

ANNUAL CULTURE GUIDE

Crop Time from Rooted Cutting*

Crop	Series/Variety	Soil pH	Light Levels (fc)	Temperature Day	Temperature Night	Fertilization (ppm N)	No. of Pinches	4 to 5-in. (10 to 13-cm) Pots	6-in. (15-cm) Pots, Gallons	10 to 12-in. (25 to 30-cm) Pots or Baskets	Plant Growth Regulators (S) spray (D) drench	Pests	Diseases	Comments
ALTERNANTHERA	Red Threads	5.8-6.2	4,000-8,000	74-85°F (23-29°C)	62-70°F (16-21°C)	175-225	1	1 ppp 6-8 weeks	1-2 ppp 8-10 weeks	3-5 ppp 10-12 weeks	Generally not needed. B-Nine(S) 2,500 ppm can be effective.	Spider mites	None	Pinch for better branching and shape.
ANGELONIA	AngelMist®	5.8-6.2	6,000-10,000	74-85°F (23-29°C)	62-70°F (16-21°C)	175-225	0-2	1 ppp 4-6 weeks	1-3 ppp 7-9 weeks	3-5 ppp 10-12 weeks	Generally not needed. B-Nine(S) 1,500-3,000 ppm and Cycocel 750-1,000 ppm tank mix(S). Avoid Florel use.	Whitefly, caterpillars	Root rot, Botrytis	High light will significantly improve plant quality by encouraging branching, earlier flowering and the ideal plant habit growth. Best-suited to mid to late Spring and Summer programs.
ANGELONIA	Archangel™	5.8-6.2	6,000-10,000	74-85°F (23-29°C)	62-70°F (16-21°C)	175-225	0-2	1 ppp 5-8 weeks	1-3 ppp 7-9 weeks	3-5 ppp 10-12 weeks	Generally not needed. B-Nine(S) 1,500-3,000 ppm and Cycocel 750-1,000 ppm tank mix(S). Avoid Florel use.	Whitefly, caterpillars	Root rot, Botrytis	High light will significantly improve plant quality by encouraging branching, earlier flowering and the ideal plant habit growth. Best-suited to mid to late Spring and Summer programs.
ARGYRANTHEMUM	Madeira™, Butterfly	5.8-6.2	6,000-9,000	65-79°F (18-26°C)	50-61°F (10-16°C)	225-300	0-1	1 ppp 6-9 weeks	1-3 ppp 7-10 weeks	3-5 ppp 9-12 weeks	B-Nine 1,500-2,000 ppm and Cycocel 750-1,000 ppm tank mix(S) or Bonzi(D) 2-5 ppm to control growth.	Whitefly, leafminers, aphids	Root rot, Botrytis	High light and cool temperatures produce high-quality plants.
BACOPA	Abunda™, Scopia® Double, Scopia Gulliver	5.4-5.8	4,000-8,000	65-76°F (18-24°C)	56-61°F (13-16°C)	175-225	1-2	1-2 ppp 5-7 weeks	2-3 ppp 7-10 weeks	4-5 ppp 8-12 weeks	Generally not needed. B-Nine(S) 1,000-1,500 ppm can be used sparingly to tone and control spread. Florel(S) 150-200 ppm will reduce early flowering and increase branching.	Thrips, aphids	Root rot, Botrytis	Pinch as needed to shape. Grow Bacopa bright and cool to maximize branching and encourage best possible habit. Test soil regularly for high pH/iron deficiency. Free-branching and trailing Abunda Giant White is ideal for combination pots, baskets and 4 to 6-in. (10 to 15-cm) pots.
BASIL	Emerald Frills, Ruby Frills	5.8-6.2	6,000-9,000	65-76°F (18-24°C)	59-67°F (15-19°C)	175-225	1	1 ppp 5-6 weeks	1-2 ppp 6-8 weeks	3-5 ppp 10-12 weeks	None	None	Pythium	Avoid overwatering and harvest fresh leaves regularly for continued growth.
BIDENS	Sunbeam	5.8-6.2	5,000-9,000	59-76°F (15-24°C)	53-61°F (11-16°C)	175-225	1-3	1 ppp 5-7 weeks	2-3 ppp 6-8 weeks	4-5 ppp 6-9 weeks	B-Nine(S) 2,500 ppm. Also responds to Sumagic(S) 3-5 ppm or Sumagic(D) 0.25 ppm.	Fungus gnats	Root and stem rot	Pinch for better branching and shape.
BIDENS	Sun Drop	5.8-6.2	5,000-9,000	59-76°F (15-24°C)	53-61°F (11-16°C)	175-225	1-3	1 ppp 5-7 weeks	2-3 ppp 6-8 weeks	4-5 ppp 6-9 weeks	B-Nine(S) 2,500 ppm. Also responds to Sumagic(S) 3-5 ppm or Sumagic(D) 0.25 ppm.	Fungus gnats	Root and stem rot	Pinch for better branching and shape.
BRACHYSCOME	Amethyst, Enduring Blue	5.8-6.2	5,000-9,000	65-73°F (18-22°C)	56-61°F (13-16°C)	175-225	0-1	1 ppp 4-6 weeks	2-3 ppp 6-8 weeks	4-5 ppp 12-14 weeks	Generally not needed. Enduring Blue is more naturally compact than Amethyst.	Thrips, whitefly	Botrytis, Thielaviopsis	Cool temperatures and high light will produce the best habit. Amethyst is best-suited for larger finish containers (1 gallon and up), while Enduring Blue is compact and suitable for finish containers up to 1 gallon.
BRACHYSCOME	Radiant Magenta	5.4-5.8	5,000-9,000	65-76°F (18-24°C)	62-67°F (16-19°C)	200-225	0-1	1 ppp 4-6 weeks	1-2 ppp 6-8 weeks	4-5 ppp 12-14 weeks	Generally not needed. Grow plants under high light with warm temperatures to achieve the best quality.	Thrips, whitefly	Botrytis	Supplement fertilizers with extra Fe to avoid yellowing foliage. Avoid cold and wet conditions.
