



CROP MANUAL

Mandevilla hybrida Rio®








South 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 ² finished 
Rio®	compact	dark green	10.5–14 cm	50-25 plants/m ²
Rio® Petite	compact	green	Packs-10.5 cm	100-50 plants/m ²
Rio® Elegant	medium	green	10.5–15 cm	50-20 plants/m ²
Rio® Grande	vigorous	green	>14 cm	10 plants/m ²






Remarks

For one cutting, two pinches are recommended to get a plant that will make the volume in spring.

Calendar Week	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	...	12	13	14	15	16	17	19	20	
Rio Scheduling from Xt126, 3 cm plug or Quickstep 2 cm plug for 10.5 cm pot with two pinches temperature (ADT) of 20°C then lower progressively to 12°C. Rio Petite will flower 1 to 2 weeks earlier.	P			✂				✂												F	F					
		P			✂				✂													F	F			
			P			✂				✂													F	F		
				P			✂				✂													F	F	
					P			✂				✂													F	F

One young plant

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

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






Remarks

With two cuttings, only one pinch is necessary to make the volume.

Calendar Week	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	...	12	13	14	15	16	17	19	20		
Rio Scheduling with 2 young plants from Xt126, 3 cm plug type or Quickstep 2 cm plug type for 10.5 cm pot with one pinch temperature (ADT) of 20°C then lower progressively to 12°C after rooting and pinching	P							✂										F	F								
		P							✂										F	F							
			P							✂										F	F						
				P							✂										F	F					
					P							✂										F	F				
						P							✂										F	F			
							P								✂									F	F		

Two young plants

Finished Plant Rio® Grande 18 cm pot

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

Remarks

Rio Grande is a vigorous type. One pinch should be enough but growers prefer two pinches to create a more branching plant.

Calendar Week	20	21	22	23	24	25	26	27	28	29	30	...	...	...	...	...	...	12	13	14	15	16	17	19	20	
Rio Grande scheduling from Xt126, 3 cm plug, with 2 plants per pot.	P			✂			✂													F	F					
		P			✂			✂														F	F			
			P			✂			✂														F	F		
				P			✂			✂														F	F	
					P			✂			✂														F	F

Two young plants

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.

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						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

	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/m2
	2 shading > 450 W/m2
	3 shading > 750 W/m2

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