

Cultural Information

CULTURAL INFO



Cultural Information for Annuals

	Vigor	pH/EC	Rooting Out Temperature	Growing Temperature	Holding Temperature	Water Requirements	Planting and Timing	Finish Times in Weeks	Spring Outdoor Finish
MAESTRO® Agastache	Vigor 3	5.8 - 6.2/1.0 - 2.0	66-72° F (19-22° C)	65-85° F (18-30° C)	50-65° F (10-18° C)	Moderate	Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 5-7; for 6"/gallon, 7-8; for 7-9" 8-10	Last to go outside
ARTIST® Blue Ageratum	Vigor 2	5.8 - 6.2/6 - 9	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C)	Moderate to Moist	Early Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12	Last to go outside
ANGELFACE® Angelonia	Vigor 3	5.8 - 6.2/6 - 9	65-72° F (18-22° C)	70-75° F (21-24° C)	60-65° F (16-18° C)	Moderate to Moist	Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 5-7; for 6"/gallon, 7-8; for 8", 7-9; for 10-12", 10-14	Do not finish outside
BUTTERFLY Argyranthemum	Vigor 3	5.8 - 6.2/6 - 9	65-72° F (18-22° C)	60-65° F (16-18° C)	40-50° F (4-10° C) outdoors	Moderate to Moist	Early Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 5-7; for 6"/gallon, 7-8; for 8", 7-9; for 10-12", 10-14	First to go outside
SILVER BULLET® Artemisia	Vigor 3	5.8 - 6.5/6 - 9	65-72° F (18-22° C)	55-65° F (12-18° C)	40-50° F (4-10° C) outdoors	Moderate	Early Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 8-10	First to go outside
Asparagus Fern Asparagus	Vigor 2	5.8 - 6.2/6 - 9	65-72° F (18-22° C)	65-72° F (18-22° C)	65-72° F (18-22° C)	Moderate to Moist	Spring to Summer Finish. Standard Plants Per Container.	For 4-5" and QT, 5-6; for 6"/gallon, 7-9	Do not move outside until all danger of frost is past
DOUBLE DELIGHT® and SOLENIA® Begonia	Vigor 2	5.5 - 6.2/6 - 9	70-75° F (21-24° C)	65-72° F (18-22° C)	65-72° F (18-22° C)	Dry to Moderate	Spring to Summer Finish. Standard Plants Per Container.	For 4-5", 6-8; for 6"/gallon, 6-8; for 10-12", 8-12	Do not move outside until all danger of frost is past
DOUBLE UP™ Begonia	Vigor 2	5.5 - 6.2/6 - 9	65-72° F (18-22° C)	65-72° F (18-22° C)	65-72° F (18-22° C)	Dry to Moderate	Spring to Summer Finish. Standard Plants Per Container.	For 4-5", 5-7; for 6"/gallon, 6-8; for 10-12", 10-12	Do not move outside until all danger of frost is past
PEGASUS® Begonia	Vigor 3	5.5 - 6.0 /6 - 9	65-72° F (18-22° C)	65-72° F (18-22° C)	65-72° F (18-22° C)	Dry to Moderate	Spring to Fall Finish.	For 4-5", 5-7; for quarts, 6-8; for 6"/gal, 7-9; for 10-12", 10-12	Do not move outside until all danger of frost is past
SPACE AGE™ Begonia rex	Vigor 2	5.8 - 6.2/6 - 9	65-72° F (18-22° C)	65-72° F (18-22° C)	65-68° F (18-20° C)	Dry to Moderate	Spring to Winter Finish. Standard Plants Per Container.	For 4-5", 7-9; for 6"/gallon, 10-12; for 10", 12-14;	Do not move outside until all danger of frost is past
SUREFIRE® Begonia	Vigor 4	5.5 - 6.2/6 - 9	65-72° F (18-22° C)	65-72° F (18-22° C)	65-72° F (18-22° C) outdoors	Dry to Moist	Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 5-7; for 6"/gallon, 6-8; for 8", 7-9; for 10-12", 10-12	Do not move outside until all danger of frost is past
CAMPFIRE® series and GOLDLOCKS ROCKS® Bidens	Vigor 2 Vigor 3	5.8 - 6.2/6 - 9	65-72° F (18-22° C)	55-65° F (12-18° C)	40-50° F (4-10° C) outdoors	Moderate	Early Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12	Second to go outside
ENDLESS™ Browallia	Vigor 2	6.5 - 7.5/6 - 9	70-85° F (21-29° C)	70-85° F (21-29° C)	70-85° F (21-29° C)	Moderate to Moist	Late Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 5-7; for 6"/gallon, 6-9; for 8", 8-9; for 10-12", 9-13	Last to go outside

VIGOR KEY – 1 to 4, with 1 representing the slower, smaller growers and 4 representing the quickest, largest growers. For combinations, choose varieties with the same vigor rating to ensure success.

