

2004

Handling Unrooted Perennials

Yoder[®]
Green Leaf
Perennials™

KEYS TO SUCCESS

1. Stick cuttings promptly.
2. Minimize wilting during rooting.
3. Use appropriate rooting hormones.
4. Practice good sanitation.
5. Provide 65°F to 75°F temperature.

On Receipt of Cuttings

- Check box count against the packing list attached to the outside of one of the cartons. Report missing boxes to Federal Express or to your sales representative immediately.
- Check count of cuttings against the packing list. Report any missing items within 72 hours.
- Open all boxes immediately and inspect cuttings for damage, e.g. dehydration, heat or freeze damage, breakage or rot. Report any damaged items within 72 hours.
- Do not allow boxes to remain in sun, heat or below-freezing temperatures.

Rooting Cuttings

- Stick cuttings as soon as possible into pre-moistened, well-drained, soilless medium with a pH between 5.5 and 6.5.
- If unable to stick cuttings immediately, unrooted cuttings can be held for several days in a cooler, between 35°F and 45°F. Cuttings will deteriorate rapidly in warmer temperatures.
- Some varieties will require rooting hormone, usually between 500 ppm and 1,000 ppm. (See list on back.)

- Stick cuttings just deep enough that they are anchored by the medium, normally, 1/4" to 1/2" deep.
- Apply mist immediately and frequently to maintain turgidity and minimize wilting while roots develop.
- When root hairs appear, usually after 7 to 10 days, gradually increase the intervals between mistings.
- Apply liquid fertilizer once or twice weekly, at 125 ppm total nitrogen.
- For best results, provide good air circulation, with temperatures between 65°F and 75°F.
- Shade to approximately 50-percent light levels during high-temperature periods.
- Most varieties are rooted within two weeks.

Insect and Disease Control

- Good cultural practices and clean, well-ventilated growing space are your best defense against disease. Botrytis, the chief fungal threat, thrives in a moist, stagnant environment. Good air circulation and adequate light will minimize its harmful effects.



- For additional disease protection, apply a broad-spectrum fungicide, like Heritage, within 48 hours after sticking. Apply at the end of the day when mist is reduced. Rotate with other fungicides like Chipco 26019, Cleary's 3336, Medallion or Pathguard on a weekly basis for disease prevention.
- Fungus gnats and their larvae pose perhaps the biggest threat to good root development on new cuttings. If you see adult fungus gnats flying around your cuttings after sticking, their larvae are probably in your medium. When necessary, drench with appropriate larvicides like Adept, Citation, Distance, Duraguard, and Gnatrol.
- Aphids can also be a pest during rooting. Useful pesticides include Azatin, Botaniguard, Decathlon, Duraguard, M-Pede/Insecticidal Soap, Marathon II, Mesuroil and Talstar GH.

Before using any pesticides, be sure that they are registered for use in your state. Check with your local county extension agent or state university extension service. Always follow label instructions.

Some varieties don't need hormone treatment for successful rooting. Following are guidelines* by variety for IBA (K salt of indole-3-butyric acid) hormone treatment, where recommended.

Rate given in ppm IBA. Apply as a light, uniform spray to cuttings within 24 hours after sticking. For best results, apply to dry plants and wait till spray dries to resume mist. This could be done at the end of the day as mist is reduced.

(An alternate application method is to dip ends of cuttings into hormone prior to stick.)

* Based on usage guidelines at Yoder facilities in California, Pennsylvania, and South Carolina.

