

Amazon Series & Bouquet™ Purple Dianthus & Cinderella Mixture Sweet William

Exceptional Additions to Bedding & Commercial Cutflower Programs

■ **Amazon** dianthus have very dark green foliage that sets off the eye-catching blooms. Stems can reach 36 in. (90 cm) tall in Winter in California, or 18 to 24 in. (45 to 60 cm) tall in Summer bedding gardens.

■ **Cinderella Mixture Sweet William** boasts a bright mix of carmine, white, carmine with eye, salmon rose, pink and scarlet flowers.

■ Lavender-flowered **Bouquet™ Purple** dianthus is the winner of the 2000 “Minnesota Select Perennial” Award and the 2001 “Mississippi Medallion” Award... Trials show it’s a terrific performer, North and South!

■ All are available as seed or plugs. Call your local distributor or PanAmerican Seed at 800 231-4868 today.

Cinderella Mixture

D. barbatus

Approximate seed count: 26,000 to 34,000 S./oz. (900 to 1,200 S./g)

Amazon Series & Bouquet Purple

D. barbatus interspecific

Approximate seed count: 34,000 to 71,000 S./oz. (1,200 to 2,500 S./g)

Bedding Plant Programs

- Large number of stems and good basal branching make showy garden displays all season long.
- “Cut-and-come-again” flowering and no need for staking make these easy-care plants a perfect choice for backyard cutting gardens.
- Vigorous, frost and heat-tolerant plants are also well-suited to landscapes.
- Perform as perennials (hardy to USDA Zone 4) and can overwinter in many areas.
- 18 to 24 in. (45 to 60 cm) tall in the garden.

Plug Production

Plug Tray Size

Best produced in 406-cell or larger plug trays.

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 vermiculite at sowing. Water well, but allow the soil to dry slightly between waterings.

Temperature

65 to 70°F (18 to 20°C)

Light

No supplemental lighting is required.

Fertilization

Stage 3: Alternate 20-10-20 and 14-0-14 at 50 ppm each week.

Stage 4: Same as Stage 3, but increase to 100 ppm.

Growth Regulators

PGRs are not generally needed, although **Amazon, Bouquet Purple** and **Cinderella Mixture Sweet William** are responsive to Bonzi and B-Nine. An application of Bonzi spray at 6 ppm in early Stage 3 will tone the plugs.

Growing On to Finish

Container Size

Bouquet Purple and **Cinderella Mixture Sweet William** are suitable for production in 4-in. (10-cm) pots, or gallon containers with 3 plugs per gallon. Can be grown pot tight. **Amazon** dianthus are best grown in gallon containers with 1 plug per gallon. Can be grown pot tight.

Temperature

60 to 72°F (15 to 22°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 **Amazon, Bouquet Purple** and **Cinderella Mixture Sweet William** 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 (from sow to flower)

Bouquet Purple:

Late Spring/Summer: 12 to 13 weeks

Late Summer/Winter: 14 to 18 weeks

Amazon:

Late Spring/Summer: 16 to 17 weeks

Late Summer/Winter: 18 to 22 weeks

Cultural Tip

Use a powdery mildew preventative program.

Commercial Cutflower Programs

- Produce high yields of salable stems for commercial greenhouse and field cutflower producers.
- Flower earlier than other vegetatively propagated dianthus, with straight, strong stems.
- Plants reach 18 to 36 in. (45 to 90 cm), with tallest growth resulting from early Fall-transplanted, greenhouse-grown plants.
- Vivid floral colors make these dianthus excellent choices as bouquet filler items.

Plug Production

Plug Tray Size

For **Bouquet Purple** and **Amazon** dianthus, use 200-cell trays for direct transplant to field or greenhouse.

Cinderella Mixture Sweet William performs best from a 392-cell tray.

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 vermiculite at sowing. Water well, but allow the soil to dry slightly between waterings.

Temperature

65 to 70°F (18 to 21°C).

Light

No supplemental lighting is required.

Fertilization

Stage 3: Alternate 20-10-20 and 14-0-14 at 50 ppm each week.

Stage 4: Same as Stage 3, but increase to 100 ppm.

A pH of 5.8 to 6.2 and an EC of about 0.75 mmhos/cm (1:2 extraction) is recommended.

Growing On to Finish

Transplanting

Transplant direct into ground beds approximately 6 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). Dianthus **Amazon**, **Bouquet Purple** and **Cinderella Mixture** Sweet William can tolerate night temperatures as low as 45°F (7°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.

Cutflower Crop Schedule

Amazon, Bouquet Purple and Cinderella Mixture

Sweet William can be transplanted year-round in coastal California or similar climates, where mid-August to February 1 transplants will develop the best stem length. Stem length for **Cinderella Mixture** Sweet William from transplants April to July may not be of sufficient length for commercial production depending on the environment. Greenhouse-grown plants generally produce taller stems than plants that are field-grown. Harvest stems with at least three open flowers.

Days to Germ.: 7-10

Weeks from Sow to Transplant

200-cell tray: 5

392-cell tray: 4

Weeks from Transplant to First Flower:

Greenhouse: 8-9 (late Spring/Summer)
9-13 (late Summer/Winter)

Field: 8-9 (late Spring/Summer)
15-18 (late Summer/Winter)

Note: For **Amazon** dianthus, add 3 to 4 weeks to the above crop flowering times.

Stem Length (Field):

18-20 in./45-50 cm (late Spring/Summer)

25-30 in./65-75 cm (late Summer/Winter)

In the field, the second-crop stems of late Spring/Summer transplants grow 23 to 25 in. (55 to 65 cm) long. For the Summer/Winter transplants, second-crop stems can reach 30 to 35 in. (75 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

Use a powdery mildew preventative program. Pyrrole and Piperalin can cause phytotoxicity.

PanAmerican Seed

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