BRACTEANTHA (STRAWFLOWER)	Basket Bon Bon, Dreamtime®	5.8-6.2	5,000-8,000	65-76°F (18-24°C)	56-61°F (13-16°C)	175-225	0-1	1 ppp 6-8 weeks	1-2 ppp 7-9 weeks	3-5 ppp 10-12 weeks	Generally not needed. Is responsive to Bonzi(S) 20-30 ppm or Sumagic(S) 10-20 ppm to maintain habit as needed.	Thrips, aphids, whitefly	Root and stem rot	High light and cool temperatures will improve plant quality significantly.
CALIBRACHOA	Cabaret®, Can-Can®	5.4-5.8	5,000-8,000	71-76°F (21-24°C)	50-58°F (10-14°C)	225-300	1-2	1 ppp 6-9 weeks	1-2 ppp 7-11 weeks	3-5 ppp 8-12 weeks	Use B-Nine(S) 2,500-5,000 ppm, Bonzi(D) 3-8 ppm or Florel(S) 300-500 ppm applied 1 time up to 3 times for large baskets to maintain habit as needed.	Thrips, aphids, leafminers	Root rot	Cooler air temperatures and high light will reduce or eliminate any need for plant growth regulators. Maintain pH at 5.2-5.8 to optimize plant health. Crop times will be shortest as days lengthen in Spring. Apply preventative broad-spectrum fungicide drench early (7-10 days after transplant). Avoid saturated media and excessive feed levels.
CALIBRACHOA	Conga™	5.4-5.8	5,000-8,000	71-76°F (21-24°C)	50-58°F (10-14°C)	225-300	1-2	1 ppp 5-8 weeks	1-3 ppp 6-10 weeks	3-5 ppp 8-12 weeks	Plant growth regulators are generally not needed and should only be applied if plants show signs of requiring extra control. B-Nine(S) 1,500-3,000 ppm applied 1 time up to 3 times should provide adequate control.	Thrips, aphids, leafminers	Root rot	Cooler air temperatures and high light will reduce or eliminate any need for plant growth regulators. Maintain pH at 5.2-5.8 to optimize plant health. Crop times will be shortest as days lengthen in Spring. Apply preventative broad-spectrum fungicide drench.
COLEUS	Aurora™, FlameThrower™, Florida Sun Rose, Lava Rose, Marquee™, Saturn, Burgundy Wedding Train	5.8-6.2	4,000-10,000	74-85°F (23-29°C)	59-70°F (15-21°C)	175-225	0-2	1 ppp 5-7 weeks	1-2 ppp 6-8 weeks	3-4 ppp 8-11 weeks	Generally not needed. Sumagic(S) 5-10 ppm or a B-Nine 2,500-3,500 ppm and Cycocel 1,000-1,500 tank mix(S) can be used to maintain habit as needed.	Thrips, aphids, whitefly	Root rot	Aurora and Lava Rose Coleus will generally not require any PGR applications during production. Plants should be pinched only as needed since Aurora and Lava Rose are extremely free-branching.
COLEUS	Campfire, Coleosaurus, Electric Lime®, Henna, Honey Crisp, Indian Summer, Mint Mocha, Redhead, Trusty Rusty, Vino, Wasabi, Other	5.8-6.2	4,000-10,000	74-85°F (23-29°C)	59-70°F (15-21°C)	175-225	0-2	1 ppp 5-7 weeks	1-3 ppp 6-8 weeks	4-5 ppp 8-11 weeks	Is responsive to B-Nine(S) 2,500-3,500 ppm and Cycocel(S) 1,000-1,500 ppm tank mix or Sumagic(S) 5-10 ppm.	Whitefly, aphids, thrips	—	Pinch early to shape. Scout plants regularly for whitefly. Avoid crowding at all stages.
CUPHEA	Allyson Heather	5.4-5.8	6,000-12,000	71-79°F (21-26°C)	59-64°F (15-17°C)	175-225	1-2	1-3 ppp 6-8 weeks	2-5 ppp 7-9 weeks	3-6 ppp 10-12 weeks	None	Whitefly, aphids	Botrytis, Root rot	Pinch as needed to shape. Fertilize regularly. Crop times will be shortest under high light.

* ppp=plants per pot

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CUPHEA	Firecracker	5.4-5.8	6,000-12,000	71-79°F (21-26°C)	59-64°F (15-17°C)	175-225	1-2	1-2 ppp 6-8 weeks	1-2 ppp 7-9 weeks	3-5 ppp 10-12 weeks	None	Whitefly, aphids	Botrytis, Oedema, Root rot	Pinch as needed to shape. Keep soil moderately dry and maintain adequate air circulation during finishing to avoid Oedema. Fertilize regularly. Crop times will be shortest under high light.
DIASCIA	Juliet™, Romeo™	5.8-6.2	5,000-8,000	62-76°F (16-24°C)	35-52°F (1-11°C)	175-225	1-2	1 ppp 5-7 weeks	1-2 ppp 7-9 weeks	3-4 ppp 9-11 weeks	Use B-Nine(S) 3,000-5,000 ppm as needed to maintain habit. Florel(S) 200-300 ppm can be used to improve branching.	Thrips, aphids, leafminers	Root rot	If grown cool and with high light levels, Juliet and Romeo Diascia will generally require little, if any, PGRs.
ERYSIMUM	Apricot Twist	5.8-6.2	5,000-9,000	62-67°F (16-19°C)	56-61°F (13-19°C)	175-225	0-1	1 ppp 7-10 weeks	1-2 ppp 8-12 weeks	3-5 ppp 14-17 weeks	Generally not needed. Growing under high light and cooler temperatures is the most effective way to control growth and improve plant habit.	Whitefly, aphids	Root and stem rot	Erysimum will start to flower from mid-Spring (in milder climates) to early Summer (in northern areas).
