

syngenta flowers

Grower Success Guide

ANNUALS 2021-2022

BRINGING PLANT POTENTIAL TO LIFE



BLOOMING BRIGHTLY™

Introducing a new interspecific New Guinea Impatiens that is a category knockout! Spectra is versatile in sun or shade and is early-to-flower, with large flowers. Its uniform mounded habit ensures high-quality retail plants in all pots sizes and hanging baskets.

syngentaflowers-us.com/spectra

INTERSPECIFIC
SPECTRA™
NEW GUINEA IMPATIENS

Table of Contents

WHAT'S INSIDE

Technical Key 1	Seed Propagation 5	Vegetative Spring Annuals URCs.... 102
Digital Tools Available Online 2	Seed Finishing..... 20	How to Read a Syngenta Tag 103
Technical Support 3	Vegetative Propagation 53	Chrysal Alesco® 104
	Vegetative Finishing 66	2021–2023 Week Calendar 108

TECHNICAL KEY

Standardized Pot Guide

NEW DESCRIPTION	ROUGHLY APPLIES TO
Pack	804, 606 packs
Large Pack	1801, 306 packs
1.0 pt. pot	4 in. pot
1.0 qt. pot	4.5 in. pot
1.25 qt. pot	6 in. pot
2.5 qt. pot	Trade gallon pot
3.0 qt. pot	8 in. pot
1.5 gal. HB	10 in. hanging basket
1.5 gal. pot	10 in. pot
2.0 gal. HB	12 in. hanging basket
2.5 gal. pot	12 in. pot
3.0 gal. HB	14 in. hanging basket
3.0 gal. pot	14 in. pot
3.5 gal. pot	15 in. pot

Moisture Level

MOISTURE LEVEL	DESCRIPTION
1 – DRY	Soil is tan to gray in color, trays are extremely light, and soil pulls away from sides of container.
2 – MEDIUM	Soil is light brown in color, no water can be extracted from soil, and soil will crumble apart.
3 – MOIST	Soil is brown in color, strongly squeezing the soil will extract a few drops of water, and trays are light with no visible bend.
4 – WET	Soil is dark brown but not shiny, no free water is seen at the surface of the soil, when pressed or squeezed water drips easily, and trays are heavy with a visible bend in the middle.
5 – SATURATED	Soil is dark brown and shiny, free water is present at the surface of the soil, water drips freely from the bottom of the tray, and trays are heavy with a visible bend in the middle.

Timing

ABBREVIATION	DESCRIPTION
E	Early
E-M	Early-Mid
M	Mid
M-L	Mid-Late
L	Late

Vigor

ABBREVIATION	DESCRIPTION
C	Compact
C-M	Compact-Medium
M	Medium
M-V	Medium-Vigorous
V	Vigorous

Digital Tools Available Online

Get online technical support today!

- Product Availability
- Field Trial Events and Results
- Online Image Library
- Sell Sheets
- Culture Sheets
- Technical Tips and Documents
- Webinars and Videos
- Catalogs and Brochures



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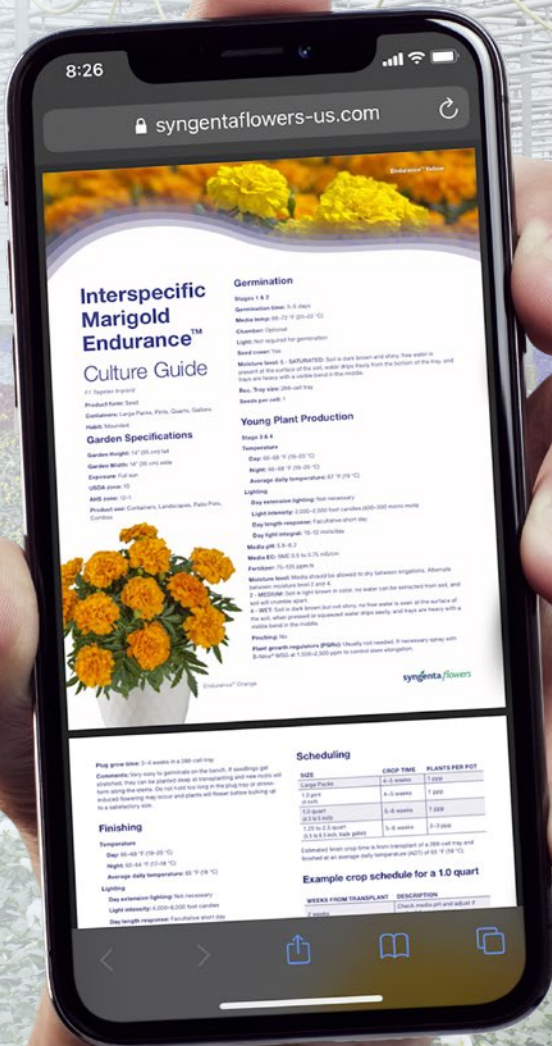
Karl Trellinger



Keith Francis



Steffi Hugo



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Imara™ XDR Rose

Seed Propagation

Imara™ XDR Rose



Begonia **BADA BING®/BADA BOOM®** *F1 Begonia semperflorens*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw, Pelleted	7–8 weeks	1-2	No	6–8 days	72–78 °F (22–26 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Avoid overwatering to help prevent excess algae growth and to promote root growth into the media. If germinating on the bench it is helpful to cover trays with Reemay® or similar to help retain humidity and reduce irrigation frequency. When irrigating use low pressure/volume nozzles/breakers to avoid moving seeds around in the cell. If the daily light integral (DLI) is less than 12 mols/day adding supplemental HID light will promote a more uniform crop. Do not use plug trays that have been used previously and had a crop treated with paclobutrazol grown in them. Most Begonia semperflorens will stop growing if exposed to any level of paclobutrazol. Do not irrigate with recycled water for this reason.

