



## Starshine™

### LAURENTIA AXILLARIS F1

**Minimum Germination Rate:** 80%

**Seed Product Form:** Raw, MultiPellets

### FLOWERING

**Time frame when plants are receptive to flower initiation:** 6 – 10 leaves are present

**Flowering Type:** Facultative long-day plant – long days enhance flowering.

**Flowering Mechanism:** Daylength greater than 13 hours. Irradiance will hasten and enhance flowering and branching.

### PLUG CULTURE

The timing approximations are based on optimal culture recommendations below:

**Germination** (approximately day 1 – 14): From the time a seed is sown until radicle emergence takes place; usually with the root penetrating the media and some cotyledon development. Expect radicle emergence in 10 – 14 days.

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

**Media:** Avoid media compaction to allow for root penetration; pH: 5.5 – 6. EC: <5 – 1

**Light:** Light is not 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.

**Moisture:** Saturated (5), from day 1 – 14 or until radicle emergence (approximately day 10).

**Humidity:** 100% from day 1 – 14

**Temperature:** 65° – 68°F (18° – 20°C) until day 14.

**Fertilizers:** Maintain EC of 0.5 – 1.

**Plug Bulking** (approximately day 14 – 28): From the time cotyledon is observed until it is fully expanded. The roots have expanded throughout the media. Dehumidify from 100% to 50 % moisture in the air.

**Media:** pH: 5.5 – 5.8. EC: 1 – 1.25

**Light:** 2,000 – 3,000 foot candles (20,000 – 30,000 lux); 6 – 10 mols of light. Begin long days (greater than 13 hours of light) on day 28 – 35.

**Moisture:** Alternate between moisture levels wet (4) and moist (3). Allow media to approach level (3) before re-saturating to level (4) (approximately day 8 – 15).

**Dehumidify:** Lower relative humidity to 50% (approximately day 14). Provide horizontal airflow to aid in drying down the media through evapotranspiration, allowing better penetration of oxygen to the roots.

**Temperature:** Once cotyledons are observed, reduce temperature to 64° – 68°F (18° – 20°C).

**Fertilizers:** 14-4-14 or 17-5-17 at 60 – 100 ppm nitrogen as needed for an EC in the soil of 1 – 1.25.

**Plug Bulking/Flower Initiation** (approximately day 28 – 35): The time it takes for the shoots to proportionately fill the plug cell and for roots to develop throughout the media. Induction and initiation may occur; if buds are present, they should be few in number and small in size.

**Media:** pH: 5.5 – 5.8. EC: 1.25 – 1.75

**Light:** 3,500 – 5,500 foot candles (35,000 – 55,000 lux); 12 – 20 mols of light.

**Temperature:** 64° – 68°F (18° – 20°C)

**Moisture:** Alternate between moisture level wet (4) to medium (2). Allow the soil to approach medium (2), before re-saturating to wet (4). If media is allowed to dry back further than (2), root damage may occur.

**Fertilizers:** 14-4-14 or 17-5-17 at 75 – 125 ppm nitrogen, as needed for an EC in the soil of 1.25 – 1.75.

**Growth Regulators:** If needed, spray B-Nine (daminozide) at 1,500 – 2,500 ppm.

**Fungicides:** Preventative fungicide may be applied for Botrytis, Rhizoctonia, Pythium.

**Initiated Bulking** (approximately day 35 – 49): Seedlings develop from juvenile to mature (cultivar specific). Seedlings are receptive to initiation and flower bud development.

**Light:** Provide 3,500 – 5,500 foot candles (35,000 – 55,000 lux) or 12 – 20 mols of light.

**Temperature:** 64° – 68°F (18° – 20°C)

**Fertilizer:** 14-4-14 or 17-5-17 at 75 – 150 ppm nitrogen, as needed for an EC in the soil of 1.25 – 1.75.

**Fungicides:** Preventative fungicide may be applied for Rhizoctonia, Pythium, and Phytophthora.

### GROWING ON

The timing approximations are based on optimal culture recommendations below:

**Transplant Ready:** 6 – 7 weeks from a '288' plug tray

**Transplant to Finish** (approximately day 42 – 78): Flower buds are usually present and developing.

**Media:** pH: 5.5 – 5.8. EC: 1.25 – 1.50

**Light:** Continue long days (greater than 13 hours) until flower buds are visible. Supplemental lighting under low light conditions at 350 – 450 foot candles (3,500 – 4,500 lux) will enhance shoot and root growth.

**Temperature:** 62° – 64°F (17° – 18°C)

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

**Humidity:** 40%

**Fertilizers:** 14-4-14 or 17-5-17 at 100 – 175 ppm, as needed for an EC in the soil of 1.25 – 1.5.

**Growth Regulators:** B-Nine (daminozide) spray at 2,500 ppm; A-Rest (ancymidol) spray at 2 – 4 ppm; Bonzi (paclobutrazol) drench at 1 – 2 ppm.

**Fungicides:** Preventative fungicide may be applied for Botrytis, Rhizoctonia, Pythium, and Phytophthora.

### TECHNIQUES TO ENHANCE POST HARVEST QUALITY

**When to Treat:** 1 – 2 weeks prior to finish or shipping.

**Growth Regulators:** B-Nine (daminozide) at 2,500 – 3,000 ppm.

**Fertilizer:** Potassium nitrate drench at 150 ppm nitrogen.

**Common Diseases:** Botrytis, Rhizoctonia, Pythium. Monitor moisture and humidity levels and use preventative fungicide drenches.

**Common Pests:** Aphids, Fungus Gnats, Shore Flies and Thrips. Use pesticides according to label directions.

PRODUCT USE	GARDEN SPECIFICATIONS
Pots, containers and hanging baskets	<b>Light:</b> Full sun <b>USDA Hardiness Zone:</b> 11 <b>AHS Heat Zone:</b> 12 – 1

	Garden Height	Garden Width
Starshine	8 – 12" (20 – 30 cm)	8 – 12" (20 – 30 cm)

### LAURENTIA SCHEDULING IN WEEKS

	Starshine
<b>Total crop time</b>	17 – 20
<b>'128' plug crop time</b>	8 – 10
<b>'200' plug crop time</b>	7 – 8
<b>'288' plug crop time</b>	7 – 8
<b>Transplant to finish crop time</b>	
<b>4" crop</b>	10 – 11
<b>10" basket crop</b>	11 – 14, depending on number of plugs transplanted

The shortest crops times may be achieved when following recommended optimal culture. Deviation in environmental conditions will result in longer crop times.

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.