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SUPERBELLS® Calibrachoa	Vigor 2	5.5 - 5.8/6 - 9	65-72° F (18-22° C)	55-65° F (12-18° C)	40-50° F (4-10° C) outdoors	Moderate to Moist	Early Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12	Second to go outside
TOUCAN® Cannia	Vigor 4	6.2 - 7.0/1.0 - 2.0	75-85° F (24-30° C)	75-85° F (24-30° C)	65-72° F (18-22° C)	Moist	Late Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 6-8; for 6"/gallon, 6-8; for 8", 8-10; for 10-12", 10-12	Do not move outside until all danger of frost is past
'Variegatum' Chlorophytum comosum	Vigor 2	6.0 - 6.5/6 - 8	68-72° F (20-22° C)	65-70° F (18-21° C)	50-55° F (10-13° C)	Moderate	Early Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 6-8; for 6"/gallon, 8-9; for 8", 11-12	Last to go outside
FLAMBE® Yellow Chrysocephalum	Vigor 2	6.0 - 6.5/6 - 9	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C) outdoors	Dry to Moderate	Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 5-6; for 6"/gallon, 6-8; for 8", 8-10; for 10-12", 10-12	Do not move outside until all danger of frost is past
SEÑORITA Cleome	Vigor 4	5.8 - 6.2/1.0 - 2.0	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C) outdoors	Dry to Moderate	Mid-Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 5-6; for 6"/gallon, 8-10; for 8", 8-10; for 10-12", 10-12	Do not move outside until all danger of frost is past
COLORBLAZE® Vigor 2: MINI ME™ Chartreuse and MINI ME™ Watermelon, Vigor 3: Royale CHERRY BRANDY®, LIME TIME® and VELVETEEN® Vigor 4: Dipt in Wine, El Brighto, GOLDEN DREAMS™, NEWLY NOIR™, REDICULOUS®, SEDONA SUNSET®, TORCHLIGHT®, Chocolate Drop, Cherry Drop, Strawberry Drop, WICKED HOT® and WICKED WITCH™ Coleus		6.0 - 6.5/0.6-0.9	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C)	Moderate to High Standard Plants Per Container,	Spring through Summer Finish. 6-8; for 8", 8-10; for 10-12", 10-12	For 4-5", 5-6; for 6"/gallon, outside	Do not finish
ISLAND GIANTS™ 'Coffee Cups' and HEART OF THE JUNGLE® Colocasia	Vigor 3	5.8 - 6.2/6 - 9	70-75° F (21-24° C)	70-75° F (21-24° C)	50-60° F (10-16° C)	Moderate to Moist	Spring to Summer Finish. Standard Plants Per Container.	For QT, 7-9; for 6"/gallon, 9-11; for 14", 13-15	Do not move outside until all danger of frost is past
VERMILLIONAIRE® Cuphea	Vigor 3	6.0 - 6.5/6 - 9	65-72° F (18-22° C)	70-75° F (21-24° C)	50-60° F (10-15° C) outdoors	Moderate to Moist	Late Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 5-6; for 6"/gallon, 8-10; for 10-12" 10-12	Last group to go outside
TOTALLY TEMPTED® Cuphea procumbens	Vigor 3	5.8 - 6.2/6 - 9	68-72° F (20-22° C)	70-78° F (21-26° C)	65-72° F (18-22° C)	Dry to Moderate	Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 8-9; for 6"/gallon, 8-9; for 8-12" 8-9	Do not move outside until temps are above 50°F (10°C)
MYSTIC Illusion Dahlia	Vigor 3	5.8 - 6.2/8 - 1.2	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-15° C)	Moderate to Moist	Early Spring to Summer Finish. Standard Plants Per Container.	For 4-5", 5-6; for 6"/gallon, 6-8; for 8", 8-10; for 10-12", 10-12	Do not finish outside
VIRTUOSO® Dahlia variabilis	Vigor 2	5.8 - 6.2/6 - 9	65-72° F (18-22° C)	65-72° F (18-22° C)	60-65° F (15-18° C)	Moderate to Dry	Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 5-6; for 6"/gallon, 6-7; for 8", 8-9; for 10-12", 10-12	Do not finish outside
SILVER FALLS™ Dichondra	Vigor 3	5.5 - 5.8/6 - 1.0	65-72° F (18-22° C)	65-72° F (18-22° C)	65-72° F (18-22° C)	Dry to Moderate	Spring to Fall Finish. Standard Plants Per Container.	For 4-5", 4-5; for 6"/gallon, 5-7; for 10-12", 7-10	Do not finish outside