Begonia **BOSSA NOVA™** *F1 Begonia boliviensis*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Pelleted	7–9 weeks	1	No	14 days	73–78 °F (23–25 °C)	Not required for germination	pH: 5.5–5.8 SME 0.5–1.0 mS/cm

Comments: Irrigate early in the day to avoid leaf scorch when high light levels are present. Allowing the soil surface to dry between irrigations will reduce algae growth. Light is not essential for emergence, but additional light at 14 hours per day will greatly enhance germination and early growth. Maintain high humidity until day 14 when it can be reduced to around 50%. Once out of the chamber, it is helpful to cover trays with Reemay® or similar to help retain humidity and reduce irrigation frequency. Avoid irrigating with cold water. 65° is ideal.

Begonia **EUREKA™** *F1 Begonia semperflorens*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Pelleted	7–8 weeks	1-2	No	6–8 days	72–78 °F (22–26 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Avoid overwatering to help prevent excess algae growth and to promote root growth into the media. If germinating on the bench it is helpful to cover trays with Reemay® or similar to help retain humidity and reduce irrigation frequency. When irrigating use low pressure/volume nozzles/breakers to avoid moving seeds around in the cell. If the daily light integral (DLI) is less than 12 mols/day adding supplemental HID light will promote a more uniform crop. Do not use plug trays that have been used previously and had a crop treated with paclobutrazol grown in them. Most Begonia semperflorens will stop growing if exposed to any level of paclobutrazol. Do not irrigate with recycled water for this reason.

Begonia **TOPSPIN™** *F1 Begonia semperflorens*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Pelleted	7–8 weeks	1-2	No	6–8 days	72–78 °F (22–26 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Avoid overwatering to help prevent excess algae growth and to promote root growth into the media. If germinating on the bench it is helpful to cover trays with find and replace all Reemay® or similar to help retain humidity and reduce irrigation frequency. When irrigating use low pressure/volume nozzles/breakers to avoid moving seeds around in the cell. If the daily light integral (DLI) is less than 12 mols/day adding supplemental HID light will promote a more uniform crop. Do not use plug trays that have been used previously and had a crop treated with paclobutrazol grown in them. Most Begonia semperflorens will stop growing if exposed to any level of paclobutrazol. Do not irrigate with recycled water for this reason.

Begonia Interspecific **BOWLER™** *F1 Begonia × hybrida*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Pelleted	6–7 weeks	1	No	6–8 days	72–78 °F (22–26 °C)	Beneficial for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Avoid overwatering to prevent excess algae growth and to promote root growth into the media. If germinating on the bench, it is helpful to cover trays with find and replace all Reemay® or similar to help retain humidity and reduce irrigation frequency. When irrigating, use low pressure/volume nozzles/breakers to avoid moving seeds around in the cell. If the daily light integral (DLI) is less than 12 mols/day, adding supplemental HID light will promote a more uniform crop.

Begonia Interspecific **TOPHAT™** *F1 Begonia × hybrida*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Pelleted	6–7 weeks	1	No	6–8 days	72–78 °F (22–26 °C)	Beneficial for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Avoid overwatering to help prevent excess algae growth and to promote root growth into the media. If germinating on the bench, it is helpful to cover trays with Reemay® or similar to help retain humidity and reduce irrigation frequency. When irrigating, use low pressure/volume nozzles/breakers to avoid moving seeds around in the cell. If the daily light integral (DLI) is less than 12 mols/day, adding supplemental HID light will promote a more uniform crop.

Calendula **COSTA™** *OP Calendula officinalis*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	3–4 weeks	1	Yes	5–10 days	70–72 °F (21–22 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Grow on the cool side. Calendulas are not recommended for fall crops where cool conditions cannot be maintained.

SEED PROPAGATION

Celosia **BRIGHT SPARKS™** *OP Celosia plumosa erecta*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	4–5 weeks	1	Yes	2–4 days	70–75 °F (21–24 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Bright Sparks is a facultative short day variety and will flower faster under short days. If sowing under short days, it is vital to grow the plugs under a day length of at least 14 hours to promote sufficient vegetative growth before flowering.

Cleome **SPARKLER™ 2.0** *F1 Cleome hassleriana*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	3–4 weeks	1	Yes	4–6 days	80–85 °F (26–30 °C) days 68–70 °F (20–21 °C) nights	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: A 15 °F positive DIF is recommended for best germination results. Cleome is a heavy feeder; start feeding in the plug about two weeks after sowing.

Cosmos **APOLLO™** *OP Cosmos bipinnatus*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	4–5 weeks	1	Yes	3–4 days	61–65 °F (16–18 °C)	Not required for germination	pH: 5.5–5.9 SME 0.25–0.5 mS/cm

Comments: Cosmos will flower early under short days, so to allow bulking of the plug provide a 14 hour day length during propagating.

