



# Frost™, Storm™, Ultra™ / PrimeTime™

PETUNIA GRANDIFLORA / PETUNIA MULTIFLORA

**Minimum Germination Rate:** Storm, Ultra: 90%  
Frost, PrimeTime: 85%

**Seed Product Form:** Pelleted, Raw

## FLOWERING

**Time Frame when plants are receptive to flower initiation:** Days 14 – 21; 3 – 4 leaves.

**Flowering Type:** Facultative Long Day Plant – long days required for flowering.

**Specific Flowering Mechanism:** Flowering is affected by daylength, irradiance and temperature.

## PLUG CULTURE

**Germination** – Optimum conditions for seedling development that begins the day the crop is sown until cotyledon expansion.

Expect radicle emergence in 3 – 5 days.

**Cover:** Do not cover the seeds.

**Media:** • pH: 5.5 – 5.8  
• EC: 0.75 – 1.0

**Light:** Light is necessary for germination. Provide a light source of 10 – 100 foot candles (100 – 1000 lux) if utilizing a chamber.

**Moisture:** Saturated (5) for days 1 – 3. On days 4 – 6 reduce moisture to wet (4). Reduce further beginning day 7 to medium (2).

**Humidity:** 100% until radicle emergence then reduce to 40%.

**Dehumidify:** Provide horizontal airflow to aid in drying down the media through evapotranspiration, allowing better penetration of oxygen to the roots.

**Temperature:** 72° – 76°F (22° – 24°C) until radicle emergence. Gradually reduce to 62° – 65°F (16° – 19°C) as cotyledons expand.

**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 – 1.0

**Light:** Provide 2500 – 3000 foot candles (2500 – 3000 lux). Supplemental lighting at 400 foot candles (4000 lux) for a 14 hour day will induce early flowering.

**Temperature:** 65° – 68°F (18° – 20°C). Once seedlings are established, gradually reduce night temperatures to 59 F (15 C) to initiate early flowering.

**Average Daily Temperature (ADT):** 67°F (19°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%

**Dehumidify:** Provide horizontal airflow to aid in drying down the media through evapotranspiration, allowing better penetration of oxygen to the roots.

**Fertilizers:** Upon initial germination begin feeding early on with 50 ppm Nitrogen. Pay attention to the addition of Boron since low Boron can cause tip abortion. Feed established seedlings at 100 – 150 ppm Nitrogen. Under high light conditions, apply an ammonium-based feed (17-5-17). Under low light conditions, apply a calcium-based feed (14-4-14). Under high light and long or extended days, an ammonium-based feed (20-10-20) is preferred. For more shoot growth, add an additional ammonium treatment to the schedule. To prevent stretching under low light and cool temperatures, reduce ammonium and apply only calcium-based fertilizer.

**Growth Regulators:** Apply 2 applications of B-Nine (daminozide) at 3500 – 5000 ppm after the first true leaves have appeared. Petunias are also responsive to a negative DIF treatment, Bonzi (paclobutrazol) and Sumagic (uniconazole).

## GROWING ON

**Transplant Ready:** 4 – 5 weeks from sow in a '288' 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 – 5.8 Yellow upper leaves may indicate iron deficiencies when pH is > 6.6.  
• EC: 1.0 – 1.5

**Light:** Petunias need long days to flower. To initiate bud under short days, extend day length to 13 hours. Under long day, low light conditions, supplemental lighting of 350 – 500 foot candles (3500 – 5000 lux) may be necessary.

**Temperature:** After transplant, Petunias require temperatures > 55°F (13°C) nights for the first 6 weeks to initiate flower bud development. After bud set, the night temperatures can be lowered to 50°F (10°C) to encourage basal branching and compactness. However, lower temperatures may also substantially decrease the number of flowers initiated. Downward cupping of leaves may indicate too cool temperatures in combination with overwatering.

**Average Daily Temperature (ADT):** 67°F (19°C)

**Moisture:** Alternate between moisture levels wet (4) and dry (1) Allow media to approach level (1) before re-saturating to level (4).

**Dehumidify:** Provide horizontal airflow to aid in drying down the media through evapotranspiration under cool, low light conditions.

**Fertilizers:** Under high light conditions, apply an ammonium-based feed (17-5-17). Under low light conditions, apply a calcium-based feed (14-4-14). Under high light and long or extended days, an ammonium-based feed (20-10-20) is preferred. To prevent stretching under low light and cool temperatures, reduce ammonium and apply only calcium-based fertilizer.

**Growth Regulators:** Petunias are responsive to B-Nine (daminozide) at 2500 – 5000 ppm. Apply B-Nine before the buds are visible. Late applications will distort flower color and size. Also responds to DIF treatments, Bonzi (paclobutrazol), Sumagic (uniconazole) or B-Nine/Cycozel (chlormequat chloride) tank mix.

**Common Diseases:** Botrytis, Rhizoctonia

**Common Pests:** Thrips

## SCHEDULING

**Total crop time:** 9 – 11 weeks

**'288' Plug crop time:** 4 – 5 weeks

**Transplant to finish crop time:** Packs: 4 – 5 weeks  
4" crop: 5 – 6 weeks

## PRODUCT USE

Packs, pots, containers, mass plantings

## GARDEN SPECIFICATIONS

**Light:** Full sun

**USDA Hardiness Zone:** 8

**AHS Heat Zone:** 12 – 1

**'Frost', 'Storm', 'Ultra' Garden Height:** 12 – 14 inches (30 – 35 cm)

**Garden Width:** 14 – 16 inches (35 – 50 cm)

**'PrimeTime' Garden Height:** 10 – 12 inches (25 – 30 cm)

**Garden Width:** 12 – 14 inches (30 – 35 cm)

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.