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SILVER RIVER™ <i>Didelta</i>	Vigor 2	6.0 - 6.5/6 - 9	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C)	Dry to Moderate	Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 5-6; for 6"/gallon, 6-7; for 10" basket, 10-12	Last to go outside
DIAMOND FROST®	Vigor 3	5.8 - 6.2/6 - 9	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C)	Moderate to Moist	Early Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12	Do not move outside until all danger of frost is past
DIAMOND SNOW®	Vigor 3								
DIAMOND MOUNTAIN® <i>Euphorbia</i>	Vigor 4								
BLUE MY MIND® BLUE MY MIND® XL <i>Evolvulus</i>	Vigor 2	6 - 6.9/6 - 9	65-72° F (18-22° C)	70-75° F (21-24° C)	50-60° F (10-16° C)	Dry to Moderate	Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 7-9; for 6"/gallon, 10-12; for 8", 10-12; for 10-12", 12-14	Last to go outside
TRUFFULA™ Pink <i>Gomphrena</i>	Vigor 4	6.0 - 6.5/0.6 - 0.9	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C)	Moderate	Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 5-7; for 6"/gallon, 7-9; for 10-12", 10-12	Do not move outside
GRACEFUL GRASSES® BABY TUT®, KING TUT® and PRINCE TUT™ QUEEN TUT™ <i>Cyperus</i>	Vigor 4 Vigor 3	6 - 6.5/6 - 9	65-72° F (18-22° C)	65-72° F (18-22° C)	50-65° F (10-18° C)	Moderate to Moist	Early Spring through Summer Finish. Standard 1 liner per 6" container	For 4-5", 4-6; for 6"/gallon, 6-8; for 8", 7-9; for 10-12", 10-12	Do not finish outside
GRACEFUL GRASSES® BLUE MOHAWK® 'Curly Wurlly' <i>Juncus</i>	Vigor 2	5.8 - 6.2/6 - 9	65-72° F (18-22° C)	65-72° F (18-22° C)	40-50° F (4-10° C)	Moist to Wet	Spring to Summer Finish. Standard Plants Per Container.	For 4-5" and QT, 4-6; for 6"/gallon, 6-8	Last to go outside
GRACEFUL GRASSES® 'Fireworks' Purple Fountain Grass 'Sky Rocket' VERTIGO® <i>Pennisetum</i>	Vigor 3 Vigor 3 Vigor 3 Vigor 4	5.8 - 6.2/6 - 9	65-72° F (18-22° C)	70-75° F (21-24° C)	50-65° F (10-18° C)	Moderate to Moist	Spring to Fall Finish. Standard Plants Per Container.	For 4-5" and QT, 4-8; for 6"/gallon, 6-9 for 7-9", 8-10; for 10-12" and 2 gallon, 10-14	Do not move outside until all danger of frost is past
GRACEFUL GRASSES® Fiber Optic Grass <i>Scirpus</i>	Vigor 2	5.8 - 6.2/6 - 9	65-72° F (18-22° C)	70-75° F (21-24° C)	50-65° F (10-18° C)	Moderate to Moist	Late Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 5-7; for 6"/gallon, 7-8; for 8", 7-9; for 10-12", 10-14	Do not move outside until all danger of frost is past
English Ivy <i>Hedera</i> Needlepoint	Vigor 2 Vigor 1	5.8 - 6.2/6 - 9	65-72° F (18-22° C)	60-65° F (16-18° C)	50-60° F (10-16° C)	Moderate to Moist	Spring through Summer Finish. Standard Plants Per Container.	For 4-5" and QT, 5-6; for 6"/gallon, 7-8	Last to go outside
SUNCREDIBLE® <i>Helianthus</i>	Vigor 4	5.5 - 5.8/1.0 - 2.0	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C)	Moderate to Moist	Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 4-5; for 6"/gallon, 7-9; for 10" basket or 14" upright, 8-9	Second to go outside
Licorice Plant <i>Helichrysum</i> Icicles <i>Helichrysum</i>	Vigor 3 Vigor 2	6.0 - 6.5/6 - 9	65-72° F (18-22° C)	65-72° F (18-22° C)	40-50° F (4-10° C)	Dry to Moderate	Spring through Summer Finish. Standard Plants Per Container.	For 4-5" and QT, 5-6; for 6"/gallon, 6-8	Last to go outside
AROMAGICA® Purple AUGUSTA® Lavender <i>Heliotropium</i>	Vigor 3	6.0 - 6.5/6 - 9	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C)	Moderate	Spring to Fall Finish. Standard Plants Per Container.	For 4-5", 5-7; for 6"/gallon, 8-10; for 10-12", 10-12	Last to go outside
HIPPO® <i>Hypoestes</i>	Vigor 2	5.8 - 6.2/6 - 9	65-72° F (18-22° C)	70-80° F (21-27° C)	65-70° F (10-18° C)	Moderate	Early Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 5-7; for 6"/gallon, 7-9; for 8", 8-10; for 10-12", 10-12	Last to go outside