Cuphea **SRIRACHA™** *F1 Cuphea llavea*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	3.5–4 weeks	1	Yes	3–5 days	70–75 °F (21–24 °C)	Not required for germination	pH: 5.8–6.2 SME 0.5–0.75 mS/cm

Comments: Only the first application of plant growth regulators (PGR) is necessary for the plug. After two weeks, you can alternate moisture between 2 and 4 to help tone the plugs. Provide supplemental lighting if possible if DLI is less than 8 mols/day.

Dahlia **FRESCO™** *OP Dahlia hybrida*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw, Coated	3–4 weeks	1	Yes	5 days	70 °F (21 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Provide day extension lighting to 12–14 hours/day to help prevent premature flower bud set.

Dahlia **HARLEQUIN™** *OP Dahlia hybrida*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw, Coated	3–4 weeks	1	Yes	5 days	70 °F (21 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Provide day extension lighting to 12–14 hours/day to help prevent premature flower bud set.

Dianthus **DIABUNDA®** *F1 Dianthus × barbatus*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Pelleted	5–6 weeks	1	Yes	5 days	72–74 °F (22–23 °C)	Not required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Providing high light and dropping the temperature to an ADT of 60 °F (21 °C) will reduce the need for PGRs. Day extension lighting to 14 hours will hasten flowering of the finished plant.

Dianthus **SUPER PARFAIT™** *F1 Dianthus chinensis*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw, Pelleted	5–6 weeks	1	Yes	5 days	72–74 °F (22–23 °C)	Not required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Providing high light and dropping the temperature to an ADT of 60 °F (21 °C) will reduce the need for PGRs. Day extension lighting to 14 hours will hasten flowering of the finished plant.

Dianthus **VENTI PARFAIT™** *F1 Dianthus chinensis*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw, Pelleted	5–6 weeks	1	Yes	5 days	72–74 °F (22–23 °C)	Not required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Providing high light and dropping the temperature to an ADT of 60 °F (21 °C) will reduce the need for PGRs. Day extension lighting to 14 hours will hasten flowering of the finished plant.

English Daisy / Bellis **BAM BAM™** *OP Bellis perennis*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Pelleted	5–6 weeks	1	Yes	3–5 days	65–70 °F (18–21 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: As plugs mature, reduce irrigation frequency to tone plants.

Gazania **BIG KISS™** *F1 Gazania rigens*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	5–6 weeks	1	Yes	4–6 days	70–75 °F (21–24 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Growing Gazania plugs on the dry side and keeping them moderately cool will help prevent leaf stretch.

Gazania **FROSTY KISS™** *F1 Gazania rigens*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	5–6 weeks	1	Yes	4–6 days	70–75 °F (21–24 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Growing Gazania plugs on the dry side and keeping them moderately cool will help prevent leaf stretch.

Gazania **GAZOO™** *OP Gazania rigens*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	5–6 weeks	1	Yes	4–6 days	70–75 °F (21–24 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Growing Gazania plugs on the dry side and keeping them moderately cool will help prevent leaf stretch.

Gazania **KISS™** *F1 Gazania rigens*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	5–6 weeks	1	Yes	4–6 days	70–75 °F (21–24 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Growing Gazania plugs on the dry side and keeping them moderately cool will help prevent leaf stretch.

Geranium **BULLSEYE™** *F1 Pelargonium × hortorum*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Coated	4–5 weeks	1	Yes	1–3 days	73 °F (23 °C)	Not required for germination	pH: 6.1–6.5 SME 0.9–1.3 mS/cm

Comments: Geraniums are irradiance plants so the more light they receive the faster they will flower. Under short days or cloudy conditions it is beneficial to provide supplemental lighting of around 400 foot candles (4,000 lux) especially in the plug tray to speed up flowering. All geraniums are especially sensitive to bacterial diseases so be sure to start with clean plug trays, media and propagation areas. Geranium seed does not carry bacterial diseases so if you start clean you can stay clean. Do not subirrigate or use recycled water. Media pH should not drop below 6.0 or the plants may suffer from iron and/or manganese toxicity.

Geranium **MAVERICK™** *F1 Pelargonium × hortorum*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Coated	4–5 weeks	1	Yes	1–3 days	73 °F (23 °C)	Not required for germination	pH: 6.1–6.5 SME 0.9–1.3 mS/cm

Comments: Geraniums are irradiance plants so the more light they receive the faster they will flower. Under short days or cloudy conditions it is beneficial to provide supplemental lighting of around 400 foot candles (4,000 lux) especially in the plug tray to speed up flowering. All geraniums are especially sensitive to bacterial diseases so be sure to start with clean plug trays, media and propagation areas. Geranium seed does not carry bacterial diseases so if you start clean you can stay clean. Do not subirrigate or use recycled water. Media pH should not drop below 6.0 or the plants may suffer from iron and/or manganese toxicity.

Geranium **MULTIBLOOM™** *F1 Pelargonium × hortorum*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Coated	4–5 weeks	1	Yes	1–3 days	73 °F (23 °C)	Not required for germination	pH: 6.1–6.5 SME 0.9–1.3 mS/cm

Comments: Geraniums are irradiance plants so the more light they receive the faster they will flower. Under short days or cloudy conditions it is beneficial to provide supplemental lighting of around 400 foot candles (4,000 lux) especially in the plug tray to speed up flowering. All geraniums are especially sensitive to bacterial diseases so be sure to start with clean plug trays, media and propagation areas. Geranium seed does not carry bacterial diseases so if you start clean you can stay clean. Do not subirrigate or use recycled water. Media pH should not drop below 6.0 or the plants may suffer from iron and/or manganese toxicity.