EUPHORBIA HYPERCIFOLIA	Breathless®	5.8-6.2	6,000-9,000	65-76°F (18-24°C)	59-67°F (15-19°C)	175-225	1	1 ppp 5-7 weeks	1-3 ppp 6-9 weeks	3-5 ppp 9-11 weeks	B-Nine(S) 2,500 ppm, Cycocel(S) 750 ppm tank mix 7-10 days after transplant. Do not use Florel.	—	—	Sensitive to overwatering. Pinch for a better habit especially in larger containers.
EVOLVULUS	Blue Daze	5.8-6.2	5,000-9,000	74-79°F (23-26°C)	59-64°F (15-17°C)	175-225	1-2	1 ppp 6-8 weeks	1-2 ppp 8-9 weeks	3-4 ppp 10-12 weeks	None	Whitefly, aphids	Pythium, Botrytis	Pinch as needed to shape. Fertilize regularly. Avoid extremely high humidity or saturated media, both of which will encourage Botrytis.
GAURA LINDHEIMERI**	Belleza	5.8-6.2	5,000-9,000	71-76°F (21-24°C)	56-61°F (13-16°C)	175-225	1-2	1 ppp 7-10 weeks	1-3 ppp 9-12 weeks	3-4 ppp 11-13 weeks	Use B-Nine(S) 3,000-4,000 ppm, Bonzi(S) 30-50 ppm or Sumagic(S) 15-30 ppm to control final plant height.	Whitefly, aphids	Botrytis, Root rot	Pinch Gaura shortly after transplanting to encourage a full habit at flowering.
GERANIUM, IVY	Focus™	5.8-6.2	2,500-4,000	65-76°F (18-24°C)	62-67°F (16-19°C)	225-300	1-2	1 ppp 8-10 weeks	1-2 ppp 9-10 weeks	4-5 ppp 11-13 weeks	Cycocel(S) 750-1,500 ppm to control growth; Florel(S) 200-300 ppm to improve branching. PGR generally not needed for basket production.	Fungus gnats, thrips, aphids, mites	Botrytis, Oedema, Pythium, Xanthomonas	Avoid drastic swings in soil moisture to reduce Oedema.
GERANIUM, IVY	Precision™	5.8-6.2	2,500-4,000	65-76°F (18-24°C)	62-67°F (16-19°C)	225-300	1-2	1 ppp 8-10 weeks	1-2 ppp 9-10 weeks	4-5 ppp 11-13 weeks	Cycocel(S) 750-1,500 ppm to control growth; Florel(S) 200-300 ppm to improve branching.	Fungus gnats, thrips, aphids, mites	Botrytis, Oedema, Pythium, Xanthomonas	Avoid drastic swings in soil moisture to reduce Oedema.
GERANIUM, ZONAL	Allure™	6.2-6.6	3,500-6,000	65-76°F (18-24°C)	62-67°F (16-19°C)	225-300	0	1 ppp 8-9 weeks	1-2 ppp 9-10 weeks	4-5 ppp 11-13 weeks	Cycocel(S) 750-1,000 ppm to control growth; Florel(S) 200-300 ppm to improve branching.	Fungus gnats, thrips, aphids, mites	Botrytis, Pythium, Xanthomonas	Keep foliage dry. Provide good air circulation.
GERANIUM, ZONAL	Dynamo™	6.2-6.6	3,500-6,000	65-76°F (18-24°C)	62-67°F (16-19°C)	225-300	0	1 ppp 8-9 weeks	1-2 ppp 9-10 weeks	4-5 ppp 11-13 weeks	Cycocel(S) 750-1,000 ppm to control growth; Florel(S) 200-300 ppm to improve branching.	Fungus gnats, thrips, aphids, mites	Botrytis, Pythium, Xanthomonas	Keep foliage dry. Provide good air circulation.
GERANIUM, ZONAL	Fantasia®	6.2-6.6	3,500-6,000	65-76°F (18-24°C)	62-67°F (16-19°C)	225-300	0	1 ppp 8-9 weeks	1-2 ppp 9-10 weeks	4-5 ppp 11-13 weeks	Cycocel(S) 750-1,000 ppm to control growth; Florel(S) 200-300 ppm to improve branching.	Fungus gnats, thrips, aphids, mites	Botrytis, Pythium, Xanthomonas	Fantasia Geraniums usually do not require PGRs to produce high-quality plants.
GERANIUM, ZONAL	Presto™	6.2-6.6	3,500-6,000	65-76°F (18-24°C)	62-67°F (16-19°C)	225-300	0	1 ppp 8-9 weeks	1-2 ppp 9-10 weeks	4-5 ppp 11-13 weeks	Generally not needed. Cycocel(S) 750-1,000 ppm to control growth; Florel(S) 200-300 ppm to improve branching.	Fungus gnats, thrips, aphids, mites	Botrytis, Pythium, Xanthomonas	Presto Geraniums usually do not require PGRs to produce high-quality plants. They are naturally compact, well-branched and early to flower.
GOMPHRENA	Pinball™ Purple	5.8-6.2	6,000-10,000	74-85°F (23-29°C)	62-70°F (16-21°C)	175-225	1-2	1 ppp 5-8 weeks	2-3 ppp 6-9 weeks	3-5 ppp 10-11 weeks	Generally not needed. B-Nine (s) 1500 ppm can be effective controlling growth.	None	Botrytis, Root and stem rot	Provide high light and warm conditions for the best overall growth.