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ROCKAPULCO® <i>Impatiens</i>	Vigor 2	5.8 - 6.2/7.5 - 8.0	68-74° F (19-23° C)	65-75° F (18-24° C)	50-60° F (10-16° C)	Moderate to Moist	Early Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 6-9; for 6"/gallon, 7-9; for 8", 7-9; for 10-12", 10-12	Do not finish outside
Sweet Caroline <i>Ipomoea</i> Sweet Caroline Bewitched Green with Envy™ and Margarita	Vigor 3 Vigor 4 Vigor 4	6.0 - 6.5/6 - 9	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C)	Moderate to Moist	Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 4-6; for 6"/gallon, 6-8; for 8", 8-10; for 10-12", 10-12	Do not move outside until all danger of frost is past
Sweet Caroline Upside™ <i>Ipomoea</i>	Vigor 4	6.0 - 6.5/6 - 9	70-75° F (21-24° C)	70-75° F (21-24° C)	50-60° F (10-16° C)	Moderate to Moist	Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12	Do not move outside until all danger of frost is past
SAFARI® <i>Jamesbrittenia</i>	Vigor 2	5.5-6.2/6-9	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C)	Moderate	Spring to Fall Finish. Standard Plants Per Container.	For 4-5", 4-5; for 6"/gallon, 7-9; for 10-12", 10-12	Last to go outside
PINK CHABLIS® <i>Lamium</i>	Vigor 3	6.0 - 6.5/6-9	65-72° F (18-22° C)	55-65° F (12-18° C)	40-50° F (4-10° C)	Moderate to Moist	Early Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12	First to go outside
LUSCIOUS® Vigor 3: BERRY BLEND™, CITRUS BLEND™, PINKBERRY BLEND™, Marmalade and GOLDENGATE™ Vigor 2: Basket TANGEGLOW®, Grape, Royale Cosmo, Royale Piña Colada, Royale LEMON TART™ and Royale RED ZONE™ <i>Lantana</i>		5.8 - 6.2/6-1.5	65-72° F (18-22° C)	70-75° F (21-24° C)	50-60° F (10-16° C)	Moderate to Moist	Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 5-7; for 6"/gallon, 7-9; for 8", 9-10	Do not finish outside
LAGUNA® <i>Lobelia</i>	Vigor 2	5.8 - 6.2/6-9	65-72° F (18-22° C)	65-72° F (18-22° C)	40-50° F (4-10° C)	Moderate to Moist	Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12	Second to go outside
Goldilocks <i>Lysimachia</i>	Vigor 3	6.0 - 6.5/6-9	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C)	Moderate to Moist	Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 4-5; for 6"/gallon, 6-8; for 8", 8-10	First to go outside
WAIKIKI SUNSET® <i>Lysimachia</i>	Vigor 2	6.0 - 6.5/6-9	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C)	Moderate to Moist	Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 4-5; for 6"/gallon, 6-8; for 8", 8-10	First to go outside
BLUSHING PRINCESS®, SNOW PRINCESS® VIOLET KNIGHT®, WHITE KNIGHT® <i>Lobularia</i>	Vigor 4 Vigor 3	6.0 - 6.5/6-9	65-72° F (18-22° C)	55-65° F (12-18° C)	40-55° F (4-12° C)	Moderate to Moist	Early Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 4-5; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12	First to go outside
GOLDDUST® <i>Mecardonia</i>	Vigor 2	5.8 - 6.2/6-9	65-72° F (18-22° C)	70-75° F (21-24° C)	70-75° F (21-24° C)	Moderate to Moist	Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12	Do not finish outside

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Big Leaf Creeping Wire Vine <i>Muehlenbeckia</i>	Vigor 2	6.0 - 6.5/6-9	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C)	Moderate to Moist	Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 4-5; for 6"/gallon, 6-8; for 8", 8-10	Last to go outside
SUNSATIA® <i>Nemesia</i>	Vigor 2	5.5 - 5.8/6-9	65-72° F (18-22° C)	55-65° F (12-18° C)	40-50° F (4-10° C)	Dry to Moderate	Early Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 4-6; For 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12	Second to go outside
Bluebird and AROMANCE® <i>Nemesia fruticans</i>	Vigor 2	5.5 - 5.8/6-9	65-72° F (18-22° C)	55-65° F (12-18° C)	40-50° F (4-10° C) outdoors	Moderate to Moist	Early Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12	First to go outside
AMAZEL BASIL® <i>Ocimum</i>	Vigor 4	6.0 - 6.5/0.6 - 0.9	65-72° F (18-22° C)	65-72° F (18-22° C)	65-72° F (18-22° C)	Moderate to Moist	Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 4-5; for 6"/gallon, 5-7; for 10-12", 7-9	Last to go outside
SUPERLOPHUS™ Sunglow <i>Oenothera</i>	Vigor 2	5.5 - 5.8/6 - 9	65-72° F (18-22° C)	65-72° F (18-22° C)	40-50° F (4-10° C)	Dry to Moderately Dry	Spring to Fall Finish. Standard Plants Per Container.	For 4-5", 6-7; for 6"/gallon, 7-9; for 10-12", 10-12	Second to go outside
STRATOSPHERE™ and KARALEE® <i>Oenothera lindheimeri</i>	Vigor 3	5.8 - 6.2/6 - 9	65-72° F (18-22° C)	55-65° F (12-18° C)	40-50° F (4-10° C) outdoors	Moderate to Moist	Early Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 6-8; for 6"/gallon, 7-10; for 8", 8-11; for 10-12", 12-14	First to go outside
BRIGHT LIGHTS™ <i>Osteospermum</i>	Vigor 2	5.8 - 6.2/6-9	65-72° F (18-22° C)	55-65° F (12-18° C)	40-50° F (4-10° C) outdoors	Dry to Moderate	Early Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12	Last to go outside
CHARMED® Wine <i>Oxalis regnellii</i>	Vigor 1	5.8 - 6.2/6 - 9	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C)	Moderate to Moist	Early Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12	Do not finish outside
SUNSTAR® <i>Pentas</i>	Vigor 2	6.0 - 6.8/6 - .9	70-75° F (21-24° C)	70-75° F (21-24° C)	50-60° F (10-16° C)	Moderate	Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 7-8; for 6"/gallon, 8-10; for 10" basket or 14" upright, 10-12	Do not move out unless temps are guaranteed to be 50-60° (10-16° C)
SUPERTUNIA® except Giant Pink and Vista <i>Petunia</i>	Vigor 3 Vigor 4	5.5 - 5.8/1.0 - 2.0	65-72° F (18-22° C)	55-65° F (12-18° C) outdoors	40-50° F (4-10° C)	Moderate to Moist	Early Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 8-10	First to go outside
SOUTHERN BLAZE™ <i>Phlox</i>	Vigor 2	5.8 - 6.2/1.0 - 2.0	65-72° F (18-22° C)	55-65° F (12-18° C)	40-50° F (4-10° C) outdoors	Dry to Moderate	Early Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12	Second to go outside
Swedish Ivy <i>Plectranthus</i>	Vigor 4	6.0 - 6.5/0.6-0.9	65-72° F (18-22° C)	55-65° F (12-18° C)	50-60° F (10-16° C)	Moderate to Moist	Spring to Fall Finish. Standard Plants Per Container.	For 4-5", 4-5; for 6"/gallon, 6-8; for 8", 8-10; for 10-12", 10-12	Last to go outside
MOJAVE® <i>Portulaca</i>	Vigor 2	6.0 - 6.5/ <.6	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C)	Dry to Moderate	Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 4-6; for 6"/gallon, 7-9; for 8", 8-10; for 10-12", 10-12	Last to go outside