Geranium **PINTO™ PREMIUM** *F1 Pelargonium × hortorum*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Coated	4–5 weeks	1	Yes	1–3 days	73 °F (23 °C)	Not required for germination	pH: 6.1–6.5 SME 0.9–1.3 mS/cm

Comments: Geraniums are irradiance plants so the more light they receive the faster they will flower. Under short days or cloudy conditions it is beneficial to provide supplemental lighting of around 400 foot candles (4,000 lux) especially in the plug tray to speed up flowering. All geraniums are especially sensitive to bacterial diseases so be sure to start with clean plug trays, media and propagation areas. Geranium seed does not carry bacterial diseases so if you start clean you can stay clean. Do not subirrigate or use recycled water. Media pH should not drop below 6.0 or the plants may suffer from iron and/or manganese toxicity.

Geranium **QUANTUM™** *F1 Pelargonium × hortorum*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Coated	4–5 weeks	1	Yes	1–3 days	73 °F (23 °C)	Not required for germination	pH: 6.1–6.5 SME 0.9–1.3 mS/cm

Comments: Geraniums are irradiance plants; the more light they receive, the faster they will flower. Under short days or cloudy conditions, it is beneficial to provide supplemental lighting of around 400 foot candles (4,000 lux), especially in the plug tray to speed up flowering. All geraniums are especially sensitive to bacterial diseases, so be sure to start with clean plug trays, media and propagation areas. Geranium seed does not carry bacterial diseases, so if you start clean you can stay clean. Do not subirrigate or use recycled water. Media pH should not drop below 6.0, or the plants may suffer from iron and/or manganese toxicity.

Geranium **RINGO 2000™** *F1 Pelargonium × hortorum*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Coated	4–5 weeks	1	Yes	1–3 days	73 °F (23 °C)	Not required for germination	pH: 6.1–6.5 SME 0.9–1.3 mS/cm

Comments: Geraniums are irradiance plants so the more light they receive the faster they will flower. Under short days or cloudy conditions it is beneficial to provide supplemental lighting of around 400 foot candles (4,000 lux) especially in the plug tray to speed up flowering. All geraniums are especially sensitive to bacterial diseases so be sure to start with clean plug trays, media and propagation areas. Geranium seed does not carry bacterial diseases so if you start clean you can stay clean. Do not subirrigate or use recycled water. Media pH should not drop below 6.0 or the plants may suffer from iron and/or manganese toxicity.

Geranium Ivy **REACH OUT™** *F1 Pelargonium peltatum*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Coated	5–6 weeks	1	Yes	4 days	73 °F (23 °C)	Not required for germination	pH: 5.8–6.2 SME 0.9–1.3 mS/cm

Comments: Geraniums are irradiance plants so the more light they receive the faster they will flower. Under short days or cloudy conditions it is beneficial to provide supplemental lighting of around 400 foot candles (4,000 lux) especially in the plug tray to speed up flowering. All geraniums are especially sensitive to bacterial diseases so be sure to start with clean plug trays, media and propagation areas. Geranium seed does not carry bacterial diseases so if you start clean you can stay clean. Do not subirrigate or use recycled water. Media pH should not drop below 6.0 or the plants may suffer from iron and/or manganese toxicity.

Geranium Ivy **TORNADO™** *F1 Pelargonium peltatum*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Coated	5–6 weeks	1	Yes	4 days	73 °F (23 °C)	Not required for germination	pH: 5.8–6.2 SME 0.9–1.3 mS/cm

Comments: Geraniums are irradiance plants so the more light they receive the faster they will flower. Under short days or cloudy conditions it is beneficial to provide supplemental lighting of around 400 foot candles (4,000 lux) especially in the plug tray to speed up flowering. All geraniums are especially sensitive to bacterial diseases so be sure to start with clean plug trays, media and propagation areas. Geranium seed does not carry bacterial diseases so if you start clean you can stay clean. Do not subirrigate or use recycled water. Media pH should not drop below 6.0 or the plants may suffer from iron and/or manganese toxicity.

Gerbera **BENGAL™** *F1 Gerbera jamesonii*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
128-cell tray	SatinCoat™	5–6 weeks	1	No	4 days	74–76 °F (23–24 °C)	Required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Under low light conditions provide supplemental HID light if possible; do not extend daylength as this will extend the time to flower. It is critical to allow adequate dry back between irrigations to prevent stunted and distorted growth. Because of this do not mist at night. If germinating on a bench it is best to use a tent system to increase humidity and reduce the frequency of irrigations/misting.

Gerbera **CARTWHEEL®** *F1 Gerbera jamesonii*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
128-cell tray	SatinCoat™	5–6 weeks	1	No	4 days	74–76 °F (23–24 °C)	Required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Under low light conditions provide supplemental HID light if possible; do not extend daylength as this will extend the time to flower. It is critical to allow adequate dry back between irrigations to prevent stunted and distorted growth. Because of this do not mist at night. If germinating on a bench it is best to use a tent system to increase humidity and reduce the frequency of irrigations/misting.

Gerbera **ELEPHANT™** *F1 Gerbera jamesonii*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
128-cell tray	SatinCoat™	5–6 weeks	1	No	4 days	74–76 °F (23–24 °C)	Required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Under low light conditions provide supplemental HID light if possible; do not extend daylength as this will extend the time to flower. It is critical to allow adequate dry back between irrigations to prevent stunted and distorted growth. Because of this do not mist at night. If germinating on a bench it is best to use a tent system to increase humidity and reduce the frequency of irrigations/misting.