HELICHRYSUM	Licorice, Silver Star	5.8-6.2	4,000-9,000	65-76°F (18-24°C)	50-61°F (10-16°C)	175-225	1-2	1 ppp 5-7 weeks	2-3 ppp 7-9 weeks	3-5 ppp 9-11 weeks	None	Fungus gnats, whitefly	Root rot	Avoid saturated media at any time. Pinch regularly to shape.
HELIOTROPE	Marine	5.8-6.2	5,000-9,000	71-76°F (21-24°C)	50-61°F (10-16°C)	175-225	1-2	1 ppp 6-7 weeks	1-2 ppp 8-9 weeks	3-5 ppp 10-12 weeks	Use B-Nine 1,500-3,000 ppm and Cycocel 750-1,000 ppm tank mix(S).	Whitefly, mites, aphids	Root rot	Cool temperatures and high light will reduce or eliminate any need for plant growth regulators.
HIBISCUS	Little Zin	5.8-6.2	6,000-10,000	74-85°F (23-29°C)	62-70°F (16-21°C)	175-225	1-2	1 ppp 6-8 weeks	1-2 ppp 8-10 weeks	3-5 ppp 10-12 weeks	Use of 1 to 3 applications of B-Nine 2500 ppm recommended to tone finished plant habit.	Spider mites, whitefly	None	Provide high light to achieve the best foliage coloration.
IMPATIENS, COMPACT, SPREADING AND VIGOROUS	SunPatiens®	5.8-6.2	4,000-9,000	68-79°F (20-26°C)	59-64°F (15-17°C)	75-150	0	1 ppp 5-7 weeks	1 ppp 7-9 weeks	3 ppp 9-12 weeks	B-Nine/Bonzi (S) 1,000 ppm; B-Nine/2 ppm Bonzi (low rate) for Compact series; 1,500 ppm; B-Nine/4 ppm Bonzi (med rate) for Spreading series.	Thrips, aphids, mites	Impatiens Necrotic Spot Virus, Botrytis, Pythium	Dry culture, low to moderate nutrition, and cool temperatures will promote toned plants.
IMPATIENS, DOUBLE	Fiesta™	5.8-6.2	4,000-6,000	68-76°F (20-24°C)	56-61°F (13-16°C)	175-225	0-1	1 ppp 6-9 weeks	1-2 ppp 7-9 weeks	4-5 ppp 10-12 weeks	Bonzi(S) 5-15 ppm can be used to control habit early; Bonzi(D) 0.5-1.0 ppm applied as crop matures will control final height but not delay flowering or reduce flower size. Florel(S) 100-200 ppm can be used to improve branching but will usually not be needed.	Leafminers, thrips	Impatiens Necrotic Spot Virus, Botrytis, Pythium	Start feeding immediately after transplanting. Avoid water stress in all stages of crop. Avoid cold stress (night temperatures below 65°F/18°C). Maintain EC above 1.0 (SME). Use early PGR applications to achieve ideal finished plants.

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Crop	Series/Variety	Soil pH	Light Levels (fc)	Temperature Day	Temperature Night	Fertilization (ppm N)	No. of Pinches	4 to 5-in. (10 to 13-cm) Pots	6-in. (15-cm) Pots, Gallons	10 to 12-in. (25 to 30-cm) Pots or Baskets	Plant Growth Regulators (S) spray (D) drench	Pests	Diseases	Comments
IMPATIENS, DOUBLE	Fiesta Bonita™	5.8-6.2	4,000-6,000	68-76°F (20-24°C)	56-61°F (13-16°C)	175-225	0-1	1 ppp 5-7 weeks	1-2 ppp 6-8 weeks	4-5 ppp 9-12 weeks	Bonzi(S) 5-10 ppm can be used to control habit early; Bonzi(D) 0.5-1.0 ppm applied as crop matures will control final height but not delay flowering or reduce flower size. Florel(S) 100-200 ppm can be used to improve branching but will usually not be needed.	Leafminers, thrips	Impatiens Necrotic Spot Virus, Botrytis, Pythium	Start feeding immediately after transplanting. Avoid water stress in all stages of crop. Avoid cold stress (night temperatures below 65°F/18°C). Maintain EC above 1.0 (SME). Use early PGR applications to achieve ideal finished plants. Fiesta Bonita Double Impatiens require less PGRs than Fiesta Double Impatiens.
IMPATIENS, EXOTIC	Fusion™	5.8-6.2	4,000-6,000	68-76°F (20-24°C)	56-61°F (13-16°C)	175-225	0-1	1 ppp 6-8 weeks	1-2 ppp 7-9 weeks	3-5 ppp 10-12 weeks	Bonzi(S) 5-15 ppm is effective for height control. Florel(S) 100-300 ppm can be used to improve branching but will not usually be needed.	Aphids, thrips	Impatiens Necrotic Spot Virus, Botrytis, Pythium	Start feeding immediately after transplanting. Avoid water stress in all stages of crop. Avoid cold stress (night temperatures below 65°F/18°C). Maintain EC above 1.0 (SME). Use early PGR application to achieve ideal finished plants. A light Bonzi drench when plant is three-quarters of finish size will promote flowering above the foliage.
IMPATIENS, NEW GUINEA	Celebration	5.8-6.2	4,000-7,000	68-76°F (20-24°C)	59-64°F (15-17°C)	175-225	0	1 ppp 7-9 weeks	1-2 ppp 9-10 weeks	3-5 ppp 10-13 weeks	Bonzi(S) 2-15 ppm can be used to control habit early; Bonzi(D) 0.25-2.0 ppm applied as crop matures will control final height but not delay flowering or reduce flower size. Florel(S) 100-200 ppm can be used to improve branching but will usually not be needed.	Thrips, aphids, mites	Impatiens Necrotic Spot Virus, Botrytis, Pythium	Maintain 68°F (20°C) average daily temperature to optimize bloom size and reduce time to flower. Cooler temperatures will extend crop time. Grow crop somewhat dry to help control growth and hasten flowering. Avoid excess micro-nutrients in the soil. With good cultural practices and environmental conditions, no PGRs will be needed.
