

Matthiola Tosca Series

(*Matthiola incana*)

Cut Flowers Culture (revised 10/23/18)

(Spring Flowering, Group 2,3)

Stem length: 24 to 32 in./61 to 81 cm

Planting density: 6 to 7 plants/ft² (65 to 75 plants/m²)

Best for: Greenhouse

Plug crop time: 5 to 6 weeks

Transplant to finish: Autumn: 8 to 10 weeks, Spring: 10 to 11 weeks, Summer: 6 to 8 weeks, Winter: 12 to 14 weeks

A good series to grow in Summer with higher light levels and temperatures.

General Information

| Exposure | Bloom Season | Height | Spread | Spacing |
|------------------|-----------------------------|-------------------------|--------|---------|
| Partial Sun, Sun | Late Spring, Summer, Autumn | 24-32 in. (61-81 cm) | - | - |

Germination

| Seed Form | Recommended Plug Size | Seeds/Cell | Plug Crop Weeks | Days to Germinate | Initial Media pH/EC | Cover Seed |
|-----------|-----------------------|------------|-----------------|-------------------|----------------------------|------------|
| RAW | 288 | 1 | 5-6 | 2-4 | 5.6-5.9 pH 0.5 mmhos/cm | Yes |

Plug Production

| | Stage 1 | Stage 2 | Stage 3 | Stage 4 |
|--------------------|--|---|---|---|
| Moisture | Level 4 | Level 3-4 | Level 2-3 | Level 1-2 |
| Temperature | 59-64°F (15-18°C) | 59-64°F (15-18°C) | 59-64°F (15-18°C) | 59-64°F (15-18°C) |
| Light | | 1,500-2,500 f.c. (16,100-26,900 Lux) | 1,500-2,500 f.c. (16,100-26,900 Lux) | 2,500-5,000 f.c. (26,900-53,800 Lux) |
| Fertilizer | Less than 100 ppm N - Less than 0.7 EC | Less than 100 ppm N - Less than 0.7 EC | 100 to 175 ppm N - 0.7 to 1.2 EC | 100 to 175 ppm N - 0.7 to 1.2 EC |

Propagation Key Tips

Double-flowering matthiola may be selected from single-flowering types by exposing seedlings with fully expanded cotyledons to 41°F (5°C) for approximately 4 to 7 days. At this point, seedlings of double-flowering plants will appear a pale green, while singles remain dark green. After removal from cold treatment, double-flowering seedlings will appear yellow and chlorotic within 1 to 2 days, while single-flowering seedlings remain robust and green. This cold treatment may only be done once to selectable matthiola plugs.

Growing on to Finish

| Growing on Temperature | Target Media pH/EC | Fertilizer | Daylength |
|--|--------------------------------|----------------------------------|-----------|
| Spring: (day) 50-62°F (10-17°C) (night) 50-62°F (10-17°C) | 5.8-6.5 pH 1.5-2.0 mmhos/cm | 175 to 225 ppm N - 1.2 to 1.5 EC | - |

Crop Scheduling

| Crop Type | Season | Density | Crop Time |
|------------|--------|---|-------------|
| Greenhouse | Autumn | 6-7 plants/ft ² (65-75 plants/m ²) | 8-10 weeks |
| Greenhouse | Spring | 6-7 plants/ft ² (65-75 plants/m ²) | 10-11 weeks |
| Greenhouse | Summer | 6-7 plants/ft ² (65-75 plants/m ²) | 6-8 weeks |
| Greenhouse | Winter | 6 plants/ft ² (65 plants/m ²) | 12-14 weeks |

Common Problems

To protect against root problems, it's recommended to sterilize (steam or other) the soil after the first crop if several crops will be grown in the same soil over the year. Matthiola is sensitive to Fusarium.

Finishing Key Tips

Double-flowering matthiola may be selected from single-flowering types by exposing seedlings with fully expanded cotyledons to 41°F (5°C) for approximately 3 to 5 days. At this point, seedlings of double-flowering plants will appear a pale green, while singles remain dark green. After removal from cold treatment, double-flowering seedlings will appear yellow and chlorotic within 1 to 2 days, while single-flowering seedlings remain robust and green. This cold treatment may only be done once to selectable matthiola plugs.

NOTE: Growers should use the information presented here as guidelines only. PanAmerican Seed recommends that growers conduct a trial of products under their own conditions. Crop times will vary depending on the climate, location, time of year, and greenhouse environmental conditions. It is the responsibility of the grower to confirm the treatment is available in their region as well as read and follow all the current label directions relating to the products. Nothing herein shall be deemed a warranty or guaranty by PanAmerican Seed of any products listed herein. PanAmerican Seed's terms and conditions of sale shall apply to all products listed herein.

Variety Pictures



Blue Sea



Rose



White



Yellow

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