



syngenta<sup>®</sup>flowers

# Begonia Braveheart<sup>®</sup>

## Culture Guide

**Botanical name:** *Begonia × hybrida*

**Product form:** Seed

**Containers:** Pints, Quarts, Gallons, Hanging Baskets

**Habit:** Mounded

### Garden Specifications

**Garden Height:** 8–10" (20–25 cm) tall

**Garden Width:** 6–8" (15–20 cm) wide

**Exposure:** Full Sun to Shade

**USDA zone:** 11

**AHS zone:** 12–1

**Product use:** Containers, Hanging Baskets, Landscapes, Patio Pots, Combos

### Germination

Stages 1 & 2

**Germination time:** 6–8 days

**Media temp:** 72–78 °F (22–26 °C)

**Chamber:** Optional

**Light:** Not required for germination

**Seed cover:** No

**Moisture level: 5 - SATURATED:** Soil is dark brown and shiny, free water is present at the surface of the soil, water drips freely from the bottom of the tray, and trays are heavy with a visible bend in the middle.

**Rec. tray size:** 288-cell tray

**Seeds per cell:** 1

### Young Plant Production

Stages 3 & 4

#### **Temperature**

**Day:** 68–70 °F (20–21 °C)

**Night:** 68–70 °F (20–21 °C)

**Average daily temperature:** 68–70 °F (20–21 °C)

#### **Lighting**

**Day extension lighting:** Not Necessary

**Light intensity:** 3,500–4,500 foot candles (700–900 micro mols)

**Day length response:** Day Neutral

**Daily light integral:** 12–14 mols/day

**Media pH:** 5.5–5.9

**Media EC:** SME 0.5 to 0.75 mS/cm

**Fertilizer:** 50–75 ppm N

**Moisture level:** Media should be allowed to dry between irrigations. Alternate between moisture level 3 and 4.

**3 - MOIST:** Soil is brown in color, strongly squeezing the soil will extract a few drops of water, and trays are light with no visible bend.

**4 - WET:** Soil is dark brown but not shiny, no free water is seen at the surface of the soil, when pressed or squeezed water drips easily, and trays are heavy with a visible bend in the middle.

**Pinching:** No

**Plant growth regulators (PGRs):** Usually not necessary in plug production. If needed to tone/hold plugs Begonias respond well to sprays of Cycocel<sup>®</sup> at 300 ppm, B-Nine<sup>®</sup> WSG at 2,500 ppm or A-Rest<sup>®</sup> at 3 ppm.

**Plug grow time:** 7–8 weeks in a 288-cell tray

**Comments:** Avoid overwatering to help prevent excess algae growth and to promote root growth into the media. If germinating on the bench it is helpful to cover trays with ReeMay<sup>®</sup> or similar to help retain humidity and reduce irrigation frequency. When irrigating use low pressure/volume nozzles/breakers to avoid moving seeds around in the cell. If the daily light integral (DLI) is less than 12 mols/day adding supplemental HID light will promote a more uniform crop. Do not use plug trays that have been used previously and had a crop treated with paclobutrazol grown in them. Most *Begonia × hybrida* will stop growing if exposed to any level of paclobutrazol. Do not irrigate with recycled water for this reason.

### Finishing

#### **Temperature**

**Day:** 66–68 °F (19–20 °C)

**Night:** 64–66 °F (18–19 °C)

**Average daily temperature:** 66 °F (19 °C)

#### **Lighting**

**Day extension lighting:** Not Necessary

**Light intensity:** 4,000–6,000 foot candles

**Day length response:** Day Neutral

**Daily light integral:** 12–14 mols/day

**Transplanting:** Transplant directly into the finished container. Place the rooting media slightly below the level of media in the container. Make sure that the root ball is covered and that the plug is situated in the center of the pot.

**Media pH:** 5.5–5.9

**Media EC:** SME EC: 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm

**Fertilizer:** 125–175 ppm N

**Pinching:** No. Pinching is not recommended or needed.

**Plant growth regulators (PGRs):** Plant growth can be controlled best through proper moisture, feed and temperature management. If needed due to environmental conditions sprays of Cycocel® at 500–1,000 ppm or B-Nine® WSG/Cycocel® tank mixes at 1,500 ppm B-Nine® WSG/300 ppm Cycocel® are effective. Avoid spraying with B-Nine® WSG during the last few weeks of crop time to avoid reducing flower size.

**Tech tip:** Do not use growing containers that have been used previously and had a crop treated with paclobutrazol grown in them. Most *Begonia × hybrida* will stop growing if exposed to any level of paclobutrazol. Do not irrigate with recycled water for this reason. It is best to avoid high ammonium fertilizers since these fertilizers promote soft, leafy growth and may delay flowering.

## Scheduling

Size	Crop Time	Plants Per Pot
Packs	5–6 weeks	1 ppp
Large Packs	5–6 weeks	1 ppp
1.0 pint (4 inch)	5–7 weeks	1 ppp
1.0 quart (4.5 to 5 inch)	5–7 weeks	1 ppp
1.25 to 2.5 quart (5.5 to 6.5 inch, trade gallon)	5–7 weeks	2–3 ppp
1.5 gallon hanging basket (10 inch basket)	7–8 weeks	3–4 ppp

Estimated finish crop time is from transplant of a 288-cell tray and finished at an average daily temperature (ADT) of 66 °F (19 °C).

## Example crop schedule for a 1.0 quart

Weeks From Transplant	Description
3 weeks	Apply plant growth regulators (PGRs) if necessary
7 weeks	Ready to ship



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**Moisture level:** Media should be allowed to dry between irrigations.

Alternate between moisture level 2 and 4.

**2 - MEDIUM:** Soil is light brown in color, no water can be extracted from soil, and soil will crumble apart.

**4 - WET:** Soil is dark brown but not shiny, no free water is seen at the surface of the soil, when pressed or squeezed water drips easily, and trays are heavy with a visible bend in the middle.

**Common pests:** Aphids, Thrips

**Common diseases:** Botrytis



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