



Pelargonium x hortorum





Central Europe
North Europe



Hortorum varieties from seed to finished

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Finished Plant Pelargonium

Series 	Leaf colour 	Minimum germ	Seeds per plug
Tornado	green	90%	1
Bulls eye	bronze	90%	1
Maverick	green	90%	1
Multibloom	green	90%	1
Orbit	green	90%	1
Pinto	green	90%	1
Ringo 2000	green	90%	1

Remarks

Coated seed.

Calendar Week	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Temperature dependent culture weeks	P											F								
		P											F							
			P											F						
				P											F					
					P											F				
						P											F			
							P											F		
								P											F	
									P											F
										P										

weekly

Cultivation Advice

Alter temperature setpoints according to light levels. In fall and winter, light levels are generally low and temperature setpoints are best decreased for optimum plant quality. Please note that lower temperatures will increase culture time.

Finish Bulking/Flower Initiation: Optimum conditions during the vegetative period, beginning at transplant, needed for the root to reach the edge of the container AND to make the plant receptive to flower initiation.



Fertilization & Substrate

pH: 6.2 – 6.5. Low pH symptoms include yellowing of leaves, interveinal chlorosis and necrosis.
EC: 1.2 – 1.5 High salts may encourage roots to become very brittle.



Pests

Preventive insecticide: Thrips



Tips & Tricks

Time frame when plants are receptive to flower initiation: Days 18 – 24; 4 – 6 leaves present.



Diseases

Preventive fungicide against soil borne diseases like, Pythium, Rhizoctonia, rust and alternaria
Preferred products depends on the country



Light

Light and temperature trigger flowering. Geraniums are light accumulators, the more light received, the faster the growth and earlier the flowering. DIF treatments may negate flowering



Irrigation

Alternate between moisture levels wet (4) and moist (3). Allow media to approach level (3) before re-saturating to level (4). Excessive drying of the media moisture level will concentrate salts around the root system and burn the root hairs. Symptoms of excessive drying include lower leavesturning reddish to yellow, and root tip die-back.



PGR Applications






CCC 1,5 g/l, 1-3 times/week
NOTE: Do not apply Cycocel after the buds have emerged above the foliage. Small and/or malformed flowers will result from late applications of Cycocel. Also responds to Bonzi (paclobutrazol), BNine/Cycocel (chlomequat chloride) tank mix.

Recommendations





Culture week	1	2	3	4	5	6	7	8	9	10	11	12
Handling	P			S								
Temperature D/N	16–18°C											
Temperature D/N	10–14°C											
Light	15 – 20 total mols											
Shading	no shading											
Humidity	40–60%											
Moisture	3											
pH	6,0–6,5											
EC growing medium	0.75 - 1.0 mS/cm											
EC feeding in mS/cm	1,0-1,5 mS/cm											
Fertilizer	N : K 1 : 1,5-1 : 2											

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