Cultural Information for Annuals

	Vigor	pH/EC	Rooting Out Temperature	Growing Temperature	Holding Temperature	Water Requirements	Planting and Timing	Finish Times in Weeks	Spring Outdoor Finish
ROCKIN® and UNPLUGGED® <i>Salvia</i>	Vigor 4 Vigor 2	5.8 - 6.2/6 - .9	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C)	Moderate	Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 5-7; for 6"/gallon (best), 7-9; for 8", 8-10; for 10-12", 10-12	Second to go outside Unplugged: no outdoor finish
Sunbini® <i>Sanvitalia</i>	Vigor 2	5.8 - 6.2/0 - .6	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C)	Dry to Moderate	Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 5-7; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12	Do not finish outside
STARDIVA® and WHIRLWIND® <i>Scaevola</i>	Vigor 2 Vigor 3	5.5 - 5.8/6 - .9	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C)	Moderate	Early Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12	Do not finish outside
LEMON CORAL® <i>Sedum</i>	Vigor 2	5.8 - 6.2/ <.6	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C)	Dry to Moderate	Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 6-7; for 6"/gallon, 8-9; for 8", 8-10; for 10-12", 10-12	Last to go outside
Angel Wings <i>Senecio</i>	Vigor 2	5.8 - 6.2/1.8 - 2.2 (using 2:1 extraction)	65-72° F (18-22° C)	65-70° F (18-21° C)	50-55° F (10-12° C)	Moderate to Medium Dry once established	Early Spring to Fall Finish. Standard Plants Per Container.	For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9	First to go outside
Persian Shield <i>Strobilanthes</i>	Vigor 3	5.8 - 6.2/6 - 9	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C)	Moderate to Moist	Spring to Summer Finish. Standard Plants Per Container.	For 4-5" and QT, 6-8; for 6"/gallon, 8-10	Last to go outside
SNOWSTORM® except GIANT SNOWFLAKE® <i>Sutera (Bacopa)</i>	Vigor 2 Vigor 3	5.5 - 5.8/1.0-2.0	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C) outdoors	Moderate to Moist	Early Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 8-10	Last to go outside
A-PEEL® <i>Thunbergia</i>	Vigor 4	5.8 - 6.2/6-9	65-72° F (18-22° C)	70-80° F (21-27° C)	65-70° F (18-21° C)	Moderate	Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 5-7; for 6"/gallon, 7-9; for 8", 8-10; for 10-12", 10-12	Last to go outside
CATALINA® and SUMMER WAVE® <i>Torenia</i>	Vigor 2 Vigor 3	5.5 - 6.2/6-9	65-72° F (18-22° C)	70-75° F (21-24° C)	70-75° F (21-24° C)	Moderate to Moist	Spring through Summer Finish. Standard Plants Per Container.	For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 10-12	Do not finish outside
'Purple Queen' <i>Tradescantia</i>	Vigor 3	5.8 - 6.2/6-9	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C) outdoors	Moderate to Dry	Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 4-5; for 6"/gallon, 6-8; for 8", 8-10	Last to go outside
SUPERBENA® <i>Verbena</i>	Vigor 3	5.8 - 6.2/6-9	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C) outdoors	Moderate to Moist	Early Spring through Fall Finish. Standard Plants Per Container.	For 4-5", 4-6; for 6"/gallon, 5-7; for 8", 7-9; for 10-12", 8-10	Last to go outside

Cultural Information for Annuals

	Vigor	pH/EC	Rooting Out Temperature	Growing Temperature	Holding Temperature	Water Requirements	Planting and Timing	Finish Times in Weeks	Spring Outdoor Finish
METEOR SHOWER® <i>Verbena</i>	Vigor 3	5.5 - 6.2/6-9	65-70° F (18-21° C)	65-72° F (18-22° C)	50-60° F (10-16° C)	Moderate to Moist	Spring through Fall Finish. 4" container - 1PPP 6" container - 1-3PPP 10" or larger - 3-5PPP	For 4-5", 5-6; for 6"/gallon, 8-10; for 10-12", 10-12	Second to go outside
'Variegata' 'Wojo's Jem' <i>Vinca</i>	Vigor 2	5.5 - 5.8/6-9	65-72° F (18-22° C)	65-72° F (18-22° C)	50-60° F (10-16° C)	Moderate to Moist	Spring to Fall Finish. Standard Plants Per Container.	For 4-5" and QT, 5-6; for 6"/gallon, 7-8	Do not move outside until all danger of frost is past

Online Cultural Guide

When you have growing questions, you can access our online growing guide at provenwinners.com/cultural-information for answers.

