



Euphorbia pulcherrima Rooting guideline



Europe



All series and varieties

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Cultivation Advice for URC

Unrooted cuttings (URC) have to be processed as fast as possible to secure optimal rooting success. Most important is to get the URC turgid as fast as possible to ensure a quick recovery after transport. Therefore temperature should not be too high in the first days.

Make sure that plug is not saturated at sticking - water a day before sticking. 100% saturated substrate lacking oxygen promotes *Erwinia* ssp.

Humidity has to be as high as possible without using too much water. Too much water in the growing tip can cause "stone hearts", a distortion of the growing tip. Double shading or whitewash of the greenhouse is recommended. Another way to reduce water is to apply wedding agent after 4 - 5 days. This reduces water volume in the crop.

For details on variety level - rooting speed etc. please contact your Syngenta technical specialist via your customer service



Substrate & Fertilization

Substrate has to be adapted to the requirements in the nursery. Poinsettia prefer air in the rooting media, what might be conflicting with the high water demand in hot summer conditions. Please start with fertilizer as soon as the callus is developing. Overhead fertilization can be risky due to climatic conditions in summer. Make sure that fertilizer is washed of the leaves to avoid tip burn. With Ebb&flood EC can be increased up to 2,5 EC



PGR Applications

PGR can be applied after about 9 days. Best use CCC or a combination of CCC and Alar (under hot conditions). Light applications are recommended to control the growth. Later PGR treatments are strongly related to climate and growth conditions. Any chemicals applied must be registered for use in both the country used & the region destination.



Diseases

Botrytis, Pythium, Rhizoctonia, under suboptimal conditions (hot and very humid) risk of *Erwinia* ssp.



Pests

Sciara, Whiteflies, Mites, Thrips usually not in propagation

URC Handling

Process within 24 hours. Store URC at 5 - 8°C — open boxes before storage. If possible unpack in the sticking area and keep under mist until processed and stuck.

Rooting Hormones






Can be used with some slow rooting varieties, for all other not needed. Details on request. Any chemicals applied must be registered for use in both the country used & the region destination.

Recommendations





Days	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Crop Profile											Callus			1st root														
Handling mist system	M ₁										M ₂	PGR			W													
Air temperature D/N	16-18°C	22°C																		20 °C								
Soil temperature D/N	16-18°C	24°C																		20 °C								
Ventilation temperature	26°C												24°C						22°C									
Light	no light - stick weeks later then week 32 might request light due to day length extension																											
Shading	<200 W/m ²						<250 W/m ²						<300 W/m ²						<400 W/m ²									
Humidity	90%						80%						70%						50 - 70%									
Moisture	4						3						2-3															
pH	5,5 - 6,0																											
EC growing medium	1 -1,2 mS/cm												1,8 -2,0 mS/cm						2,0 - 2,5 mS/cm									
EC feeding in mS/cm	1,8 mS/cm (in Ebb&Flood systems up to 2,5 mS/cm possible)																											
Fertilizer	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/m ²
	2 shading > 450 W/m ²
	3 shading > 750 W/m ²

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