IBA ppm	IBA ppm	IBA ppm	IBA ppm
ABUTILON	ARMERIA	CAMPSIS	COSMOS
Nabob .....750	Nifty Thrifty .....1000	Flamenco .....None	atrosanguineus .....1000
Rosalie .....750	Rubrifolia .....1000	flava .....None	COTONEASTER
Tangelo .....750	Victor Reiter .....1000	Madame Galen .....None	Coral Beauty .....500
ACHILLEA	ARTEMESIA	CARYOPTERIS	DELOSPERMA
Anthea .....None	Oriental Limelight .....None	Dark Knight .....1000	br.Pink .....1000
Apple Blossom .....None	dr.French Tarragon .....500	First Choice .....1000	br.Yellow .....1000
Coronation Gold .....1000	Powis Castle .....None	Grand Bleu .....1000	cooperi .....1000
Fireland .....None	Silver Brocade .....None	Longwood Blue .....1000	herbeum .....1000
Heidi .....None	Silver King .....None	Worcester Gold .....1000	Mesa Verde .....1000
King Edward .....None	Silver Mound .....None	CEANOTHUS	Starburst .....1000
Moonshine .....1000	Valerie Finnis .....None	Carmel Creeper .....500	ERIGERON
Oertel's Rose .....None	BAPTISIA	Concha .....500	Prosperity .....1000
Paprika .....None	pendula .....3500	Dark Star .....500	Sea Breeze .....750
Red Beauty .....None	Purple Smoke .....3500	Emily Brown .....500	ERODIUM
Royal Tapestry .....None	BASIL	Julia Phelps .....500	Dark Eyes .....750
Snowsport .....None	Kasar .....500	Yankee Point .....500	ERYSIMUM
Summerwine .....None	BUDDLEIA	CENTAUREA	Bowles' Mauve .....750
Terra Cotta .....None	Attraction .....1000	Gold Bullion .....None	Variegated .....750
ACTINIDIA	Black Knight .....1000	CERATOSTIGMA	ESCALLONIA
Arctic Beauty .....1000	Border Beauty .....1000	plumbaginoides .....1500	Compacta .....500
AEGOPODIUM	Cornwall Blue .....1000	CHRYSOGONUM	EUPATORIUM
Variegatum .....None	Dartmoor .....1000	Pierre .....750	Chocolate .....500
AJUGA	Empire Blue .....1000	CISTUS	Gateway .....500
Bronze Beauty .....1000	Guinevere .....1000	Prostratus .....750	Hardy Ageratum .....None
Burgundy Glow .....None	Harlequin .....1000	purpureus .....750	Little Joe .....500
Catlin's Giant .....1000	Honeycomb .....1000	CLEMATIS	Selection .....500
Chocolate Chip .....None	Nanho Blue .....1000	Alan Bloom .....1000	EUPHORBIA
Metallica .....1000	Nanho Purple .....1000	CLETHRA	Chameleon .....1000
Metallica Crispa .....1000	Pink Delight .....1000	Fern Valley Pink .....1000	Portuguese Velvet .....1000
Purple Brocade .....1000	Queen's Robe .....1000	Hokie Pink .....1000	Pupurea .....1000
Purple Torch .....1000	Royal Red .....1000	Hummingbird .....1000	x.martinii .....1000
Silver Beauty .....1000	Silver Frost .....1000	Rosea .....1000	GAILLARDIA
Silver Queen .....1000	Summer Beauty .....1000	Ruby Spice .....1000	Baby Cole .....500
AMSONIA	Sungold .....1000	COLEONEMA	Mandarin .....500
hubrechtii .....1500	White Ball .....1000	Sunset Gold .....750	Summer's Kiss .....None
tabernaemontana .....1500	White Profusion .....1000	CONVOLVULUS	GALIAM
ANISODONTEA	CALAMINTHA	cneorum .....750	Sweet Woodruff .....1500
Tara's Pink .....750	Variegata .....500	COREOPSIS	GAURA
ANTENNARIA	CALLICARPA	auriculata Nana .....None	Corrie's Gold .....None
parvifolia .....None	dichotoma .....500	Crème Brulee .....1000	Dauphin .....None
Rubra .....750	Issai .....500	Golden Gain .....None	Fountain Pink .....None
ANTHEMIS	CAMPANULA	Limerock Ruby .....1000	Fountain White .....None
E. C. Buxton .....1000	Birch Hybrid .....1000	Moonbeam .....None	Siskiyou Pink .....None
Sauce Hollandaise .....1000	Blue Waterfall .....1000	Nana .....None	Whirling Butterflies .....None
Susanna Mitchell .....1000	Cherry Bells .....1000	r.American Dream .....None	GERANIUM
ARABIS	Chettle Charm .....None	r.Sweet Dreams .....1000	xc.Biokovo .....1000
Variegata .....500	Dickson's Gold .....500	Tequila Sunrise .....500	xc.Cambridge .....1000
ARCTOSTAPHYLOS	Elizabeth .....1000	v.Zagreb .....None	xc.Karina .....1000
Carmel Sur .....500	Kent Belle .....1000	CORREA	c.Ballerina .....1000
Point Reyes .....500	Wedding Bells .....1000	Carmine Bells .....500	c.Splendens .....1000