By providing easy, 24/7 access to this information, we save you time – and money – so you can spend it tending to business and building that business, too.

6 Critical Production Tips

Want to produce full and floriferous container recipes using Proven Winners annuals? Follow these six production tips from our growers who have decades of experience growing gorgeous hanging baskets.

1 The Key to Success

Starting with exceptional quality liners is the most important thing you can do to get your container recipes off to a great start. Even if you encounter issues along the way as you produce your crop, they will be far easier to navigate if you start with quality liners. Your propagator will be happy to work with you to determine the best liner size and delivery date to fit your production model.



Starting with robust liners is the key to success in growing premium quality container recipes. Work with your propagator to determine the best liner size to fit your needs.

2 Start Your Liners Off Right

Minimizing stress on newly planted liners will avoid complications down the road. As a standard practice, we apply a preventative broad spectrum fungicide drench one week after transplant to all newly transplanted liners. This protects their roots from potential attacks.

3 Moderate Your Watering

It is very easy to overwater newly transplanted liners, so take care not to create this unnecessary stress. During the first few weeks after transplant, the root system is still small and does not yet extend down the bottom of the container. At this time, frequent but low volume water applications are required to provide the liners just the right amount of water they need without becoming overly wet.



Drip lines allow maximum control over irrigation, ensuring liners are not over- or under-watered in production.

4 Build a Strong Foundation

When your liners are young and are newly transplanted into hanging baskets, focus on developing a strong root system for the plants. Timing is key. We closely monitor the growing temperature, pH and EC of the growing media, and fertility while the plants are becoming established in the container.

5 Trimming and Shaping

As the plants are growing, a series of pinches and/or PGR applications are used to shape the plants in the containers. For many plants, we trim around the edges of the containers as needed, prior to spacing uprights and hanging the baskets. PGR rates are listed on our website for all of the plants we offer.



Trimming plants around the edges of the containers before spacing will make it easier to lay them out properly on the floor.

6 Feed Those Plants!

Premium quality hanging baskets and upright containers will fly out of inventory in spring, so be sure you are feeding your entire crop well to get the most out of your inventory. We recommend using fertilizers that contain micronutrients and 100% EDDHA as the source of iron. Call our grower hotline if you need fertilizer recommendations.

Nordic Nurseries – 604.607.7074

Ed Sobkowich Greenhouses – 905.945.8870.

Cultural Information and Growing Tips

To produce the highest quality plant material, growers must have detailed crop culture information. In order to help our grower customers produce the best finished crops, our propagators have developed this user-friendly guide which categorizes plants by their basic cultural needs – pH, growing temperature, and fertilization. The goal is to aide our grower customers in setting up custom growing environments for plants grouped by their basic needs. Visit provenwinners.com for more detailed cultural information on all Proven Winners varieties.

