

## Dianthus Amazon

(*Dianthus barbatus interspecific*)

A PanAmerican Seed Product

### Germination

Light is required for germination. Use a well-drained, disease-free medium with a pH of 5.8 to 6.2, as well as good aeration and water-holding capacity. Cover seed with a medium layer of coarse vermiculite at sowing. Seed takes approximately 3 to 4 days to germinate.

### Plug Production

#### Plug Tray Size

**Amazon** dianthus is best produced in 406-cell plug trays for bedding plant programs. For cut flower programs, a 200-cell tray can be used.

#### Sowing

Use a well-drained, disease-free medium with a pH of 5.8 to 6.2, as well as good aeration and water-holding capacity. Cover seed with a medium layer of coarse vermiculite at sowing. Seed takes approximately 3 to 4 days to germinate.

#### Temperature

**Germination:** 64 to 68°F (18 to 20°C)

**Cotyledon emergence:** 65 to 70°F (18 to 21°C) days; 60°F (15°C) nights

**True leaf expansion:** 60°F (15°C) days; 55°F (13°C) nights

#### Light

Light is required for germination.

#### Humidity

Maintain 95 to 97% relative humidity until cotyledons emerge.

#### Fertilization

Beginning at Stage 3, fertilize 2 times a week with 50 ppm N. Increase the nitrogen concentration to 100 ppm after 1 week, and continue this program until the plugs are finished. Maintain the EC at 0.5 to 0.75 mmhos/cm, and increase to 1.0 mmhos/cm at Stages 3 and 4. pH can be maintained at 5.8 to 6.2 throughout.

### Growing On to Finish

#### Bedding Plant Programs:

##### Container Size

Best grown in gallon or 8-in. (20-cm) containers with 3 plugs per pot.

##### Temperature

60 to 72°F (15 to 22°C)

##### Fertilization

After plants are established, apply a calcium-based fertilizer or 15-5-15 at 150 ppm, 1 to 2 times per week. Dianthus require adequate calcium in their fertilization program.

##### Growth Regulators

Since Amazon dianthus are very responsive to growth regulators, growers should experiment with concentrations and application timing. For example, an application of Bonzi spray at 20 ppm can be applied 2 weeks after transplanting into a 4-in. (10-cm) or larger pot. For 6-in. (15-cm) pots or gallons, another application of Bonzi spray at 20 ppm may be required 2 weeks later.

Amazon can be produced year-round in high-light areas, but under low-light conditions (northern Europe), Amazon flowering will be significantly delayed during the Winter. NOTE: Amazon is best produced as the daylength increases for finishing as an early Summer crop.

##### Tip:

A small percentage (3 to 5%) of early off-types can be observed with Amazon dianthus at 4 to 5 weeks from sowing. These plants should be removed at transplant.

##### Cut Flower Programs

##### Transplanting

Transplant directly into ground beds approximately 5 weeks after sowing, spacing 3 to 4 plants per net sq. ft. (approximately 30 to 40 plants per net sq. m). If main stem is pinched on Amazon dianthus, then space at 1.5 plants per net sq. ft. (approximately 15 plants per net sq. m).

## **Temperature**

65 to 80°F (18 to 27°C). Amazon dianthus can tolerate temperatures as low as 45°F (7°C), but the crop will be delayed. Plants are frost-tolerant, although frost will damage flowers.

## **Light**

Best results are achieved when plants are grown in full sun or in a high-light greenhouse. The combination of high light with high heat will result in shorter stems.

## **Fertilization**

After plugs are established, apply 200 ppm calcium nitrate per week.

## **Netting/Pinching**

A single layer of support netting is recommended.

## **Cultural Tip**

In outdoor production, a preventative rust program is recommended.