Gerbera **JAGUAR™** F1 *Gerbera jamesonii*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
128-cell tray	SatinCoat™	5–6 weeks	1	No	4 days	74–76 °F (23–24 °C)	Required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Under low light conditions provide supplemental HID light if possible; do not extend daylength as this will extend the time to flower. It is critical to allow adequate dry back between irrigations to prevent stunted and distorted growth. Because of this do not mist at night. If germinating on a bench it is best to use a tent system to increase humidity and reduce the frequency of irrigations/misting.

Hibiscus **HONEYMOON™** F1 *Hibiscus moscheutos*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
200-cell tray	Raw	3–4 weeks	1	Yes	3–5 days	75–81 °F (24–27 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: If Cycocel® is applied, seedlings may temporarily yellow. Begin feeding at 75 ppm N at radical emergence.

Impatiens **ACCENT™** F1 *Impatiens walleriana*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	4–5 weeks	1	Yes	3–5 days	72–75 °F (22–24 °C)	Required for germination	pH: 5.8–6.2 SME 0.5–0.75 mS/cm

Comments: Use a calcium based fertilizer and feed once a week at most to avoid soft growth and stretching of plugs. Do not let plants go into the night with wet foliage or tip abortion may occur. Downward cupping or twisting of immature leaves may be caused by overuse of PGRs. Subdue Maxx® and/or Segway® drenches are recommended plug stage fungicides for disease management.

Impatiens **ACCENT™ PREMIUM** F1 *Impatiens walleriana*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	4–5 weeks	1	Yes	3–5 days	72–75 °F (22–24 °C)	Required for germination	pH: 5.8–6.2 SME 0.5–0.75 mS/cm

Comments: Use a calcium based fertilizer and feed once a week at most to avoid soft growth and stretching of plugs. Do not let plants go into the night with wet foliage or tip abortion may occur. Downward cupping or twisting of immature leaves may be caused by overuse of PGRs. Subdue Maxx® and/or Segway® drenches are recommended plug stage fungicides for disease management.

Impatiens **ATHENA™** F1 *Impatiens walleriana*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	4–5 weeks	1	Yes	3–5 days	72–75 °F (22–24 °C)	Required for germination	pH: 5.8–6.2 SME 0.5–0.75 mS/cm

Comments: Use a calcium-based fertilizer and feed once a week at most to avoid soft growth and stretching of plugs. Do not let plants go into the night with wet foliage or tip abortion may occur. Downward cupping or twisting of immature leaves may be caused by overuse of PGRs. Subdue Maxx® and/or Segway® drenches are recommended plug stage fungicides for disease management.

Impatiens **IMARA™ XDR** F1 *Impatiens walleriana*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	4–5 weeks	1	Yes	3–5 days	72–75 °F (22–24 °C)	Required for germination	pH: 5.8–6.2 SME 0.5–0.75 mS/cm

Comments: Use a calcium based fertilizer and feed once a week at most to avoid soft growth and stretching of plugs. Do not let plants go into the night with wet foliage or tip abortion may occur. Downward cupping or twisting of immature leaves may be caused by overuse of PGRs. Subdue Maxx® and/or Segway® drenches are recommended plug stage fungicides for disease management, and rotations of Mural® and Micora® sprays and Segovis® sprays or drenches are recommended for the finishing stage. For more information on Imara™ XDR visit us at www.syngentaflowers-us.com/Imara.

Impatiens **XTREME™** F1 *Impatiens walleriana*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	4–5 weeks	1	Yes	3–5 days	72–75 °F (22–24 °C)	Required for germination	pH: 5.8–6.2 SME 0.5–0.75 mS/cm

Comments: Use a calcium based fertilizer and feed once a week at most to avoid soft growth and stretching of plugs. Do not let plants go into the night with wet foliage or tip abortion may occur. Downward cupping or twisting of immature leaves may be caused by overuse of PGRs. Subdue Maxx® and/or Segway® drenches are recommended plug stage fungicides for disease management.

Impatiens New Guinea **FLORIFIC®** F1 *Impatiens hawkeri*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	4–6 weeks	1	Yes	8 days	70–75 °F (22–24 °C)	Not required for germination	pH: 5.8–6.2 SME 0.9–1.3 mS/cm

Comments: Ensure a good scouting program for Thrips is in place.

Marigold African **ANTIGUA™** *F1 Tagetes erecta*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Detailed, SatinCoat™	4–5 weeks	1	Yes	3–5 days	72–75 °F (22–24 °C)	Not required for germination	pH: 6.1–6.5 SME 0.5–0.75 mS/cm

Comments: Easy to germinate on the bench. Maintain media pH above 6.2 to avoid iron/manganese toxicity. Short days will shorten time to flower.

Marigold African **BIG TOP™** *F1 Tagetes erecta*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Coated, Detailed	4–5 weeks	1	Yes	3–5 days	72–75 °F (22–24 °C)	Not required for germination	pH: 6.1–6.5 SME 0.5–0.75 mS/cm

Comments: Easy to germinate on the bench. Maintain media pH above 6.2 to avoid iron/manganese toxicity. Short days reduces time to flower.