IMPATIENS, NEW GUINEA	Celebrette	5.8-6.2	4,000-7,000	68-76°F (20-24°C)	59-64°F (15-17°C)	175-225	0	1 ppp 6-8 weeks	1-2 ppp 7-9 weeks	4-5 ppp 8-11 weeks	Bonzi(S) 2-10 ppm can be used to control habit early; Bonzi(D) 0.25-1.0 ppm applied as crop matures will control final height but not delay flowering or reduce flower size. Florel(S) 100-200 ppm can be used to improve branching but will usually not be needed.	Thrips, aphids, mites	Impatiens Necrotic Spot Virus, Botrytis, Pythium	Maintain 68°F (20°C) average daily temperature to optimize bloom size and reduce time to flower. Cooler temperatures will extend crop time. Grow crop somewhat dry to help control growth and hasten flowering. Avoid excess micro-nutrients in the soil. With good cultural practices and environmental conditions, no PGRs will be needed.
IMPATIENS WALLERIANA	Patchwork™	5.8-6.2	4,000-6,000	68-76°F (20-24°C)	56-61°F (13-16°C)	175-225	0-1	1 ppp 6-8 weeks	1-2 ppp 7-9 weeks	3-5 ppp 10-12 weeks	Bonzi(S) 5-15 ppm is effective for height control. Florel(S) 100-300 ppm can be used to improve branching but will not usually be needed.	Aphids, thrips	Impatiens Necrotic Spot Virus, Botrytis, Pythium	Start feeding immediately after transplanting. Avoid water stress in all stages of crop. Avoid cold stress (night temperatures below 65°F/18°C). Maintain EC above 1.0 (SME). Use early PGR application to achieve ideal finished plants. A light Bonzi drench when plant is three-quarters of finish size will promote flowering above the foliage.
IPOMOEA	SolarPower™	5.8-6.2	6,000-10,000	70-75°F (21-24°C)	65-70°F (18-21°C)	175-225	0-1	1 ppp 4-5 weeks	1 ppp 5-6 weeks	3-5 ppp 8-10 weeks	Generally not required. B-Nine (S) 2,500-3,500 ppm can be effective at controlling growth.	Aphids, whitefly	Pseudomonas	Avoid cold and wet conditions.
IREFINE	Blazin' Lime, Blazin' Rose	5.8-6.2	4,000-7,000	71-79°F (21-26°C)	62-67°F (16-19°C)	175-225	1-2	1 ppp 7-9 weeks	2-3 ppp 8-10 weeks	4-5 ppp 10-13 weeks	Generally not needed. Responsive to Bonzi.	Whitefly	—	Pinch regularly to encourage branching and improve habit.
LAMIUM	Jade Frost	5.8-6.2	4,000-8,000	71-79°F (21-26°C)	59-64°F (15-17°C)	175-225	1-2	1 ppp 4-5 weeks	2-3 ppp 5-8 weeks	3-5 ppp 8-10 weeks	Generally not needed. Soil moisture and cool temperatures are the most effective way to control growth.	Aphids, whitefly	Root and stem rot	Pinch plants to encourage branching and improve habit.
LAMIUM	'Anne Greenaway', 'Beacon Silver', 'White Nancy'	5.8-6.2	4,000-8,000	71-79°F (21-26°C)	59-64°F (15-17°C)	175-225	1-2	1 ppp 4-5 weeks	2-3 ppp 5-8 weeks	3-5 ppp 8-10 weeks	Generally not needed. Soil moisture and cool temperatures are the most effective way to control growth.	Aphids, whitefly	Root and stem rot	Pinch plants to encourage branching and improve habit.
LANTANA	Landmark™, Little Lucky™, Lucky™, Dallas Red, New Gold, Purple Trailing	5.8-6.2	5,000-10,000	74-85°F (23-29°C)	62-67°F (16-19°C)	225-300	1-3	1-2 ppp 6-7 weeks	1-3 ppp 7-8 weeks	3-6 ppp 10-12 weeks	Lantana is responsive to a B-Nine 2,500-5,000 ppm and Cycocel 1,000-1,500 ppm tank mix(S) as well as Florel(S) 300-400 ppm, Bonzi(S) 20-40 ppm and Sumagic(S) 10-20 ppm. Little Lucky should not need growth regulators due to its naturally compact habit.	Whitefly, leafminer, aphids	Root rot	Allow plants to dry regularly between waterings. Pinch as needed to shape. Feeding at recommended levels will promote vigorous plants that will continue to actively grow and flower. Lucky varieties are naturally compact and free-branching, while Landmark varieties are more vigorous.
LOBELIA	Waterfall™	5.8-6.2	5,000-8,000	71-76°F (21-24°C)	56-61°F (13-16°C)	175-225	1-2	1 ppp 9-10 weeks	2-3 ppp 10-11 weeks	4-5 ppp 10-13 weeks	Generally not needed.	Thrips	Botrytis	Azure Mist and Blue have a mounded, trailing habit, while Lavender has a trailing habit. Ideal for Spring and Summer throughout North America. Will flower in Autumn, Winter and early Spring in the Sunbelt.
LOBELIA	Early Springs™	5.8-6.2	5,000-8,000	71-76°F (21-24°C)	56-61°F (13-16°C)	175-225	1-2	1 ppp 7-9 weeks	1 ppp 9-11 weeks	4-5 ppp 10-12 weeks	Generally not needed.	Aphids, thrips	Botrytis	Transplant 24-28 days after stick, and optional pinch again 10-14 days after transplant. 4-in. (10-cm) size may skip second pinch. Keep on dry side.
