

Begonia x hybrida








Central Europe
North Europe



Tophat

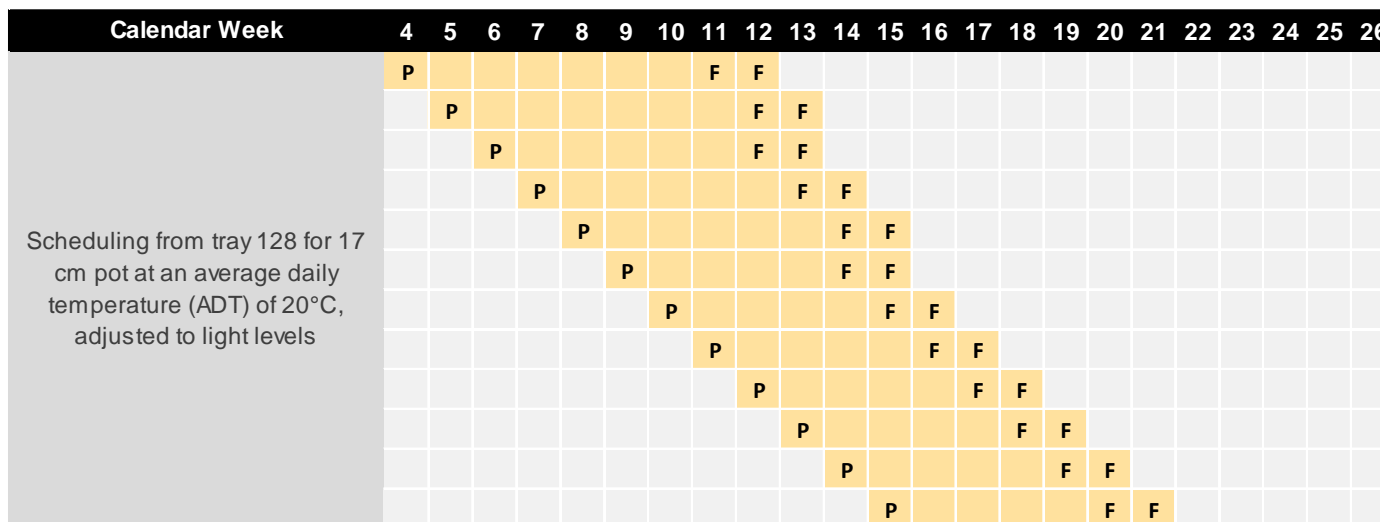
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Finished Plant *Begonia x hybrida*

Series 	Type 	Leaf colour 	Pot size 	Plants/m ² finished 
Tophat	vigorous	green	12 cm	25 plants/m ²
		green	13 cm	20 plants/m ²
		green	15 cm	16 plants/m ²
		green	17 cm	12 plants/m ²

Remarks

N.A.



Cultivation Advice

Tophat has neutral response to day length. For optimal crop time keep average daily temperature at 18-21°C. Transplant plugs from tray after delivery to avoid stretch of plants and delays in crop development.



Fertilization & Substrate

Use balanced fertilization N:K = 1:2 with 150 ppm nitrogen weekly. Avoid low levels of Ca and Mg in substrate and keep pH in range 5,4-5,8.



Spacing

Tophat branches very well. To avoid stretching and PGR applications, we recommend spacing in week 4 after potting.



Light

Daily light integral 12 -20 mols/day if less than 12 supplemental HID daily lighting is recommended.



Irrigation

For optimal crop timing and plant habit keep substrate alternate between moisture level 4 - 2.



PGR Applications

Tophat has none to very little need for PGR. If needed 2-4 ppm Paclobutrazol (Bonzi) or 2500 ppm of Daminozide (B9/Alar). Also possible chloromequat chloride (Cycocel) 300 ppm.



Pests

Aphids, Thrips



Diseases

Botrytis






Recommendations

Culture guideline at optimum average daily temperature 20°C:




Culture week	1	2	3	4	5	6	7
Handling	P			S			F
Temperature D/N	18–19°C						
Light	If day light integral (DLI) is less than 12 mols/day						
Shading	500 - 600 W/m ²						
Humidity	50–70%						
Moisture	2-4 (alternating)						
pH	5,4–5,8						
EC growing medium	1,25 - 1,5 mS/cm						
EC feeding in mS/cm	1,5 - 2,0 mS/cm						
Fertilizer	N : K 1 : 2						

Legend







Soil moisture level

	5	saturated: water is easily observed. When the substrate is touched, water moves out freely from top to bottom.
	4	wet: water is not easily observed. When the substrate is touched, there is very little movement of water from top to bottom.
	3	moist: the substrate is black but not glistening. When the substrate is touched, there is water, but virtually no water movement.
	2	medium: the substrate turns from dark to medium brown. There is no water movement when touched.
	1	dry: the substrate changed color to very light brown.








Culture stages Cuttings / Seeds

	callus development / germ1, radicle emergence
	root development / germ2, cotyledon expansion
	leaf development / plug bulking plug finishing / plug finishing










EC zones feeding mS/cm

	1	0,5–1,0 mS/cm
	2	1,0–1,5 mS/cm
	3	1,5–2,0 mS/cm
	4	2,0–2,5 mS/cm
	5	2,5–3,0 mS/cm
	6	3,0–3,5 mS/cm







EC zones growing medium mS/cm (Sonneveld 1:1,5)

	1	0,5–0,75 mS/cm
	2	0,75–1,0 mS/cm
	3	1,0–1,25 mS/cm
	4	1,25–1,5 mS/cm
	5	1,5–1,75 mS/cm
	6	1,75–2,0 mS/cm
	7	2,0–2,25 mS/cm




Temperature zones


	1	0–5°C
	2	5–8°C
	3	8–12°C
	4	12–14°C
	5	14–16°C
	6	16–18°C
	7	18–20°C
	8	20–22°C
	9	>22°C

Light zones

	1	total darkness
	2	short day <12 h/short day treatment
	3	shaded
	4	no-shading / natural light
	5	supplemental light > 14 h/long day treatment
	6	night interruption

Shading

	1	shading > 250 W/m ²
	2	shading > 450 W/m ²
	3	shading > 750 W/m ²

ST	sticking URC	L	lift cover
RD	root development	G	gapping
SC₀	sowing no Vermiculite cover	TP	transplanting
SC₁	sowing plus light Vermiculite cover	T	ypl transplanting
SC₂	sowing plus medium Vermiculite cover	C	cover to protect from frost
SC₃	sowing plus thick Vermiculite cover	PGR	PGR treatment (spray)
RE	radicle emergence	PD	PGR treatment (drench) or heavy spray
Cot	cotyledon	✂	pinch
M₁	mist day and night	DB	disbud
M₂	mist day – dry night	P	potting
W	end mist	S	spacing
FC	fleece cover	F	flow ering
PC	plastic cover	LF	leaf removal and maintenance
			start short day