Proven Winners® Annuals

Growing Temp	A pH 5.5 - 5.8	B pH 5.8 - 6.2	C pH 6.0 - 6.5
A 55°-65° F (12-18° C)	Superbells® <i>Calibrachoa</i> , Sunsatia®, Aromance® and other <i>Nemesia</i> , Supertunia® <i>Petunia</i>	Butterfly <i>Argyranthemum</i> , Campfire® and Goldilocks Rocks® <i>Bidens</i> , Beth's Blue® <i>Isotoma</i> , Karalee® and Stratosphere™ <i>Oenothera</i> , Bright Lights™ <i>Osteospermum</i> , Southern Blaze™ <i>Phlox</i> , 'Variegata' and 'Wojo's Jem' <i>Vinca</i>	Silver Bullet® <i>Artemisia</i> , Pink Chablis® <i>Lamium</i> , Princess and Knight <i>Lobularia</i> , Swedish Ivy <i>Plectranthus</i>
B 65°-72° F (18-22° C)	Pegasus® <i>Begonia</i> , Superlophus™ <i>Oenothera</i> , Silver Falls™ <i>Dichondra</i> , Suncredible® <i>Helianthus</i> , Stardiva® and Whirlwind® <i>Scaevola</i> , Snowstorm® <i>Sutera</i> (Bacopa)	Artist® <i>Ageratum</i> , Asparagus Fern <i>Asparagus</i> , Double Delight®, Double Up™, Space Age™, Solenia®, Surefire® <i>Begonia</i> , Señorita Rosalita® and Señorita Blanca® <i>Cleome</i> , Mystic Illusion and Virtuoso® <i>Dahlia</i> , Diamond <i>Euphorbia</i> , English Ivy <i>Hedera</i> , Rockapulco® <i>Impatiens</i> , Safari® <i>Jamesbrittenia</i> , Blue Mohawk® and 'Curly Wurlly' <i>Juncus</i> , Laguna® <i>Lobelia</i> , Vertigo® <i>Pennisetum</i> , Rockin'® and Unplugged® <i>Salvia</i> , Sunbini® <i>Sanvitalia</i> , Lemon Coral® <i>Sedum</i> , Angel Wings <i>Senecio</i> , Persian Shield <i>Strobilanthes</i> , 'Purple Queen' <i>Tradescantia</i> , Superbena® and Meteor Shower® <i>Verbena</i>	'Variegatum' <i>Chlorophytum</i> , Flambé® <i>Chrysocephalum</i> , Island Giants™ <i>Colocasia</i> , ColorBlaze® <i>Coleus</i> , Baby Tut®, King Tut®, Prince Tut™ and Queen Tut™ <i>Cyperus</i> , Silver River™ <i>Didelta</i> , Truffula™ Pink <i>Gomphrena</i> , Aromagica® and Augusta® <i>Heliotropium</i> , Sweet Caroline and Margarita <i>Ipomoea</i> , Goldilocks and Waikiki Sunset™ <i>Lysimachia</i> , Big Leaf <i>Muehlenbeckia</i> , Mojave® <i>Portulaca</i> , Amazel Basil® <i>Ocimum</i>
C 70°-75° F (21-24° C)		Maestro® <i>Agastache</i> , Angelface® <i>Angelonia</i> , Totally Tempted® <i>Cuphea</i> , Licorice Plant <i>Helichrysum</i> , Hippo® <i>Hypoestes</i> , Fiber Optic Grass <i>Isolepis</i> , Luscious® <i>Lantana</i> , GoldDust® <i>Mecardonia</i> , 'Fireworks', Purple Fountain Grass and 'Sky Rocket' <i>Pennisetum</i> , A-Peel® <i>Thunbergia</i> , Catalina® and Summer Wave® <i>Torenia</i>	Endless™ <i>Browallia</i> , Vermillionaire® <i>Cuphea</i> , Blue My Mind® and Blue My Mind® XL <i>Evolvulus</i> , Sweet Caroline Upside™ <i>Ipomoea</i> and Sunstar® <i>Pentas</i>
Growing Temp			E pH 6.2 - 7.0
D 70°-85° F (21-29° C)			Toucan® <i>Canna</i>

In growing group codes, the first letter represents the Growing Temp and the second letter represents the pH.

Fertilizer rate for all plants listed above is 150-200 Constant Liquid Feed (CLF) with the following exceptions:

75-100 CLF	Silver River™ <i>Didelta</i>	200-300 CLF
Endless™ <i>Browallia</i>	Rockapulco® <i>Impatiens</i>	Toucan® <i>Canna</i>
Blue My Mind® <i>Evolvulus</i>	Fiber Optic Grass <i>Isolepis</i>	Señorita <i>Cleome</i>
Blue My Mind® XL <i>Evolvulus</i>	'Fireworks', Purple Fountain Grass, 'Sky Rocket' and Vertigo® <i>Pennisetum</i>	Sweet Caroline and Margarita <i>Ipomoea</i>
100-150 CLF	Sunstar® <i>Pentas</i>	Southern Blaze™ <i>Phlox</i>
Asparagus Fern <i>Asparagus</i>	Mojave® <i>Portulaca</i>	Supertunia® <i>Petunia</i>
Double Delight® <i>Begonia</i>	Sunbini® <i>Sanvitalia</i>	A-Peel® <i>Thunbergia</i>
Double Up™ <i>Begonia</i>	Lemon Coral® <i>Sedum</i>	
'Variegatum' <i>Chlorophytum</i>		

Culture Notes and Groups:

pH:

- A: pH 5.5-5.8
- B: pH 5.8-6.2
- C: pH 6.0-6.5

EC:

- A: < .6
- B: .6-.9
- C: 1.0-2.0

Well-Balanced Fertilizer

N-P-K, 2:1:1.5 with adequate amounts of micronutrients
 Low: 100-150 ppm Constant Liquid Feed
 Medium: 150-200 ppm Constant Liquid Feed
 High: 200-300 ppm Constant Liquid Feed

Fertilizer Disclaimer:

It is a good practice to clear water (leach) once every 3-4 times you water to lower soluble salt levels in the media. EC should also be monitored using weekly EC measurements.

Rooting Out Temperatures:

The first 10 days of container growth:
 establishing root system to outside edge of container
 from the newly planted liner.
 65-72° F (18-22° C)

Growing Temperatures:

Once roots are to the edge of the container – growing
 on the plant and bulking up foliage and flowers.
 A: 55-65° F (12-18° C)
 B: 65-72° F (18-22° C)
 C: 70-75° F (21-24° C)
 D: 70-85° F (21-29° C)
 Night temperatures should be run 5° F (-15° C) lower
 than day temperatures

Holding Temperatures:

(For toning crops and/or for when you have to hold
 the crop when it is ready to go)
 A: 40-50° F (4-10° F) outdoors*
 B: 50-60° F (10-16° F)
 C: Maintain Growing Temperatures

Light Levels:

High: Full sun crops need very high, bright light
 Moderate: Sun to partial shade crops, High to
 moderate light
 Low: Partial to full shade crops, Moderate to low light

* Sometimes this temperature is indoors when prompted
 not to finish the plants outdoors.