Marigold African **INCA II™** *F1 Tagetes erecta*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Detailed, SatinCoat™	4–5 weeks	1	Yes	3–5 days	72–75 °F (22–24 °C)	Not required for germination	pH: 6.1–6.5 SME 0.5–0.75 mS/cm

Comments: Easy to germinate on the bench. Maintain media pH above 6.2 to avoid iron/manganese toxicity. Short days will shorten time to flower.

Marigold African **PERFECTION™** *F1 Tagetes erecta*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Detailed, SatinCoat™	4–5 weeks	1	Yes	3–5 days	72–75 °F (22–24 °C)	Not required for germination	pH: 6.1–6.5 SME 0.5–0.75 mS/cm

Comments: Easy to germinate on the bench. Maintain media pH above 6.2 to avoid iron/manganese toxicity. Short days will shorten time to flower.

Marigold French anemone **ALUMIA™** *OP Tagetes patula nana*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Coated, Detailed	3–4 weeks	1	Yes	3–5 days	68–72 °F (20–22 °C)	Not required for germination	pH: 5.8–6.2 SME 0.5–0.75 mS/cm

Comments: Very easy to germinate on the bench. If seedlings get stretched, they can be planted deep at transplanting, and new roots will form along the stems. Do not hold too long in the plug tray or stress-induced flowering may occur, and plants will flower before bulking up to a satisfactory size.

Marigold French dwarf crested **HAPPY™** *OP Tagetes patula nana*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Detailed, SatinCoat™	3–4 weeks	1	Yes	3–5 days	68–72 °F (20–22 °C)	Not required for germination	pH: 5.8–6.2 SME 0.5–0.75 mS/cm

Comments: Very easy to germinate on the bench. If seedlings get stretched, they can be planted deep at transplanting, and new roots will form along the stems. Do not hold too long in the plug tray or stress-induced flowering may occur, and plants will flower before bulking up to a satisfactory size. Happy is a genetically compact series, so chemical growth regulators are usually not necessary. Control can also be gained by good moisture management and applications of various growth regulators if needed.

Marigold Interspecific **ENDURANCE™** *F1 Tagetes triploid*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	SatinCoat™	3–4 weeks	1	Yes	3–5 days	68–72 °F (20–22 °C)	Not required for germination	pH: 5.8–6.2 SME 0.5–0.75 mS/cm

Comments: Very easy to germinate on the bench. If seedlings get stretched, they can be planted deep at transplanting and new roots will form along the stems. Do not hold too long in the plug tray or stress-induced flowering may occur and plants will flower before bulking up to a satisfactory size.

Marigold Interspecific **ZENITH™** *F1 Tagetes triploid*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Detailed	3–4 weeks	1	Yes	3–5 days	68–72 °F (20–22 °C)	Not required for germination	pH: 5.8–6.2 SME 0.5–0.75 mS/cm

Comments: Very easy to germinate on the bench. If seedlings get stretched, they can be planted deep at transplanting, and new roots will form along the stems. Do not hold too long in the plug tray or stress-induced flowering may occur, and plants will flower before bulking up to a satisfactory size.

Mimulus **MAGIC™** *F1 Mimulus × hybrida*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Pelleted	4–5 weeks	1	No	5–7 days	65–68 °F (18–20 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Provide day extension lighting to 14 hours under short days using mum type lights (10 foot candles). Using HID lights can promote too early of flowering.

Nicotiana **PERFUME™** *F1 Nicotiana × sandrea*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Pelleted	4–5 weeks	1	No	3–5 days	70–75 °F (21–24 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Cool days with high light will reduce the need to apply PGRs.

Nicotiana **SARATOGA™** *F1 Nicotiana × alata*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Pelleted	4–5 weeks	1	No	3–5 days	70–75 °F (21–24 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Cool days with high light will reduce the need to apply PGRs.

Osteospermum **ASTI™** *F1 Osteospermum ecklonis*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	4–5 weeks	1	Yes	8–12 days	68–70 °F (21–22 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: It is very important to spray the plugs with Cycocel® at 300 ppm about 10 days after sowing to help reduce hypocotyl stretch. Shorter hypocotyls will result in a stronger central stem after transplant and will reduce floppiness in the finished plant.

Pansy **COLOSSUS™** *F1 Viola × wittrockiana*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw, PreNova	5–6 weeks	1	Yes	5 days	65–68 °F (18–20 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Keep media pH below 5.8 to help avoid Thielaviopsis infections. Under hot temperatures provide lower light levels to reduce heat stress. Do not hold Pansy plugs - transplant before plugs get root bound.

Pansy **DELTA™** *F1 Viola × wittrockiana*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw, PreNova	5–6 weeks	1	Yes	5 days	65–68 °F (18–20 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Keep media pH below 5.8 to help avoid Thielaviopsis infections. Under hot temperatures provide lower light levels to reduce heat stress. Do not hold Pansy plugs - transplant before plugs get root bound.

Pansy **DELTA™ PREMIUM** *F1 Viola × wittrockiana*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw, PreNova	5–6 weeks	1	Yes	5 days	65–68 °F (18–20 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Keep media pH below 5.8 to help avoid Thielaviopsis infections. Under hot temperatures provide lower light levels to reduce heat stress. Do not hold Pansy plugs - transplant before plugs get root bound.

