easy grow guide
delphinium hunky dory
(Delphinium grandiflorum)

floranova
creative plant breeding

Plug Production: 288 plugs or similar

Sowing/Media:	Use a well-drained, disease-free, peat based plug medium with pH 5.8-6.2, EC <0.75 mmhos. Cover seed well with vermiculite.
Germination Stage 1: (5-7 days)	Media moisture and humidity should be high for germination. Temperature should be 68-70°F (20-21°C). Light is not necessary for germination but is beneficial to prevent stretch in low light conditions. Once germination has begun, the trays can be kept under high humidity for another 1-2 days if necessary to ensure even germination.
Germination Stage 2:	Reduce moisture slightly between irrigations but keep uniformly moist during rooting. Media temperature can be lowered to 65-68°F (18-20°C), light levels of up to 2000 f.c. are beneficial. You can begin to fertilize with 75-100ppm N from a low phosphorous, nitrate based fertilizer.
Germination Stage 3:	Allow media surface to dry to a pale brown colour before irrigating again to improve rooting, but avoid wilting. Maintain media temperature at 65-68°F (18-20°C), light levels should be 2000-3000 f.c. Fertilizer rate can be increased to 100-150ppm N from a low phosphorous, nitrate based fertilizer, keep media pH 5.8-6.2 and EC 0.7-1.0 mmhos.
Germination Stage 4:	Maintain moisture levels the same as stage 3, temperature can be lowered to 60-65°F (15-18°C), light levels can be increased to 4000-5000 f.c. but avoid high temperatures. Fertilize as per stage 3, keep media pH and EC as per stage 3.
Growth Regulators:	Should not be necessary during the plug stage if ideal conditions can be achieved.

Growing On to Finish: 5” (13cm) pots, 6-8” (15-20cm) pots

Media:	Use a well-drained, disease free, peat-based growing mix with pH 5.8-6.2, EC <1.0-1.5mmhos.
Temperatures:	Day temperatures of 65-68°F (18-20°C) and night temperatures 58-60°F (14-16°C) should give good results, but for a harder, more toned plant, the night temperatures can be lowered to 46-50°F (8-10C), whilst keeping the day temperatures the same. This will reduce the need for growth regulators. Delphinium grandiflorum can tolerate temperatures as low as 5°C (41°F) but growing in cooler conditions will increase crop times.
Light:	Keep light levels as high as possible, but keep the temperature levels as recommended above. Supplementary lighting can be used to extend day length up to 14 hours, which will reduce crop times.
Irrigation:	Practice a good wet/dry moisture cycle avoiding extremes of wet and dry.
Fertilizer:	Fertilize once-twice a week with 200-250ppm N from a low phosphorous, nitrate based fertilizer with high potassium. Keep media pH 5.8-6.2 and EC no higher than 1.5-2.0 mmhos.
Growth Regulators:	Delphinium grandiflorum is naturally well branched and when grown as recommended, growth regulators shouldn‘t be necessary, particularly if grown cooler. If further growth control is required, sprays of B-Nine (2500 ppm) + Cycocel (1000 ppm), or Bonzi (20ppm) are effective. Drenches of Bonzi (1-2 ppm) can also be used. It is best to run your own trials, to avoid overdosing, as environmental conditions and cultural practices can affect results.
Pests:	Whiteflies and Spider Mite.
Diseases:	Powdery Mildew, upper yellow leaves - iron deficiency induced by high pH.

Plug Times:

288 Plug:	6-7 weeks

Transplant to Finish:

Container	Plants/Container	Transplant to Finish	Total Crop Time
5” (13cm):	1x plug	13-14 weeks	19-21 weeks (sown week 1 in UK)
6” (15cm):	3 x 288 plugs	10-12 weeks	16-19 weeks (sown week 6 in UK)

Crop times are based Northern European conditions. Week 1 sowing above was grown under day temperatures of 60-65°F (15-18°C) and night temperatures of 46-50°F (8-10°C). Week 5 sowing above was grown under day temperatures of 65-68°F (18-20°C) and night temperatures of 58-60°F (14-16°C). Alternative environmental conditions and cultural regimes will alter the crop times stated above.