PanAmerican Seed.

GROWERFACTS

Amazon Series Dianthus

Exceptional Additions to Summer Bedding & Commercial Cut Flower Programs

• Amazon dianthus have strong stems and very dark green, glossy foliage that sets off eye-catching blooms.

• Versatile series is an exceptional landscape and bedding plant, and makes an excellent commercial and home garden cut flower.

■ No vernalization is required for flowering.

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

Amazon for 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.

■ The exceptional performance of **Amazon** dianthus in the heat along with the vibrant colors make this a great addition to late Spring, Summer and early Autumn flowering programs.

■ In the garden, Amazon grows to about 18 to 24 in. (45 to 60 cm) tall.

Amazon for Commercial Cut Flower Programs

Produce high yields of salable stems for commercial greenhouse and field cut flower producers.

■ Plants reach 18 to 36 in. (45 to 90 cm), with tallest growth resulting from early Autumn-transplanted, greenhouse-grown plants.

■ Vivid floral colors make these dianthus excellent choices as bouquet filler items.

D. barbatus interspecific

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

Plug Production for Bedding Plant & Cut Flower Programs 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 later 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 for 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.

Crop Scheduling for Bedding Plant Programs

Weeks from sow to transplant (406-cell tray): 4 weeks Late Spring through Autumn finishing: 12 to 13 weeks Winter finishing: 14 to 18 weeks **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.

Growing On to Finish for 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 at slow as 45° F (7 $^{\circ}$ 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.

Crop Schedule for Cut Flower Programs

Amazon 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. Greenhousegrown 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: 11 to 14 Late Summer/Winter: 12 to 18

Field:

Late Spring/Summer: 11 to 14 Late Summer/Winter: 18 to 23

Stem Length (Field):

Late Spring/Summer: 20 to 25 in./50 to 65 cm Late Summer/Winter: 25 to 36 in./65 to 92 cm

In the field, the secondary stems of late Spring/ Summer transplants grow 25 to 30 in. (65 to 75 cm) long. For the Summer/Winter transplants, second-crop stems can reach 30 to 36 in. (75 to 90 cm). Plants can be harvested continuously for approximately 4 to 6 weeks. NOTE: All information is based on California coastal conditions.

Cultural Tip

In outdoor production, a preventative rust program is recommended.



PanAmSeed.com

[™] denotes a trademark of and [®] denotes a registered trademark of Ball Horticultural Company in the U.S. It may also be registered in other countries.

PanAmerican Seed Co. 622 Town Road West Chicago, Illinois USA 60185-2698 630 231-1400 Fax: 630 231-3609 PanAmerican Seed Europe BV Lavendelweg 10 NL-1435 EW Rijsenhout, Holland +31 (0)297-383038 Fax: +31 (0)297-383036

©2005 Ball Horticultural Company Printed in USA PAS06073