

easy grow guide

viola angel

(F1 viola xwilliamsii)



Plug Production: 512 or 288 plugs

Sowing/Media:	Use a well-drained, disease-free, peat based plug medium with pH 5.5-5.8, EC 0.75mmhos. Cover seed with coarse vermiculite
Germination Stage 1: (4-5 days)	Keep medium uniformly moist, media temperature should be 65-70°F (18-21°C), Keep light levels <1500 f.c. until cotyledons are open.
Germination Stage 2:	Dry down covering slightly to improve rooting and control floppiness, maintain media temperature at 65-70°F (18-21°C), once cotyledons have opened light levels should be 1500-2000 f.c.
Germination Stage 3:	Allow media to dry further between irrigations, practice a good wet/dry cycle but avoid wilting, media temperature should be 60-65°F (15-18°C), light levels should be around 3000 f.c. with shading in hot weather Fertilize every other watering with 100-150ppm N (nitrate form) from 15-5-15, 17-5-17, or 13-2-13 keep media pH at 5.5-5.8 and EC at 1.0-1.5mmhos.
Germination Stage 4:	Keep media on the drier side and lower media temperature to 55-60°F (13-15°C), light levels can be increased to 3000-4000 f.c. if possible. Fertilize as stage 3, avoid using high NH4 fertilizers but make sure pH is below 6.5.
Growth Regulators:	Cool temperatures and good moisture management should provide adequate control but if needed, sprays of B-Nine (1500–2500 ppm), A-Rest (2–7 ppm), B-Nine (1000–2500 ppm) + Cycocel (500–1500 ppm), or B-Nine (1000–2500 ppm) + A-Rest (1–5 ppm) can be used. Weather conditions and cultural practices directly affect how much growth regulator to use, so it is recommended that you run your own trials.

Growing On to Finish: Packs, 4”(10cm) pots

Media:	Use a well-drained, disease free, peat-based growing mix with pH 5.5-5.8, EC <1.5mmhos.
Temperatures:	Keep media temperature at 60-65°F(15-18°C) until roots have developed and then lower to 55-60F(12-15°C) to grow on. Growing cool produces a much better finished product, but the crop time will increase if the temperature is below 55-60F(12-15°C)
Light:	Keep light levels at 3000-4000 f.c.. Provide shade if light levels are higher to keep temperatures down.
Irrigation:	Practice a good wet/dry moisture cycle to aid root development and control height.
Fertilizer:	Fertilize once a week with 150ppm N (nitrate form) from 15-5-15, 17-5-17, or 13-2-13 but keep media pH at 5.5-5.8 definitely <6.5 and media EC no higher than 1.0-1.5mmhos.
Growth Regulators:	Fall sowings for spring flowering should need minimal PGR's if the ideal temperatures stated above can be achieved, along with good moisture management. Summer sowings for fall flowering are much more likely to need chemical PGR's. Sprays of B-Nine (2500–5000 ppm), A-Rest (3–10 ppm), B-Nine (1500–2500 ppm) + Cycocel (750–1500 ppm), or B-Nine (1500–2500 ppm) + A-Rest (3–7 ppm) will give some control. Weather conditions and cultural practices directly affect how much growth regulator to use, so it is recommended that you run your own trials.
Pests:	Aphids, Thrips, Spider Mites. Fungus Gnats and Shore Flies during the plug stage.
Diseases:	Pythium, Thielaviopsis, Botrytis, fungal leafspots, Downy and Powdery mildew.

Plug Times:

512 Plug:	4-5 weeks	288 Plug:	5-6 weeks
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Transplant to Finish:

Container	Plants/Container	Transplant to Finish	Transplant to Finish
Packs	1x plug per cell	4-5 weeks - Autumn	8-9 weeks – Spring
4” (10cm):	1x plug	4-6 weeks - Autumn	8-10 weeks - Spring

Crop times are based on UK trials in optimum conditions. Alternative environmental conditions and cultural regimes can alter the crop times stated above.