	IBA ppm		IBA ppm		IBA ppm		IBA ppm
GERANIUM cont.		ITEA		Emerald & Gold . . . . .	.500	d.Laphammi	1000
dalmaticum	1000	Little Henry	1000	Ky Col Spearmint . . . . .	.500	d.London Grove	1000
endressi	1000	KERRIA		Orangemint . . . . .	.500	d.May Breeze	1000
xo.Bressingham's Delight.1000		Picta	1000	Peppermint . . . . .	.500	g.Anita Kistler	1000
xo.Claridge Druce	1000	Pleniflora	1000	Vgtd Pineapple	None	p.Blue Boy	1000
Johnson's Blue	1000	LAMIASTRUM		MONARDA		p.Bright Eyes	1000
m.Album	1000	galeobdelon vgt	None	Blue Stocking	None	p.David	1000
m.Bevan's Variety	1000	Herman's Pride	1000	Jacob Cline	None	p.Flamingo	1000
m.Ingwensen's Variety .1000		LAMIUM		Mahogany	None	p.Franz Schubert	1000
p.Purpleum	1000	Anne Greenway	1000	Prairie Night	None	p.Shortwood	1000
sanguineum	1000	Beacon Silver	None	Raspberry Wine	None	st.Home Fires	1000
Silver Sugar Plum	1000	Beedham's White	None	Snow White	None	st.Pink Ridge	1000
GEUM		Pink Pewter	None	NEPETA		st.Sherwood Purple . . .1000	
rivale	1000	Purple Dragon	None	Catnip . . . . .	.500	sub.Apple Blossom . . .1000	
GYPHOPHILA		Red Nancy	None	Dropmore . . . . .	.500	s.Atropurpurea	1000
Viette's Dwarf	1000	Shell Pink	None	Six Hills Giant . . . . .	.500	s.Candy Stripe	1000
HEDERA		White Nancy	None	Walker's Low . . . . .	.500	s.Coral Eyes	1000
Ann Marie	1000	LAVANDULA		OENANTHE		s.Crimson Beauty	1000
Baltic Ivy	1000	Blue Cushion	1000	Flamingo . . . . .	.500	s.Dirigo Arbutus	1000
California	1000	Dilly Dilly	1000	OENOTHERA		s.Emerald Blue	1000
English Ivy	1000	Fred Boutin	1000	b. Siskiyou	None	s.Fort Hill	1000
Gold Child	1000	dentata (French)	1000	speciosa	None	s.Millstream Daphne . .1000	
Gold Heart	1000	Goodwin Creek	1000	ORIGANUM		s.Oakington Blue Eyes .1000	
Green Leaf Vgtd.	1000	Grosso	1000	Amargcus dictamnus . . .750		s.Red Wings	1000
Green Ripple	1000	Hidcote	1000	Aureum . . . . .	.500	s.Scarlet Flame	1000
Irish Lace	1000	Hidcote Pink	1000	Greek Oregano . . . . .	.500	s.Snowflake	1000
Ivalace	1000	Jean Davis	1000	Herrenhausen . . . . .	.500	s.White Delight	1000
Manda's Crested	1000	Lady	1000	Hopley's Purple . . . . .	.500	PHYGELIUS	
Mottled Mosaic	1000	Munstead	1000	Italian Oregano . . . . .	.500	African Queen . . . . .	.750
Patricia	1000	Otto Quast	1000	Kent Beauty . . . . .	.500	Devil's Tears . . . . .	.750
Ralf	1000	Provence	1000	Pilgrim . . . . .	.500	PHYSOSTEGIA	
Star	1000	Sarah	1000	Rosenkuppel . . . . .	.500	Red Beauty	None
Thorndale	1000	Silver Edge	1000	Sicillian (Marjoram)750		Variegata	None
