

Stock Vintage

(*Matthiola incana*)

Germination

Cover seed with a medium to light covering of coarse vermiculite to keep the seed moist. Seed can be germinated either on the bench or in a germination chamber if the recommended germination temperatures can be maintained. Allow 3 to 4 days for germination. Maintain a clean, disease-free environment in the seedling production area.

Plug Production

Plug Tray Size

Vintage plugs are best produced in 406-cell or larger trays.

Media

Use a well-drained, disease-free, soilless medium.

Sowing

Cover seed with a medium to light covering of coarse vermiculite to keep the seed moist. Seed can be germinated either on the bench or in a germination chamber if the recommended germination temperatures can be maintained. Allow 3 to 4 days for germination. Maintain a clean, disease-free environment in the seedling production area.

Temperature

Germination: 68 to 72°F (20 to 22°C). Avoid temperatures higher than 75°F (24°C), as this will produce soft, stretched seedlings which are susceptible to damping off.

Cotyledon stage: 60°F (15°C) nights, 65 to 68°F (18 to 20°C) days

True leaves: 60°F (15°C) nights, 65°F (18°C) days

Hold plugs: 55°F (13°C) nights, 60°F (15°C) days. The best-quality, well-toned plugs result when Stage 4 temperatures are maintained.

Light

Supplemental lighting is not required.

Humidity

Maintain relative humidity (RH) at 95 to 97% until cotyledons emerge.

Soil Moisture

Keep the plug media moist. Do not subject the seedlings to water stress for toning, as they will not recover well.

Fertilizer

Beginning at Stage 3, feed seedlings twice each week, applying 50 ppm N from 14-0-14 or 13-2-13, alternating with 20-10-20 fertilizer. After the first week, increase to 100 ppm until the plugs are finished.

Stage 2: Maintain EC at 0.5 to 0.75 mmhos and pH at 5.8 to 6.2.

Stages 3 and 4: Maintain EC at 1.00 mmhos and pH at 5.8 to 6.2.

Growth Regulators

Plant growth regulators are not required.

Growing On to Finish

Container Size

Transplant plugs into 606 Jumbo cell-packs for best results.

Growing Location

The best-quality Vintage matthiola can be grown outside under cold frame-type conditions to flower/finish, beginning 1 to 2 weeks after transplant.

Media

Keep the media moist. Avoid conditions that are either too wet or too dry. Wet conditions can cause diseases including Root Rots, Downy Mildew and Bacterial Blight. Dry conditions can cause wilting and lower leaf chlorosis, which then exposes plants to other infections. It is critical to differentiate between lower leaf chlorosis symptoms caused by nutrient deficiency/drought stress, or Downy Mildew.

Temperature

Greenhouse production: Provide night temperatures of 50 to 55°F (10 to 13°C) and day temperatures of 60 to 65°F (15 to 18°C). When finishing Vintage matthiola in the greenhouse, avoid temperatures higher than 68°F (20°C).

Outdoor production: Best-quality plants result during

the time of year when night temperatures are in the low 50s°F (10°C) and day temperatures are in the 60 to 70°F (15 to 21°C) range for the first few weeks.

Light

Supplemental lighting is not required.

Fertilizer

One week after transplant, begin a constant feed program with 150 ppm. Maintain EC of 1.5 and pH of 5.8 to 6.2 from transplant to finish. Leach the crop with clear water occasionally to prevent any salt accumulation. NOTE: The constant feed program is better than a weekly feed program, as it will help in preventing any lower leaf chlorosis as the crop comes into flower.

Growth Regulators

Plant growth regulators are not recommended.

Common Problems

Insects: Fungus gnats, shore flies (plug production); thrips, leaf miners, Lepidopteran pests (finishing)

Diseases: Downy Mildew, Root Rots, Bacterial Blight. Incorporate preventative fungicide sprays for Downy Mildew throughout the crop cycle. Use appropriate recommended chemicals at the label rates, and maintain a clean, sanitized growing environment. Use a substrate drench with a broad spectrum fungicide at Stage 4 of plug production to help prevent any possible disease occurrence. Avoid wetness on the foliage for prolonged periods and provide good air circulation in the greenhouse.

