) to allow roots to penetrate into the media.

**Fertilizer:** Apply fertilizer at rate 1 (less than 100 ppm N/less than 0.7 mS/cm EC) from nitrate-form fertilizers with low phosphorous.

##### Stage 3

**Soil temperature:** 65 to 70°F (18 to 21°C)

**Light:** Up to 2,500 f.c. (26,900 Lux)

**Moisture:** Allow media to further dry until the surface becomes light brown (level 2) before watering. Keep the moisture to wet-dry cycle (moisture level 4 to 2).  
**Fertilizer:** Increase fertilizer to rate 2 (100 to 175 ppm N/0.7 to 1.2 mS/cm EC). If growth is slow, apply a balanced ammonium and nitrate-form fertilizer with every other fertilization. Maintain medium pH 5.8 to 6.2 and EC between 1.0 and 1.5 mS/cm (1:2 extraction).

**Growth Regulators:** Control plug growth first by environment, nutrition and irrigation management, then with chemical plant growth regulators if needed. Minimize ammonium-form nitrogen fertilizer to avoid seedling elongation. Temperature differential (DIF) can also be used to minimize height. Test all chemical plant regulators first.

**In North American conditions:** Apply B-Nine/Alar (daminozide) 1 to 2 applications at 5,000 ppm (6.0 g/l, 85% formulation or 7.8 g/l, 64% formulation) as a spray. The first application should be made when plugs have 2 to 3 true leaves. A second application

can be made 7 days later. This treatment can improve basal branching of mature plants.

**In Northern European conditions:** 1 to 3 applications of B-Nine/Alar (daminozide) at 1,250 ppm (1.5 g/l, 85% formulation or 2.0 g/l, 64% formulation) spray have been tested and shown effective if needed.

#### Stage 4

**Soil temperature:** 60 to 65°F (16 to 18°C)

**Light:** Up to 5,000 f.c. (53,800 Lux) if temperature can be controlled.

**Moisture:** Same as Stage 3.

**Fertilizer:** Same as Stage 3.

#### Growing On to Finish

##### Container Size

**4 to 5-in. (10 to 13-cm) pots:** 1 plant per pot

**6-in. (15-cm) pots:** 1 to 3 plants per pot

**10-in. (25-cm) baskets:** 3 to 4 plants per basket

##### Media

Use a well-drained, disease-free, soilless medium with a pH of 5.5 to 6.2 and a medium initial nutrient charge.

##### Temperature

**Nights:** 57 to 65°F (14 to 18°C)

**Days:** 61 to 75°F (16 to 24°C)

Sophistica petunias can tolerate temperatures as low as 35°F (2°C); however, keep in mind that crop timing (time to flower) is related to daily average temperature when grown under proper daylength. Sophistica plants will take longer to flower when grown in cooler conditions.

**Note:** Black Berry may get some yellow color breaks under cold temperature at about 35°F (2°C).

##### Light

Keep light levels as high as possible while maintaining moderate temperatures.

##### Fertilizer

Apply nitrate-form with low phosphorus fertilizer at rate 3 (175 to 225 ppm N (1.2 to 1.5 mS/cm EC) every other irrigation. Apply a balanced ammonium and nitrate-form fertilizer with low phosphorus as needed to encourage growth and balance medium pH. Maintain medium pH 5.8 to 6.2.

For a constant fertilizer program, apply fertilizer at rate 2 (100 to 175 ppm N or 0.7 to 1.2 mS/cm EC) while maintaining the above recommended EC and pH ranges.

##### Growth Regulators

Use B-Nine/Alar (daminozide) at 5,000 ppm (5.9 g/l, 85% formulation or 7.8 g/l, 64% formulation) for weekly application starting at 7 days after transplant, or just use the same PGR as that for grandiflora petunias such as Dreams or Supercascade.

**Caution:** Avoid using B-Nine for Lime Bicolor and Black Berry as B-Nine could bleach out color and make the flowers a much lighter color for Lime Bicolor and wash out black color a little bit to become more cherry tone as well as may get some yellow color breaks for Black Berry. Instead of B-Nine, Bonzi 2 to 3 ppm drench or Topflor 1 to 2 ppm drench at 10 days



after transplant can be used.

To determine the best rate for your conditions, we recommend that you run an in-house trial.

#### **Photoperiod**

Sophistica petunias can flower successfully at 10- hour daylengths. Crop time is 3 to 6 days faster under longer day conditions.

#### **Crop Scheduling**

**Sow to transplant (288-cell plug):** 5 to 6 weeks

**Transplant to flower:** 5 to 7 weeks

#### **Total Crop Time:**

**Container Size:** 4-in. (10-cm) pot

**Number of Plants:** 1 plant per pot

**Spring:** 10 to 12 weeks

**Summer:** 8 to 10 weeks

**Container Size:** 6-in. (15-cm) pot

**Number of Plants:** 1 to 3 plants per pot

**Spring:** 10 to 12 weeks

**Summer:** 8 to 10 weeks

**Container Size:** 10-in. (25-cm) basket

**Number of Plants:** 3 to 4 plants per basket

**Spring:** 10 to 13 weeks

**Summer:** 8 to 11 weeks

#### **Common Problems**

No major problems will occur if good cultural and IPM practices are used.

#### **Garden Information**

- The unique colors of Sophistica are excellent for mono and mixed containers, baskets.
- Plant in full sun.
- Reaches 10 to 15 in. (25 to 38 cm) tall and spreads 10 to 12 in. (25 to 30 cm)

**Note:** Growers should use the information presented here as a starting point. Crop times will vary depending on the climate, location, time of year and greenhouse environmental conditions. Chemical and PGR recommendations are only guidelines. It is the responsibility of the applicator to read and follow all the current label directions for the specific chemical being used in accordance with all regulations.

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<http://www.panamseed.com/advancedsearch.aspx?srch>