Moisture Regimes:

Transplant:

Water lightly to maintain moisture level within root zone
 until roots reach the side of the finished container. Once
 roots are developed to the side of the pot, see finish
 watering regime.

Finish Watering Regimes:

- A: Dry to Moderate: Water thoroughly without over-
 saturating; keep moist during root development; allow
 soil surface to dry completely before watering after
 the crop is rooted to the edge of the pot.
- B: Moderate to Moist: Water thoroughly without
 over-saturating; keep moist but not wet throughout
 entire growth cycle.
- C: Moist to Wet: Water thoroughly and keep
 moisture constant throughout entire growth cycle.

Standard Plants Per Pot (PPP):

- 4-5": 1 ppp
- 6": 1-2 ppp
- Gallon: 1-3 ppp
- 8": 3 ppp
- 10-12": 3-5 ppp

More cuttings per pot will yield faster finishing times.
 The higher light and temperatures experienced with
 summer production will dramatically reduce crop times.

Soil Mix for Container Growing:

Use a high-quality, professional grade soil mix that is
 adjusted to work with your water quality and growing style
 to help manage pH and water control.

Use a well-drained, high-quality professional grade soil
 mix. A peat-lite based soil or equivalent that gives you
 60% organic matter and 40% secondary aggregates, such
 as perlite, rock-wool, coir, and/or bark, will provide proper
 soil porosity (well-drained soil).

Growth Regulator Disclaimer:

All PGR rates should be trialed by each individual grower
 before applications are made to entire crop to ensure
 desired results. All rates are given as a spray unless
 otherwise stated. Summer production may require higher
 PGR rates when crops are grown indoors. Proven Winners
 and its affiliates are not responsible for misapplication or
 misuse of these products. Check manufacturers' labels for
 approved rates and usage recommendations.

Pest Management:

A weekly scouting program is suggested. Monitor for common greenhouse pests. Treat accordingly, using label instructions. Be sure to rotate chemical classes to guard against development of resistance to chemicals.

Disease Management:

Treat with preventative broad spectrum fungicidal drench one week after transplant. Scout crops regularly (at least once a week) for disease development. Good air circulation, control of humidity, and good sanitation practices are critical. Good sanitation practices include keeping greenhouses clean at all times, eliminating weeds and debris, disinfecting equipment and greenhouses as often as possible, and keeping hose ends off the floor. Good water management practices are critical to healthy plant growth.

Day Neutral:

Ability of plants to flower freely regardless of daylength.

Spring Outdoor Finish:

Many Proven Winners crops can be finished outdoors under cool temperatures. Finishing under cool temperatures will allow you to expand production area, allows additional spacing inside greenhouse, allows additional turns, and improves quality of the product. Those plants finished outdoors will need additional time to finish. Specific finishing times are difficult to predict due to variability in weather patterns. Outdoor mum production areas are perfect to use as spring cold temperature finishing space.

Before plants are moved outside, they should be acclimated to colder temperatures using holding temperatures stated above.

Ideally, plants should be moved outdoors on an overcast day, with moderate temperatures, little wind, and no severe cold (freezing temperatures) forecasted for the next 24 hours. Often a full moon will mean clear skies, which will allow temperatures to drop more than expected. To maintain proper nutrition after a heavy rain, a light water application with 400-500 ppm N can be used on the already wet plants (this high fertilizer application on dry plants will result in burn).

Plants vary in ability to withstand cold temperature finishing. To help you manage when crops can be placed outdoors, we have split our plant material into 3 groups (Not all crops can be finished outdoors and will be noted as No). In the case of unusually cold temperatures, you should have frost protection measures ready (frost cloth, sprinklers, or ability to move plants under cover).

It is generally too cold for insects and disease to prosper. You should continue to scout for problems, however, chemical control measures probably won't be needed. Plant growth regulators will not be needed to control growth.

Growers who wish to try this method of finishing plants should trial a small portion of their plant material the first year to gain experience and comfort. Each year will differ and growers need to be prepared to adapt as conditions change.

A: First to go outside – 33-36° F (0-2° C):

These plants can be placed outside the earliest. When temperatures are not forecasted to drop below freezing for the next 10 days you should be able to move these plants outdoors. Should the temperature be forecasted to drop below 28° F (-2° C), protection measures should be taken.

B: Second to go outside – 38-42° F (3-5° C):

This is the second wave of plant material. These plants can be moved outside when odds are that temperatures are much less likely to drop below freezing. Protection measures should be taken for this group when temperatures are forecasted to reach 32° F (0° C). Average daily temperatures should be higher than when group A material was moved out. Generally, a few weeks after group A is moved out, group B can be moved outside.

C: Last to go outside – 45° F + (7° C +):

This is the third wave of plant material. These plants can be moved outside when temperatures are no longer likely to reach freezing. A hard frost will cause damage to this group. If a hard frost is forecasted, protection measures should be implemented.

For questions please call the grower hotlines:

Nordic Nurseries – 604.607.7074

Ed Sobkowich Greenhouses – 905.945.8870



Need help? Give us a call.

We're totally committed to helping you grow quality crops.