

## Dianthus Bouquet

(*Dianthus barbatus interspecific*)

### Germination

#### for Bedding Plant and & Cut Flower Programs

##### Plug Tray Size

Bouquet dianthus are best produced in 406-cell or larger 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 medium layer of coarse vermiculite at sowing. Seed takes about 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.

### Plug Production

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##### 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

#### for Bedding Plant Programs

##### Container Size

Suitable for production in 5-in. (13-cm) pots, or gallon containers with 3 plugs per gallon.

##### Temperature

**Days:** 60 to 72°F (15 to 22°C)

**Nights:** 50 to 60°F (11 to 15°C)

##### Fertilization

After plants are established, apply a calcium-based fertilizer or 15-5-15 at 100 ppm, 1 to 2 times per week. Dianthus require adequate calcium in their fertilization program.

##### Growth Regulators

Since Bouquet 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.

**Crop Scheduling (sow to flower)**

Late Spring/Summer: 12 to 13 weeks

Late Summer/Winter: 14 to 18 weeks

**Cultural Tip:**

Use a powdery mildew preventative program.

## Commercial Cutflower Programs

**Transplanting**

Transplant directly into ground beds approximately 5 weeks after sowing, spacing 3 to 4 plants per net sq. ft. (approx. 30 to 40 plants per net sq. m).

**Temperature**

60 to 72°F (15 to 22°C).

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.

**Cut Flower Crop Schedule**

**Bouquet** dianthus can be transplanted year-round in coastal California or similar climates, where mid-August to February 1 transplants will develop the best stem length. Greenhouse-grown plants generally produce taller stems than plants that are field-grown. Harvest stems with at least 3 open flowers.

**Weeks from sow to transplant:**

200-cell tray: 5 weeks

**Weeks from transplant to first flower:****Greenhouse:**

Late Spring/Summer: 8 to 9 weeks

Late Summer/Winter: 9 to 13 weeks

**Field:**

Late Spring/Summer: 8 to 9 weeks

Late Summer/Winter: 15 to 18 weeks

**Stem Length (Field):**

Late Spring/Summer: 18 to 20 in. (45 to 50 cm)

Late Summer/Winter: 25 to 30 in. (65 to 75 cm)

In the field, the second-crop stems of late Spring/Summer transplants grow 20 to 25 in. (50 to 65 cm) long. For the Summer/Winter transplants, second-crop stems can reach 25 to 35 in. (65 to 90 cm). Plants can be harvested continuously for approximately 4 to 6

weeks. If cut back, a second flush of flowers will be ready to harvest in 8 to 10 weeks. Note: All information is based on California coastal conditions.

**Cultural Tip:**

In outdoor production, a preventative program for powdery mildew may be required.

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