Tri-Green & White	1000	stoechas (Spanish Lavender) 1000		Thumbles . . . . .	.500	POLEMONIUM	
HELENIUM		Vera	1000	Vgtd Oregano	None	Bressingham Purple . . .1000	
Coppelia . . . . .	.500	LEPTOSPERMUM		OZOTHAMNUS		PRUNELLA	
Mardi Gras . . . . .	.500	Ruby Glow . . . . .	.500	diosmifolius . . . . .	.750	Loveliness . . . . .	.750
HELIANTHEMUM		LINARIA		PACHYSANDRA		RANUNCULUS	
Annabel . . . . .	.2000	Canon J. Went . . . . .	.500	terminalis	None	Buttered Popcorn	None
Cerise Queen . . . . .	.2000	LITHODORA		t.Silver Edge	None	ROSMARINUS	
Dazzler . . . . .	.2000	Grace Ward . . . . .	.2000	PARTHENOCISSUS		Arp . . . . .	.500
HELIANTHUS		Heavenly Blue . . . . .	.2000	Boston Ivy	None	Benenden Blue . . . . .	.500
First Light	1000	LONICERA		PAXISTIMA		Blue Spire . . . . .	.500
Low Down	1000	Blanche Sandman1000		canbyi	1000	Hill Hardy . . . . .	.500
HELICHRYSUM		Dropmore Scarlet1000		PENSTEMON		Huntington Carpet . . . .	.500
Curry . . . . .	.500	Goldflame	1000	Apple Blossom . . . . .	.500	Irene . . . . .	.500
Nana . . . . .	.500	John Clayton	1000	Elfin Pink . . . . .	.500	officinalis . . . . .	.500
Ruby Cluster	1000	Purpurea	1000	Garnet . . . . .	.500	Prostratus . . . . .	.500
HELIOPSIS		LYCHNIS		Midnight Blue . . . . .	.500	Salem . . . . .	.500
Bressingham Doubloon .1000		Gardner's World	1000	Pike's Peak Purple . . . .	.500	Spice Island . . . . .	.500
Loraine Sunshine	1000	Jenny	1000	Prairie Dusk . . . . .	.500	Tuscan Blue . . . . .	.500
Prairie Sunset	1000	LYSIMACHIA		Purple Haze . . . . .	.500	RUDBECKIA	
HOULTUYNIA		Alexander	None	Purple Passion . . . . .	.500	ful. var. fulgida . . . . .	.750
Chameleon	None	clethroides	None	Ruby . . . . .	.500	RUELLIA	
HYPERICUM		MARJORAM		Sour Grapes . . . . .	.500	brittoniana	1000
Albury Purple	1000	Compactum . . . . .	.500	PEROVSKIA		Chi Chi	1000
calycinum	1000	MAZUS		atriplicifolia	None	SALVIA	
Hidcote	1000	reptans	None	Longin	None	chamaedryoides . . . . .	.750
Sunburst	1000	r.Albus	None	PERSICARIA		chiapensis . . . . .	.750
Sungold	1000	MELISSA		Dimity	None	e.Honeydew Sage . . . .	.500
Tricolor	1000	All Gold . . . . .	.500	Firetail	1000	e.Pineapple Sage	None
HYSSOP		Lemon Balm	None	Lance Corporal	1000	gr. Purple	None
Pink Delight . . . . .	.500	MENTHA		Painter's Pallete	1000	gr. Red	None
IBERIS		Applemint . . . . .	.500	Red Dragon	None	gr.San Takao . . . . .	.750
Snow Cushion	1000	Chocolate Mint . . . . .	.500	PHLOX		gr.Sierra San Antonio . .750	
Snowflake	1000	Corsican Mint . . . . .	.500	d.Clouds of Perfume . . .1000			

