



## CROP MANUAL

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# Mandevilla hybrida Rio®

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Central Europe  
Northern Europe



Rio®  
Rio® Petite  
Rio® Elegant  
Rio® Grande

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# Finished Plant Rio®, Rio® Petite, Rio® Elegant 10,5 cm pot

Series 	Type 	Leaf colour 	Pot size 	Plants/m <sup>2</sup> finished 
Rio®	compact	dark green	10.5–14 cm	50-25 plants/m <sup>2</sup>
Rio® Petite	compact	green	Packs-10.5 cm	100-50 plants/m <sup>2</sup>
Rio® Elegant	medium	green	10.5–15 cm	50-20 plants/m <sup>2</sup>
Rio® Grande	vigorous	green	>14 cm	10 plants/m <sup>2</sup>

## Remarks

Mandevilla is a very light/temperature sensitive crop. Therefore enclosed schedule can be only a rough guideline. More details on request. Lead time is depending on light, temperature and as a consequence PGR treatments.

Calendar Week	44	46	48	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
Scheduling from 2,5 cm plug type for 10.5 cm pot with one pinch at an average daily temperature of 18°C adjusted to light levels. Northern Europe and France. Variety Rio®, Rio® Elegant. For Rio® Petite reduce by one week.	P			✂														F							
		P		✂															F						
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## One young plant

# Cultivation Advice

**Use each Rio® genetic for the relevant pot size.** Crop pinching is recommended when planted with single plant per pot in order to achieve a well-shaped plant that fills the pot, but will extend the total production time. Temperature range during transport & distribution of finished product to be kept between 12 - 15°C. Mandevilla is a tropical plant. Temperatures below 20°C delay development.



## Fertilization & Substrate

Important to keep EC levels > 1,5 (high EC) at second half of growing in the substrate. Use a high porosity with well drained media.



## Diseases

Botrytis, Pythium, Rhizoctonia, Fusarium, Colletotrichum, leaf spot are common diseases.



## Pests

Aphids, Whiteflies, Spidermites are common pests.



## Light

High light levels to avoid veining and promote growth. Perfect are DLI above 15 mol. With lower light levels (8 - 10 mol/day) please reduce temperature to avoid veining.



## PGR Applications






Growth control can be reached with use of Regalis (prohexadione-calcium), Bonzi (paclobutrazol), Caramba (metconazole) or B9/Alar (daminozide) as single product or tank mixed with CCC (chlormequatchloride). Please check the products are registered in the country before using them. Any late PGR will result in delayed flowering.

# Recommendations





Culture week	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Handling			✕											
Temperature D/N	18–20°C													
Light	Positive when available													
Shading	☀													
Humidity	50–70%													
Moisture	2	3					3	2						
pH	5.0 - 5.5													
EC growing medium	1.25 - 1.5 mS/cm					1,5 - 1.75 mS/cm								
EC feeding in mS/cm	2.0 - 2.5 mS/cm					2.0 - 2.5 mS/cm								
Fertilizer	N : K 1 : 1					N:K 1:1								

## 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>&gt;</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