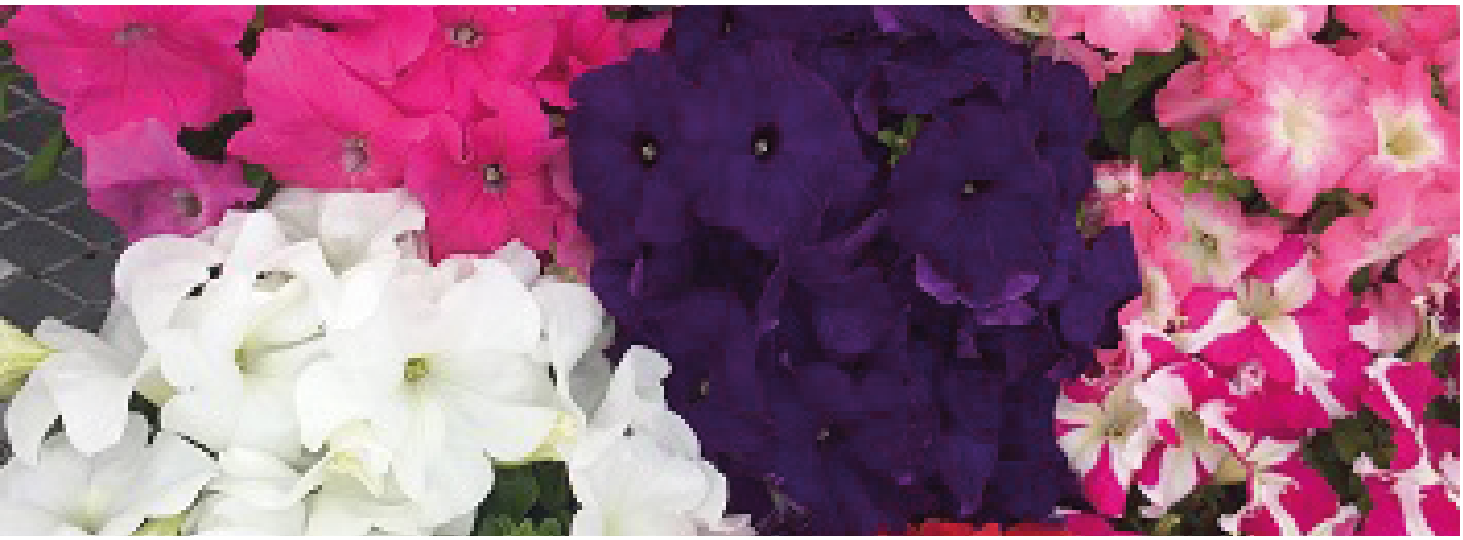
Petunia x hybrida $F_1$

# SUCCESS!® HD

## HD stands for High Density



- Genetically compact, dense growing grandiflora Petunia
- Unbeatable in earliness and uniformity
- Large flowers in vivid, intense colors
- Fast filling of packs and pots

- The Benary Petunia pellets require more water than usual to dissolve; this is crucial to ensure rapid and uniform germination.

| | |
|---|---|
| **Crop Time** | Spring: 9 - 13 weeks |
| **Height** ⌀ | 7 " / 18 cm |
| **Width** ⌀ | 11 " / 28 cm |
| **Exposure** | Sun |
| **Seed Form** | Pelleted Seed |
| **Product Use** | Packs, Pots, Mixed Containers, Landscape |
| **Family, Origin** | Solanaceae, South America |
| **Minimum Germ. Rate** | 85% |

# TECHNICAL GUIDE

Petunia x hybrida $F_1$ SUCCESS!® HD

**Flowering**

**Flowering Type:** Facultative long day plant. Long days and high irradiance will promote flowering.

**Flowering Mechanism:** Flowering is affected by day-length, irradiance and temperature.

**Plug Culture**

**Germination:** Optimum conditions for seedling development, beginning on the day of sowing until radicle emergence. Expect radicle emergence in 3-5 days.

**Sowing method:** 1 pellet per plug.

**Media:** pH 5.5-5.8; keeping the pH below 6.0 will help to keep boron and iron available. EC 0.5-0.75.

**Cover:** No cover is necessary. Light is required for germination.

**Temperature:** 22-24 °C (72-76 °F) until radicle emergence. The temperature can be lowered approximately on day 5 to 20-22 °C (68-72 °F). Once cotyledons have fully expanded, reduce the temperature further to 18-20 °C (64-68 °F).

**Moisture:** Begin by watering to saturated (5); applying enough water to help dissolve the pellets. After sowing do not allow the pellets to dry back before moving to the germination chamber or benches. Maintain saturation (5) for 3–4 days or until radicle emergence. On day 5 reduce media moisture to wet (4) for the next 5–6 days. On day 10 reduce the moisture further to medium (2). Alternate between wet (4) and a medium (2) between watering.

**Humidity:** 95–100 % until day 5; then reduce to 40–60 %. Reducing the humidity will help to prevent the seedlings from stretching. Provide proper ventilation and horizontal airflow to improve oxygen levels in the media.

**Light:** Light is necessary for germination. If using a germination chamber, provide 100–100 ft. candles (100–1,000 lx).

**Fertilizer:** Maintain an EC < 1.0. Fertilized water should not exceed an EC of 0.5. Upon initial germination after 5–6 days, begin feeding with 50 ppm nitrogen. Pay attention to the addition of boron since low boron can cause tip abortion. Ideal boron concentration is 0.5 ppm.