Continued >>>

	IBA ppm		IBA ppm		IBA ppm		IBA ppm
SALVIA <i>cont.</i>		Little Moor	None	THYMUS		VIOLA	
gu.Black & Blue	1000	Matrona	None	Archer's Gold	None	Etain	1500
Indigo Spires	750	Mediovariegatum	None	Argenteus	None	Lianne	1500
leucantha	None	Mohrchen	None	Caraway (h.-barona)	None	Maggie Mott	1500
l.Santa Barbara	None	Neon	None	Citrus	None	VITEX	
muelleri	750	Ogon	None	Coccineus	None	angus-castus	1000
n.Blue Hills	None	sieboldii	None	Creeping Lemon	None	Blushing Spires	1000
n.Caradonna	1000	tetractinum	None	Elfin	None	WALDSTEINIA	
n.East Friesland	None	Tricolor	None	Elizabeth	None	ternanta	1000
n.Lubeca	None	Vera Jameson	None	English	None	WEIGILEA	
n.May Night	1000	SEMPERVIVUM		Golden Lemon	None	Variegata	1000
n.Snowhill	None	Carmen	None	Lime	None	Wine and Roses	1000
n.Viola Klose	1000	Commander Hay	None	Magic Carpet	None	WESTRINGIA	
nip.Fuji Snow	1000	Kalinda	None	Oregano Scented	None	Wynyabbie Gem	750
o.Berggarten	500	Purple Passion	None	Pink Chintz	None		
o.Garden Sage	500	Red Beauty	None	Silver Edged	None		
o.GoldenSage	500	Red Cobweb	None	Wedgewood	None		
o.lcertina	500	Royal Ruby	None	Woolly	None		
o.Purple Sage	500	Ruby Hearts	None	TRICYRTIS			
o.Rachel's Gold	500	Saturn	None	Amethystina	None		
o.Sage Of Bath	500	Silverine	None	Hatatogisa	None		
o.Tricolor Sage	500	Sunset	None	Miyazaki	None		
o.Woodcote	500	SILENE		Tojen	None		
pit.Grandiflora	750	Clifford Moor	None	VERBASCUM			
pr.Indigo	None	Druett's Variegated	500	Jackie	1000		
sc.Turkestanica	750	Swan Lake	500	VERBENA			
v.Purple Rain	1000	SOLIDAGO		Batesville Rose	None		
Waverly White	750	Crown of Rays	None	bonariensis	750		
SANTOLINA		Fireworks	None	Homestead Purple	None		
Lemon Queen	500	Golden Fleece	None	Taylorstown Red	None		
Nana	500	SOLLYA		VERONICA			
SAPONARIA		Boddy's Choice	750	alpina Alba	None		
Max Frei	1000	SPILANTHES		Blue Charm	None		
SAXIFRAGA		acmella	500	Corinne Tremaine	None		
Apple Blossom	750	SPIRAEA		Crater Lake Blue	None		
Harvest Moon	None	Anthony Waterer	1000	Georgia Blue	None		
Triumph	750	Gold Flame	4000	Goodness Grows	None		
SCABIOSA		Golden Elf	1000	Icicle	None		
Pink Mist	1000	Little Princess	1000	Minuet	None		
SEDUM		Magic Carpet	4000	Red Fox	None		
acre	None	Neon Flash	4000	Royal Candles	None		
Autumn Fire	None	STACHYS		Sunshine	None		
Autumn Joy	None	Hummelo	1000	Trehane	None		
Blue Spruce	None	STEVIA		Waterperry	None		
Brilliant	None	rebaudiana	500	VINCA			
Frosty Morn	None	TEUCRIUM		Common Myrtle	1000		
Fuldaglut	None	chamaedrys	1000	Sterling Silver	1000		
John Creech	None	Prostratus	1000				
k. Variegatum	None						



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