



CROP MANUAL

Pelargonium spec.

rooting guideline



Region 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. No assimilation light until URC are turgid (2 -3 days under normal circumstances).

Be aware of Xanthomonas and other bacterial diseases. Stick to hygiene rules. In case of any questions please contact us for further support.

Do not use Switch (cyprodinil & fludioxonil) as under certain conditions an application results in severe phytotoxicity.



Substrate

0,8 – 1 mS/cm. Plug size is depending on further processing and climate conditions.



PGR Applications

CCC. Please start with PGR treatments in time to avoid stretch (between day 6 and 10 in most cases). Bonzi might be used in Cascade varieties to avoid stretch. Any chemicals applied must be registered for use in both the country used & the region destination.

Rooting Hormones

Can be used with some slow rooting ivy 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.

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.



Pests

Aphids, Thrips, Caterpillars



Diseases






Botrytis, Pythium, Puccinia pelargonii (Pelargonium rust)

Recommendations for URC





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					growing tip stretches		1st leaf						
Handling mist system	M1								M2		P				P		W											
Air temperature D/N	16–18°C	18 – 20°C														16 – 18°C												
Soil temperature D/N	16–18°C	19 – 21°C														16 – 18°C												
Light	10–15 mol/cm ² /day, additional HID light is needed if light levels is < 5 mol/cm ² /day																											
Shading	300 W/m ²	350 W/m ²										400 – 450 W/m ²							*									
Humidity	90%										80%							50 – 70%										
Moisture	5 – 4										4 – 3							3 – 2										
pH	5,8–6,0																											
EC growing medium	0,8 mS/cm										1,5 mS/cm							2,0 mS/cm										
EC feeding in mS/cm	1,8 mS/cm																											
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