Pansy **DELTA™ SPEEDY** *F1 Viola × wittrockiana*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw, PreNova	5–6 weeks	1	Yes	5 days	65–68 °F (18–20 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Keep media pH below 5.8 to help avoid Thielaviopsis infections. Under hot temperatures provide lower light levels to reduce heat stress. Do not hold Pansy plugs - transplant before plugs get root bound.

Pansy Spreading **FREEFALL™** *F1 Viola × wittrockiana*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Primed	4–5 weeks	1	Yes	5 days	65–68 °F (18–20 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Keep media pH below 5.8 to help avoid Thielaviopsis infections. Under hot temperatures provide lower light levels to reduce heat stress. Also if very frequent irrigation occurs due to high temperatures apply a supplemental feed of Solubor® to avoid Boron deficiency.

Pansy Spreading **FREEFALL™ XL** *F1 Viola × wittrockiana*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Primed	4–5 weeks	1	Yes	5 days	65–68 °F (18–20 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Keep media pH below 5.8 to help avoid Thielaviopsis infections. Under hot temperatures, provide lower light levels to reduce heat stress. If frequent irrigation occurs due to high temperatures, apply a supplemental feed of Solubor® to avoid Boron deficiency.

Penstemon **ARABESQUE**® F1 *Penstemon hartwegii*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	5–6 weeks	1	Yes	7 days	68–73 °F (20–23 °C)	Not required for germination	pH: 5.8–6.2 SME 0.5–0.75 mS/cm

Comments: Warm day temperatures can promote soft growth and excessive stem elongation.

Penstemon **PARTYBELLS**™ F1 *Penstemon hartwegii*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	5–6 weeks	1	Yes	7 days	68–73 °F (20–23 °C)	Not required for germination	pH: 5.8–6.2 SME 0.5–0.75 mS/cm

Comments: Warm day temperatures can promote soft growth and excessive stem elongation.

Pentas **BEEBRIGHT**™ F1 *Pentas lanceolata*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Pelleted	7–8 weeks	1	No	7–10 days	73–76 °F (23–24 °C)	Not required for germination	pH: 6.1–6.5 SME 0.9–1.3 mS/cm

Comments: Provide supplemental lighting when DLI is less than 12 mols/day. Monitor pH and maintain above 6.1, or growth can stall.

Pentas **HONEYCLUSTER**™ F1 *Pentas lanceolata*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Pelleted	7–8 weeks	1	No	7–10 days	73–76 °F (23–24 °C)	Not required for germination	pH: 6.1–6.5 SME 0.9–1.3 mS/cm

Comments: Provide supplemental lighting when DLI is less than 12 mols/day. Monitor pH levels and maintain above 6.1, or growth can stall.

Petunia grandiflora **DUVET**™ F1 *Petunia grandiflora*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Pelleted	4–5 weeks	1	No	3–5 days	72–76 °F (22–24 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Covering seed is not necessary but a light vermiculite coating will help maintain moisture levels in drier climates. Keep pelleted seed at moisture level 5 the first several days to ensure the pellet is completely dissolved. Providing long days in the plug stage will reduce overall time to flower. Low boron levels can induce tip abortion. Spraying an uneven plug tray with B-Nine® WSG at 1,500 ppm may help even the growth in the tray.

Petunia grandiflora **FROST**™ F1 *Petunia grandiflora*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw, Pelleted	4–5 weeks	1	No	3–5 days	72–76 °F (22–24 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Covering seed is not necessary but a light vermiculite coating will help maintain moisture levels in drier climates. Keep pelleted seed at moisture level 5 the first several days to ensure the pellet is completely dissolved. Providing long days in the plug stage will reduce overall time to flower. Low boron levels can induce tip abortion. Spraying an uneven plug tray with B-Nine® WSG at 1,500 ppm may help even the growth in the tray.

Petunia grandiflora **TRITUNIA**™ F1 *Petunia grandiflora*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw, Pelleted	4–5 weeks	1	No	3–5 days	72–76 °F (22–24 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Covering seed is not necessary but a light vermiculite coating will help maintain moisture levels in drier climates. Keep pelleted seed at moisture level 5 the first several days to ensure the pellet is completely dissolved. Providing long days in the plug stage will reduce overall time to flower. Low boron levels can induce tip abortion. Spraying an uneven plug tray with B-Nine® WSG at 1,500 ppm may help even the growth in the tray.

Petunia milliflora **PICOBELLA**™ F1 *Petunia milliflora*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Pelleted	4–5 weeks	1	No	3–5 days	72–76 °F (22–24 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Covering seed is not necessary but a light vermiculite coating will help maintain moisture levels in drier climates. Keep pelleted seed at moisture level 5 the first several days to ensure the pellet is completely dissolved. Providing long days in the plug stage will reduce overall time to flower. Low boron levels can induce tip abortion.

Petunia multiflora **DAMASK**™ F1 *Petunia multiflora*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Pelleted	4–5 weeks	1	No	3–5 days	72–76 °F (22–24 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Covering seed is not necessary but a light vermiculite coating will help maintain moisture levels in drier climates. Keep pelleted seed at moisture level 5 the first several days to ensure the pellet is completely dissolved. Providing long days in the plug stage will reduce overall time to flower. Low boron levels can induce tip abortion. Spraying an uneven plug tray with B-Nine® WSG at 1,500 ppm may help even the growth in the tray.

