

# Dragon Wing® Series Begonia

*B. x hybrida*

Approximate seed count (pelleted): 28,500 S./oz.  
(1,000 S./g)

## Germination

### Plug Tray Size

**Dragon Wing** plants are best produced in 200-cell plug trays. This permits the plant enough growth at the plug stage so that the direction of the arching stem is clear for correct orientation at planting time. This orientation can be seen in smaller plugs, but is less readily apparent.

## Media

Use a well-drained, disease-free sowing medium with a pH of 5.8 to 6.0 and electrical conductivity (EC) of 0.5 mmhos/cm. A very light covering of vermiculite may be needed when germinating pelleted seed on the bench.

## Moisture

Keep media saturated through germination.

## Temperature

72 to 75°F (22 to 24°C). Keep temperature as constant as possible.

## Humidity

Maintain relative humidity at approximately 95% or higher.

## Light

Light is beneficial but not required for germination.

## Plug Production

### Temperature

After radicle emergence, maintain a constant 70°F (21°C) soil temperature for two weeks. In Week 3, the temperature can be decreased to 65°F (18°C).

## Moisture

Slightly reduce media moisture levels after radicle emergence. Maintain uniform media moisture until the true leaves appear; then allow media to dry out slightly between waterings. Do not stress plugs until Stage 4.

## Light

Light will help to ensure a higher-quality seedling. After radicle emergence, keep light levels at 400 to 2,000 f.c. (4,000 to 20,000 Lux) for two weeks.

## Fertilizer

Begin fertilization at 5 days out of the germination chamber, or 10 days after germination on the bench. **Dragon Wing** plugs require more feed than other fibrous begonias. Recommended application is 50 ppm N, 2 to 3 times per week. In Week 3, increase feed to 150 to 200 ppm N, 2 to 3 times per week.

## Plant Growth Regulators

Growth regulators are not required to produce **Dragon Wing** begonia plugs.

## Growing On to Finish

### Container Size

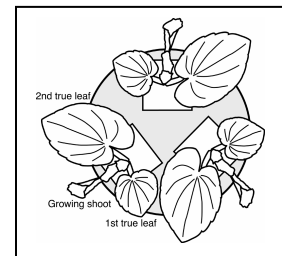
**Dragon Wing** begonias can be transplanted into a wide range of container sizes. Follow these guidelines for the number of plants per pot or basket:

Container Size	Bench Spacing	Plants Per Pot/Basket
4-4.5-in. (10-11-cm)	Pot-tight	1
5.5-6-in. (14-15-cm) pots	8 in. (20 cm)	1-2
6.5-8-in. (16-20-cm) pots	8-10 in. (20-25 cm)	2-3
1-gal. container	10 in. (25 cm)	2
10-12-in. (25-30-cm) baskets	—	4

## Transplanting

*Due to directional stem arching, it is very important to position **Dragon Wing** plugs properly when placing more than one plug into baskets and containers for finishing.*

Plugs must be placed with the growing shoot facing outward, toward the outside of the container (*see drawing*). This is the side of the plant the flower is on. The directional growth remains consistent as the plant matures, ensuring flowers on the outside of the finish container.



## Media

Use a well-drained, disease-free, soilless medium with a pH of 5.4 to 6.0 and electrical conductivity (EC) of 1.0 mmhos/cm.

## Light

Grow on in a high-light environment – 3,000 to 7,000 f.c. (30,000 to 70,000 Lux). *Daylength and light quality can have a dramatic effect on plant habit; daylength can also affect flowering time.* **Dragon Wing** begonias will flower under natural daylength year-round, making them a good choice for year-round production in warmer climates. They flower 1 to 3 weeks faster under short days. Short days (8 to 10 hours) cause plants to grow nearly horizontal. Natural or HID long days give intermediate, arching growth. Long days provided by incandescent lighting cause more upright growth, which is beneficial for plant shipment (tighter spacing on shelves with less breakage).

## Watering

Produce **Dragon Wing** begonias on the drier side to help prevent any fungal or water mold-type diseases. However, allowing plants to wilt even slightly between waterings will delay flowering, reduce branch number and result in pale foliage.

## Fertilizer

A feed program of 200 ppm N once a week can begin as soon as the plugs have begun to root out.

**NOTE:** Severe fertility and/or water stress will delay flowering 1 to 2 weeks.

## Plant Growth Regulators

**4-in. (10-cm) pots:** A spray of 3 ppm (0.75ml/l) Bonzi can be applied weekly for 3 applications to keep plants compact. Start the first application 2 weeks after transplanting.

**6-in. (15-cm) pots:** A spray of 5 ppm (1.25 ml/l) Bonzi 2 weeks after transplant has been found to be effective in trials in Elburn, IL. An additional 1 or 2 sprays of 5 ppm (1.25 ml/l) Bonzi every other week after the first application results in earlier flowering, shorter internodes, darker foliage and more uniform branches.

For larger containers, these additional applications may not be needed. In trials in Elburn, IL, **Dragon Wing** begonias grown in an 8-in. (20-cm) pot with 3 plants per pot evidenced more branches and more flowers than those grown in a 6-in. (15-cm) pot *without using any plant growth regulators.* **NOTE:** In-house trials are recommended to determine the best rates for your location. Always follow current manufacturer label instructions.

## Crop Scheduling

**Sow to transplant:** 7 to 8 weeks

**Transplant to finish:**

**4-in. (10-cm) pots with 1 plant per pot:** 7 to 9 weeks

**6-in. (15-cm) pots with 2 to 3 plants per pot:** 7 to 9 weeks

**8-in. (20-cm) pots with 3 plants per pot:** 8 to 10 weeks

**10-12-in. (25-30-cm) pots with 4 plants per pot:** 9 to 11 weeks

## Common Problems

**Dragon Wing** begonias are quite disease and pest-free. No major problems will occur if using good cultural and IPM practices. A wide range of insecticides have been tested on **Dragon Wing** plants with little or no phytotoxicity.

## In the Garden and the Landscape

Home gardeners and landscapers will see the best results when they plant **Dragon Wing** begonias in a well-drained location with partial shade or filtered sun. Feed regularly with an all-purpose fertilizer. If the foliage turns a bronze (reddish) color, more feed is required. In landscapes and gardens, place **Dragon Wing** plants on 10 to 12-in. (25 to 30-cm) centers. **Dragon Wing** begonias will reach a height of 12 to 15 in. (30 to 38 cm) and spread to about 15 to 18 in. (38 to 45 cm) in the garden.

# PanAmerican Seed

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