



## CROP MANUAL

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# Begonia tuberhybrida

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Central Europe  
North Europe







Nonstop  
Nonstop Mocca  
Swing  
Limitless  
Illumination  
Tenella  
Funky

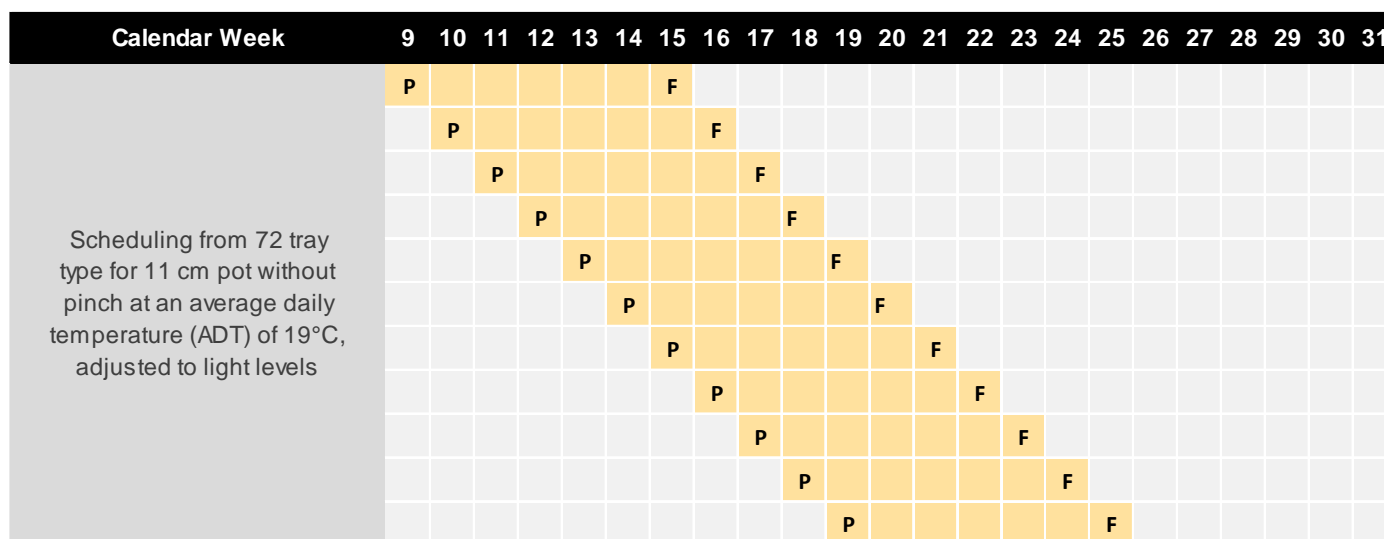
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# Finished Plant Begonia

## Remarks

Obligate long day plants!

Series 	Type 	Leaf colour 	Pot size 
Nonstop	medium	green	10.5–12 cm
Nonstop Mocca	medium	dark green	10.5–12 cm
Swing	compact	green	9–11 cm
Limitless	medium	green	10,5-12 cm
Illumination	trailing	green	10–12 cm
Funky	trailing	green	10–12 cm
Tenella	trailing	green	10–12 cm



# Cultivation Advice

When natural day length is less than 12 hours continue with assimilation lighting day extension to 14-16 hr. If plants are placed under short days conditions growth will be uneven and plants start to form a tuber.



## Pests

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Aphids, Thrips



## Diseases

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Botrytis, Pythium, Rhizoctonia,  
Powdery mildew



## Light

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Begonia tuberhybrida wants to form tubers and single flowers when natural daylength is < 12 hours.



## Irrigation

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Alternate between moisture levels wet (4) and medium (2). Allow media to approach level (2) before re-saturating to level (4).



## PGR Applications

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CCC (Chlormequat chloride) if needed can be used as a spray 0,03% - 0,05%.



## Tips & Tricks

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Pot immediately upon receipt. Do not allow plants to become overgrown in the tray. Avoid too high ammonium levels which leads to tall, stretched plants with few flowers.






# Recommendations

## Culture guideline for 11 cm pot starting from 72 tray:





Culture week	1	2	3	4	5	6	7
Handling	P		S				
Temperature D/N	18-20°C		16-18°C				
Light	Until the day length is < 12 hr.						
Shading	> 450 W/m2						
Humidity	40-60%						
Moisture	Alternate between 2 - 4						
pH	5,5-5,8						
EC growing medium	1,2 mS/cm						
EC feeding in mS/cm	1,5 mS/cm						
Fertilizer	N : K 1 : 1			N : K 1 : 1,5			

## Legend







### Soil moisture level

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

	<b>1</b> 0,5-1,0 mS/cm
	<b>2</b> 1,0-1,5 mS/cm
	<b>3</b> 1,5-2,0 mS/cm
	<b>4</b> 2,0-2,5 mS/cm
	<b>5</b> 2,5-3,0 mS/cm
	<b>6</b> 3,0-3,5 mS/cm







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

	<b>1</b> 0,5-0,75 mS/cm
	<b>2</b> 0,75-1,0 mS/cm
	<b>3</b> 1,0-1,25 mS/cm
	<b>4</b> 1,25-1,5 mS/cm
	<b>5</b> 1,5-1,75 mS/cm
	<b>6</b> 1,75-2,0 mS/cm
	<b>7</b> 2,0-2,25 mS/cm




### Temperature zones

	<b>1</b> 0-5°C
	<b>2</b> 5-8°C
	<b>3</b> 8-12°C
	<b>4</b> 12-14°C
	<b>5</b> 14-16°C
	<b>6</b> 16-18°C
	<b>7</b> 18-20°C
	<b>8</b> 20-22°C
	<b>9</b> >22°C

### Light zones

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

### Shading

	<b>1</b> shading > 250 W/m2
	<b>2</b> shading > 450 W/m2
	<b>3</b> shading > 750 W/m2

<b>ST</b>	sticking URC	<b>PC</b>	plastic cover
<b>RD</b>	root development	<b>L</b>	lift cover
<b>SC<sub>0</sub></b>	sowing no Vermiculite cover	<b>G</b>	gapping
<b>SC<sub>1</sub></b>	sowing plus light Vermiculite cover	<b>TP</b>	transplanting
<b>SC<sub>2</sub></b>	sowing plus medium Vermiculite cover	<b>T</b>	ypl transplanting
<b>SC<sub>3</sub></b>	sowing plus thick Vermiculite cover	<b>C</b>	cover to protect from frost
<b>RE</b>	radicle emergence	<b>PGR</b>	PGR treatment (spray)
<b>Cot</b>	cotyledon	<b>PD</b>	PGR treatment (drench) or heavy spray
<b>M<sub>1</sub></b>	mist day and night	<b>&lt;</b>	pinch
<b>M<sub>2</sub></b>	mist day - dry night	<b>DB</b>	disbud
<b>W</b>	end mist	<b>P</b>	potting
<b>FC</b>	fleece cover	<b>S</b>	spacing
<b>PC</b>	plastic cover	<b>F</b>	flowering
		<b>LF</b>	leaf removal and maintenance