LYSIMACHIA NUMMULARIA**	Goldilocks	5.8-6.2	4,000-8,000	71-79°F (21-26°C)	59-64°F (15-17°C)	175-225	1-2	1 ppp 4-5 weeks	2-3 ppp 5-8 weeks	3-5 ppp 8-10 weeks	Generally not needed. Pinching is best for shaping the plant.	—	—	Lysimachia Goldilocks is grown primarily for its foliage.
NEMESIA	Aromatica™	5.8-6.2	4,000-7,000	65-76°F (18-24°C)	35-52°F (1-11°C)	175-225	1-2	1 ppp 5-7 weeks	2-3 ppp 7-9 weeks	3-4 ppp 9-11 weeks	Grow cool and bright to improve habit. Nemesia is responsive to B-Nine(S) 2,500-4,000 ppm, Sumagic(S) 20-30 ppm, and Florel(S) 200-300 ppm.	Thrips, aphids, leafminer	Root rot	If grown cool and with high light levels, Aromatica will generally require little, if any, PGRs. Avoid water-logged media.

* ppp=plants per pot

** Perennial varieties that can be grown cold without treatment for Spring and Summer sales.

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Crop Time from Rooted Cutting*

Crop	Series/Variety	Soil pH	Light Levels (fc)	Temperature Day	Temperature Night	Fertilization (ppm N)	No. of Pinches	4 to 5-in. (10 to 13-cm) Pots	6-in. (15-cm) Pots, Gallons	10 to 12-in. (25 to 30-cm) Pots or Baskets	Plant Growth Regulators (S) spray (D) drench	Pests	Diseases	Comments
OSTEOSPERMUM	Serenity™, Blue Eyed Beauty	5.8-6.2	5,000-9,000	59-76°F (15-24°C)	44-55°F (6-12°C)	225-300	1	1 ppp 10-13 weeks	2-3 ppp 11-14 weeks	3-4 ppp 11-15 weeks	Is responsive to B-Nine(S) 2,500-4,000 ppm alone or as a tank mix(S) with Cycocel 750-1,000 ppm. Bonzi(S) 15-30 ppm is also effective.	Aphids, whitefly, thrips	Root and stem rot, Botrytis	After transplanting, allow plants to become established for 1-2 weeks at 60-65°F (15-18°C). Once plants are well established, begin growing at recommended cool temperatures. After 4-6 weeks of cool conditions, plants can be forced in 6-8 weeks.
OSTEOSPERMUM	Voltage™ Yellow, Voltage White	5.8-6.2	5,000-9,000	59-76°F (15-24°C)	44-55°F (6-12°C)	225-300	0-1	1 ppp 8-11 weeks	1-2 ppp 8-11 weeks	3-5 ppp 8-11 weeks	Is responsive to B-Nine(S) 2,500-4,000 ppm alone or as a tank mix(S) with Cycocel 750-1,000 ppm. Bonzi(S) 15-30 ppm is also effective.	Aphids, whitefly, thrips	Root and stem rot, Botrytis	After transplanting, allow plants to become established for 1-2 weeks at 60-65°F (15-18°C). Once plants are well established, pinch and begin growing at recommended cool temperatures. Pinch optional. After 4-6 weeks of cool conditions, plants can be forced in 6-8 weeks.
PERILLA	Magilla® Purple	5.8-6.2	4,000-10,000	74-85°F (23-29°C)	59-70°F (15-21°C)	175-225	0-1	1 ppp 5-7 weeks	1-2 ppp 6-8 weeks	3-4 ppp 8-11 weeks	B-Nine(S) 2,000-4,000 ppm, applied 1-3 times, can be used to control habit.	Thrips, aphids, whitefly	Root rot	Plants should be pinched as needed to control habit. Crop times will be shorter under long days or warmer temperatures.
PETCHOA	SuperCal®	5.4-5.9	5,000-8,000	60-70° F (16-21° C)	50-58° F (10-14° C)	200-250	1 or 2	1 ppp 6-8 weeks	1-3 ppp 7-9 weeks	3-5 ppp 9-12 weeks	Foliar sprays of A-Rest 10-30 ppm or sprays of B-Nine/Bonzi tank mix, B-Nine 2,500-5,000 ppm/Bonzi 10-30 ppm. Drench of A-Rest 1-3 ppm, or drench of Bonzi 1-4 ppm.	Whitefly, thrips, leafminers, aphids, mites	Botrytis, Crown rot, Tobacco Mosaic Virus	Blue, Purple, Terracotta, Velvet are high vigor. Artist Rose, Blushing Pink, Cherry, Neon Rose, Pink Ice, Violet are medium vigor. Vanilla Blush is low vigor. Cool temperatures and high light reduce need for PGR.
PETUNIA	Double Wave®, Cascadias™ Indian Summer, Suncatcher™	5.4-5.8	5,000-8,000	59-76°F (15-24°C)	53-61°F (11-16°C)	225-300	0-1	1 ppp 6-8 weeks	2-3 ppp 7-9 weeks	3-5 ppp 9-12 weeks	B-Nine(S) 1,500-2,500 ppm, applied 2-4 times, can be used to control habit early; Bonzi(D) 0.25-1.0 ppm applied as crop matures will control final height but not delay flowering or reduce flower size.	Whitefly, thrips, leafminers	Botrytis, Root rot, Tobacco Mosaic Virus	Cool temperatures and high light will reduce or eliminate any need for PGRs. Monitor regularly for high pH and possible iron deficiency. Flowering will be best as days lengthen in late Spring and Summer. Daylength of more than 14 hours will hasten flowering.