**Plug Bulking and Flower Initiation:** Optimum conditions during the vegetative stage from cotyledon expansion to flower initiation. This stage is when the seedlings root to the edge of the plug and reach the 3–5 true leaf stage where flower initiation occurs.

**Media:** pH 5.5–5.8; EC 1.25–1.5.

**Light:** Petunias are facultative long day plants, so a longer day length and higher light levels will promote early flowering. Provide a minimum day length of 11.5 hours. To initiate flowering under short days, extend the day length to 13.5-14 hours. Long days with low light conditions require supplemental lighting of 350-500 ft. candles (3,500-5,000 lx). Petunia will flower more quickly when young plants are given a long day treatment.

**Temperature:** 18-20 °C (64-68 °F) until day 28, then reduce the temperature to 15-18 °C (58-64 °F). Keep temperatures > 16 °C (60 °F) until the plants are ready to transplant. For the fastest finish maintain an average daily temperature of 19.5 °C (67 °F).

**Moisture:** On approximately day 10 start to alternate between a wet (4) and a medium (2) between watering. Allow the media moisture level to approach a medium (2) before resaturating to wet (4).

**Fertilizer:** Pay attention to the addition of boron since low boron can cause tip abortion. Ideal boron concentration is 0.5 ppm. Fertilize established seedlings at 100-175 ppm nitrogen. Under high light conditions, apply an ammonium based fertilizer (17-5-17) or (20-10-20). Under low light conditions, apply a calcium based fertilizer (14-4-14) or (15-15). 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:** Petunias are very responsive to B-Nine (daminozide) sprays in the early stages. Apply the first application early, on day 7-10 as a spray at 2,500 ppm, for toning the seedlings. Afterwards, they should not require additional growth regulators.

**Growing On**
**Media:** pH 5.5-5.8; EC 1.5-2.0.

**Light:** Provide 12-18 mol/m2/day (3,500-5,000 ft. candles or 35,000-50,000 lx) of light in the finishing stages. Petunias need long days to flower. To initiate bud under short days, extend the day length to 14 hours. Long days with low light conditions require supplemental lighting of 350-500 ft. candles (3,500-5,000 lx).

**Temperature:** After transplanting, always maintain temperatures > 13 °C (56 °F) during night for the first 3-4 weeks to initiate flower bud development. These low night temperatures encourage basal branching and compactness for a higher quality plant. However, lower temperatures may also substantially decrease the number of flowers initiated. An average daily temperature of 17-21 °C (62-70 °F) will work well.

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

**Humidity:** 40-60 % humidity is ideal. Providing good ventilation and horizontal air flow will help lower the humidity and dry back the media, providing oxygen to the roots.

**Fertilizer:** Feed at 100-200 ppm nitrogen. Under high light conditions, apply an ammonium based fertilizer (17-5-17) or (20-10-20). To prevent stretching under low light conditions, apply a calcium based fertilizer (14-4-14) or (15-5-15). Under high light and long days an ammonium based feed (20-10-20) is preferred.

**Growth Regulators:** The genetically compact series SUCCESS!® HD and BOOM!™ HD do not require repeated applications of growth regulators after transplanting.

**Fungicide:** Apply fungicides during long periods of low light and high humidity.

**Common Diseases:** Botrytis, rhizoctonia, pythium.

**Pests:** Primarily aphids and thrips.

**Post Harvest:** Fertilize with potassium nitrate at 100 ppm 1-2 weeks prior to shipping.

**Plug & Finished Crop Time**
**Plug Crop Time**

288 tray: 4-5 weeks

**Finished Crop Time**

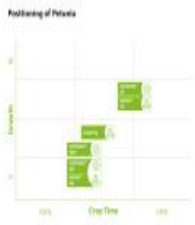
Packs: 4-5 weeks

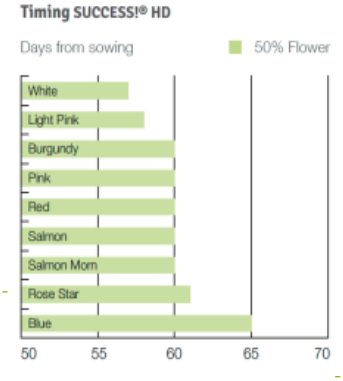
12 cm (5") pots: 5-7 weeks

15 cm (6") pots: 6-7 weeks

### Timing & Positioning Charts








### Moisture Codes

| | |
|---|---|
| **Saturated (5)** | Water is easily observed when finger is pressed on cell. Water moves freely from the top of the plug to the bottom. |
| **Wet (4)** | Media looks black and is not glistening. The media feels wet to the touch but there is very little water movement. |
| **Moist (3)** | Water is not easily visible. When finger is pressed on the cell there is very little movement from top to bottom. |
| **Medium (2)** | Media is not black, but now looks medium brown. There is no water movement when pressed with finger. |
| **Dry (1)** | Media has changed color to a very light brown and is dry to the touch. |

All information in our technical guide is based on our own trials and would therefore be as guideline only. Detailed cultivation aspects vary depending on climate, location, time of year and environmental conditions. Benary expressly disclaims any responsibility for the content of such data/information and makes no representation or warranty for the cultivation of any products listed. It is recommended that growers conduct a trial of products under their own conditions.

# COLORS OF THE SERIES

Petunia x hybrida $F_1$ SUCCESS!® HD



**White**
PH0410P



**Burgundy**
PH0405P



**Red**
PH0406P



**Salmon**
PH0408P



**Salmon Morn**
PH0409P



**Light Pink**
PH0404P



**Pink**
PH0403P



**Rose Star**
PH0407P



**Blue**
PH0401P



**Maxi Mix**
PH0499P