PETUNIA	Phantom, Pinstripe, Sun Spun®	5.4-5.8	5,000-8,000	59-76°F (15-24°C)	53-61°F (11-16°C)	225-300	0-1	1 ppp 5-7 weeks	2-3 ppp 6-8 weeks	3-5 ppp 8-11 weeks	B-Nine(S) 1,500-2,500 ppm, applied 2-4 times, can be used to control habit early. Bonzi(D) 0.25-1.0 ppm applied as crop matures will control final height but not delay flowering or reduce flower size. B-Nine applications late in the crop time can cause instability in flower color.	Whitefly, thrips, leafminers	Botrytis, Root rot, Tobacco Mosaic Virus	Cool temperatures and high light will reduce or eliminate any need for PGRs. Monitor regularly for high pH and possible iron deficiency. Flowering will be best as days lengthen in late Spring and Summer. Daylength of more than 14 hours will hasten flowering.
PETUNIA	Glow	5.4-5.8	5,000-8,000	59-76° F (15-24° C)	53-61° F (11-16° C)	225-300	0-1	1 ppp 5-7 weeks	2-3 ppp 6-8 weeks	3-5 ppp 8-11 weeks	B-Nine(S) 1,500-2,500 ppm, applied 2-4 times, can be used to control habit early. Bonzi(D) 0.25-1.0 ppm applied as crop matures will control final height but not delay flowering or reduce flower size.	Whitefly, thrips, leafminers	Botrytis, Root rot, Tobacco Mosaic Virus	Cool temperatures and high light will reduce need for PGRs. Monitor regularly for high and possible iron deficiency.
PETUNIA	Black Magic	5.4-5.8	5,000-8,000	59-76° F (15-24° C)	53-61° F (11-16° C)	225-300	0-1	1 ppp 5-7 weeks	2-3 ppp 6-8 weeks	3-5 ppp 8-11 weeks	B-Nine(S) 1,500-2,500 ppm, applied 2-4 times, can be used to control habit early. Bonzi(D) 0.25-1.0 ppm applied as crop matures will control final height but not delay flowering or reduce flower size.	Whitefly, thrips, leafminers	Botrytis, Root rot, Tobacco Mosaic Virus	Cool temperatures and high light will reduce or eliminate any need for PGRs. Monitor regularly for high pH and possible iron deficiency.
PETUNIA	Cha-Ching Cherry	5.4-5.8	5,000-8,000	59-76° F (15-24° C)	53-61° F (11-16° C)	225-300	0-1	1 ppp 5-7 weeks	2-3 ppp 6-8 weeks	3-5 ppp 8-11 weeks	B-Nine(S) 1,500-2,500 ppm, applied 2-4 times, can be used to control habit early. Bonzi(D) 0.25-1.0 ppm applied as crop matures will control final height but not delay flowering or reduce flower size. B-Nine applications late in the crop time can cause instability in flower color.	Whitefly, thrips, leafminers	Botrytis, Root rot, Tobacco Mosaic Virus	Cool temperatures and high light will reduce or eliminate any need for PGRs. Monitor regularly for high pH and possible iron deficiency. First blooms in low light/short day will have less star; as crop matures, color pattern intensifies.
PETUNIA	Ragtime	5.8-6.2	5,000-8,000	59-76° F (15-24° C)	53-61° F (11-16° C)	225-300	0-1	1 ppp 6-8 weeks	1-3 ppp 7-9 weeks	3-5 ppp 9-12 weeks	Early applications of growth regulators are required. B-Nine 1,500-2,000 ppm/ Cycocel 750-1,000 ppm spray, Bonzi 2-3 ppm drench. Apply 2-3 times early in the crop cycle.	Whitefly, thrips, leafminers	Botrytis, Root rot, Tobacco Mosaic Virus	This is a vigorous variety that branches well. Early growth regulator applications help with tone and branching.
PETUNIA	Flash Mob	5.4-5.8	5,000-8,000	59-76° F (15-24° C)	53-61° F (11-16° C)	225-300	0-1	1 ppp 5-7 weeks	2-3 ppp 6-8 weeks	3-5 ppp 8-11 weeks	B-Nine(S) 1,500-2,500 ppm, applied 2-4 times, can be used to control habit early. Bonzi(D) 0.25-1.0 ppm applied as crop matures will control final height but not delay flowering or reduce flower size. B-Nine applications late in the crop time can cause instability in flower color.	Whitefly, thrips, leafminers	Botrytis, Root rot, Tobacco Mosaic Virus	Cool temperatures and high light will reduce or eliminate any need for PGRs. Monitor regularly for high pH and possible iron deficiency. Flowering will be best as days lengthen in late Spring and Summer. Daylength of more than 14 hours will hasten flowering.
PETUNIA	Lime Light	5.8-6.2	5,000-8,000	59-76° F (15-24° C)	53-61° F (11-16° C)	225-300	0-1	1 ppp 5-7 weeks	2-3 ppp 6-8 weeks	3-5 ppp 8-11 weeks	Generally not needed.	Whitefly, thrips, leafminers	Botrytis, Root rot, Tobacco Mosaic Virus	This variety is extremely sensitive to growth regulators, and it is naturally well-branched and compact.

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PETUNIA	Rhythm and Blues	5.8-6.2	5,000-8,000	59-76° F (15-24° C)	53-61° F (11-16° C)	225-300	0-1	1 ppp 6-8 weeks	1-3 ppp 7-9 weeks	3-5 ppp 9-12 weeks	Early applications of growth regulators are required. B-Nine 1,500-2,000 ppm/ Cycocel 750-1,000 ppm spray, Bonzi 2-3 ppm drench. Apply 2-3 times early in the crop cycle.	Whitefly, thrips, leafminers	Botrytis, Root rot, Tobacco Mosaic Virus	This is a vigorous variety that branches well. Early growth regulator applications help with tone and branching.
PLECTRANTHUS	Mona Lavender	5.8-6.2	4,000-7,000	74-79°F (23-26°C)	59-64°F (15-17°C)	175-225	0-1	1 ppp 6-8 weeks	1-2 ppp 7-9 weeks	3-5 ppp 9-12 weeks	B-Nine 1,500-2,500 ppm and Cycocel 750-1,000 ppm tank mix(S) or Bonzi(S) 5-20 ppm applied as needed is effective.	Whitefly, worms	Root rot	Mona Lavender requires a short-day treatment to flower. Natural-day crops can be finished in southern climates for January to March sales. Spring, Summer and Fall crops can be achieved using black cloth/ short days in all regions.
PLECTRANTHUS	Nico, Nicolleta, Variegata	5.8-6.2	5,000-8,000	71-79°F (21-26°C)	56-61°F (13-16°C)	175-225	1-2	1 ppp 6-8 weeks	1-3 ppp 7-10 weeks	3-5 ppp 9-12 weeks	Generally not needed.	Whitefly	Botrytis, Pythium, Rhizoctonia	Regularly allow the media to dry between waterings. Pinch regularly to improve habit.
PURSLANE	Fairytales, Rio Grande™	5.8-6.2	5,000-10,000	71-79°F (21-26°C)	62-67°F (16-19°C)	225-300	1-2	1-2 ppp 5-6 weeks	2-3 ppp 6-8 weeks	3-5 ppp 9-12 weeks	Generally not needed.	Whitefly	Root rot	Regularly allow the media to dry moderately between waterings, especially in cool periods. Regular pinching and constant feeding will improve habit and flowering.
RUDBECKIA	Gold Rush	5.8-6.2	5,000-9,000	62-67°F (16-19°C)	65-76°F (18-24°C)	175-225	1-2	1 ppp 6-8 weeks	1-2 ppp 8-10 weeks	4-5 ppp 10-12 weeks	Generally not needed. Bonzi(D) 1-2 ppm can be effective in controlling overall growth and reducing flower stem height.	Aphids, leafhoppers	Botrytis, Powdery Mildew, Leaf Spot	Provide good air circulation around the crown of the plant to avoid common diseases and poor growth.
SALVIA GUARANTICA	Black & Blue, Black & Bloom	5.4-5.8	6,000-9,000	71-79°F (21-26°C)	59-64°F (15-17°C)	175-225	1-2	1 ppp 7-9 weeks	1-2 ppp 8-10 weeks	2-3 ppp 10-12 weeks	A B-Nine 2,000-3,500 ppm and Cycocel 1,000-1,500 ppm tank mix(S) will help control height.	Whitefly, fungus gnats, thrips	Botrytis, Pythium, Rhizoctonia	Regularly allow the media to dry between waterings, particularly during cool periods. Salvia Black & Blue prefers warm conditions to ensure early flowering.
SALVIA LONGISPICATA X FARINACEA	Mystic Spires Blue	5.8-6.2	6,000-10,000	71-79°F (21-26°C)	62-67°F (16-19°C)	175-225	1-2	1 ppp 4-8 weeks	2-3 ppp 6-10 weeks	4-5 ppp 8-12 weeks	Responsive to B-Nine 2,500-3,000 ppm. Increase rates as days lengthen in late Spring and Summer.	Whitefly	—	Regularly allow the media to dry moderately between waterings, especially in cool periods. Proper pinching and moderate feeding will improve habit and flowering.
SCAEVOLA	Blue Fan, Bondi™, Brilliant, White Sparkle	5.8-6.2	5,000-9,000	74-79°F (23-26°C)	59-64°F (15-17°C)	175-225	1-2	1 ppp 5-7 weeks	1-2 ppp 7-8 weeks	3-5 ppp 10-12 weeks	Generally not needed. Bonzi(D) 1-3 ppm or Bonzi(S) 20-40 ppm will control growth.	Whitefly	Pythium, Rhizoctonia	Scaevola prefers a well-drained soil. Allow the media to dry between waterings. Night temperatures lower than recommended will significantly slow the crop and lead to problems with root rot.
STROBILANTHES	Persian Shield	5.8-6.2	3,000-6,000	74-79°F (23-26°C)	59-64°F (15-17°C)	175-225	1-3	—	1-2 ppp 8-10 weeks	3-5 ppp 10-13 weeks	Generally not needed.	Whitefly	Root rot	Moderate light levels produce more colorful foliage. Pinch early to shape. Feed regularly to maintain growth.
THUNBERGIA	Sunny™	5.8-6.2	5,000-8,000	71-79°F (21-26°C)	59-64°F (15-17°C)	175-225	1-3	1 ppp 6-8 weeks	1-2 ppp 7-9 weeks	4-5 ppp 10-12 weeks	Generally not needed.	Mites, whitefly, thrips	Botrytis	Thunbergia is a warm-season crop that prefers night temperatures above 60°F (15°C). Pinch regularly to shape.
VERBENA	Aztec®, Aztec® Magic	5.8-6.2	5,000-8,000	71-79°F (21-26°C)	62-64°F (16-17°C)	225-300	1-2	1 ppp 5-7 weeks	1-3 ppp 7-8 weeks	4-5 ppp 10-13 weeks	Responsive to a B-Nine 2,500-3,500 ppm/ Cycocel 750-1,000 ppm tank mix(S) and Florel(S) 250-300 ppm to control growth and improve plant habit.	Whitefly, leafminers, aphids	Root rot	Regularly allow plants to dry between waterings. Pinch as needed to shape.
VERBENA	EnduraScape™	5.8-6.2	5,000-8,000	71-79°F (21-26°C)	62-64°F (16-17°C)	225-300	1-2	1 ppp 5-7 weeks	1-3 ppp 7-8 weeks	4-5 ppp 10-13 weeks	Responsive to a B-Nine 2,500-3,500 ppm/ Cycocel 750-1,000 ppm tank mix(S) and Florel(S) 250-300 ppm to control growth and improve plant habit.	Whitefly, leafminers, aphids	Root rot	Regularly allow plants to dry between waterings. Pinch as needed to shape. EnduraScape varieties may require more PGR use under normal conditions.