Petunia multiflora **HURRAH™** F1 *Petunia multiflora*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Pelleted	4–5 weeks	1	No	3–5 days	72–76 °F (22–24 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Covering seed is not necessary but a light vermiculite coating will help maintain moisture levels in drier climates. Keep pelleted seed at moisture level 5 the first several days to ensure the pellet is completely dissolved. Providing long days in the plug stage will reduce overall time to flower. Low boron levels can induce tip abortion. Spraying an uneven plug tray with B-Nine® WSG at 1,500 ppm may help even the growth in the tray.

Petunia spreading **FOTOFINISH™** F1 *Petunia pendula*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Pelleted	4–5 weeks	1	No	3–5 days	72–76 °F (22–24 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Covering seed is not necessary, but a light vermiculite coating will help maintain moisture levels in drier climates. Keep pelleted seed at moisture level 5 the first several days to ensure the pellet is completely dissolved. Providing long days in the plug stage will reduce overall time to flower. Low boron levels can induce tip abortion. Spraying an uneven plug tray with B-Nine® WSG at 1,500 ppm may help even the growth in the tray.

Petunia spreading grandiflora **SKYBOX™** F1 *Petunia pendula*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Pelleted	4–5 weeks	1	No	3–5 days	72–76 °F (22–24 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Covering seed is Not necessary but a light vermiculite coating will help maintain moisture levels in drier climates. Keep pelleted seed at moisture level 5 the first several days to ensure the pellet is completely dissolved. Providing long days in the plug stage will reduce overall time to flower. Low boron levels can induce tip abortion.

Petunia spreading milliflora **FLASHFORWARD™** F1 *Petunia pendula*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Pelleted	4–5 weeks	1	No	3–5 days	72–76 °F (22–24 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Covering seed is not necessary but a light vermiculite coating will help maintain moisture levels in drier climates. Keep pelleted seed at moisture level 5 the first several days to ensure the pellet is completely dissolved. Providing long days in the plug stage will reduce overall time to flower. Low boron levels can induce tip abortion. Spraying an uneven plug tray with B-Nine® WSG at 1,500 ppm may help even the growth in the tray.

Phlox **POPSTARS™** F1 *Phlox drummondii*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	4–5 weeks	1	Yes	3–5 days	68–72 °F (20–22 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Keep EC less than 0.75 mS/cm as Phlox drummondii are sensitive to high salts. Keep EC less than 0.75 mS/cm and avoid the dry-growing method of growth control, as Phlox drummondii are sensitive to high salts.

Primula **LIBRE™** F1 *Primula obconica*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	6–7 weeks	1	Yes	7 days	72–75 °F (22–24 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Control Thrips to avoid Tospovirus.

Primula **PRIMERA™** F1 *Primula acaulis*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw, Primed	6–7 weeks	1	Yes	7 days	64–68 °F (18–20 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Grow plugs on the dry side to avoid excessive algae growth.

Ranunculus **MACHÉ™** F1 *Ranunculus asiaticus*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw, Pelleted	8–10 weeks	1	Yes	14–21 days	50–55 °F (10–13 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Control Thrips to avoid Tospovirus.

Ranunculus **MAGIC™** F1 *Ranunculus asiaticus*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw, Pelleted	8–10 weeks	1	Yes	14–21 days	50–55 °F (10–13 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Control Thrips to avoid Tospovirus.

Salvia **MOJAVE™** *OP Salvia splendens*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	4–5 weeks	1	Yes	5–7 days	72–75 °F (22–24 °C)	Not required for germination	pH: 5.5–5.8 SME 0.5–0.75 mS/cm

Comments: Salvia is sensitive to high salts in the plug tray, so do not let the EC rise above 1.5 mS/cm. After fertilization, rinse the plants off with clear water to avoid burning the young growing tips.

Salvia **SENTRY™** *OP Salvia splendens*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	4–5 weeks	1	Yes	5–7 days	72–75 °F (22–24 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Salvia is sensitive to high salts in the plug tray, so do not let the EC rise above 1.5 mS/cm. After fertilization, rinse the plants off with clear water to avoid burning the young growing tips.

Salvia **SIZZLER™** *OP Salvia splendens*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	4–5 weeks	1	Yes	5–7 days	72–75 °F (22–24 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Salvia is sensitive to high salts in the plug tray so do not let the EC rise above 1.5 mS/cm. After fertilization, rinse the plants off with clear water to avoid burning the young growing tips.

Salvia **VICTORIA™** *OP Salvia farinacea*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	6–7 weeks	1	Yes	5–7 days	72–75 °F (22–24 °C)	Not required for germination	pH: 5.5–5.8 SME 0.5–0.75 mS/cm

Comments: Salvia is sensitive to high salts in the plug tray, so do not let the EC rise above 1.5 mS/cm. After fertilization, rinse the plus off with clear water to avoid burning the young growing tips. Salvia farinacea is a long day crop so extending the daylength to 16hrs with HID lights at true leaf stage is beneficial.

Sanvitalia **QUEEN OF SUNLIGHT™** *Sanvitalia speciosa*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	5–6 weeks	3	Yes	7–10 days	70–72 °F (21–22 °C)	Not required for germination	pH: 5.5–5.9 SME 0.25–0.5 mS/cm

Comments: Providing supplemental HID light will speed germination and improve plug quality. Sensitive to high salts; keep EC less than 0.5 mS/cm in the plug.

Schizanthus **ATLANTIS™** *F1 Schizanthus × wisetonensis*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	4–7 weeks	1	Yes	7–14 days	62–65 °F (17–19 °C)	Not required for germination	pH: 5.8–6.2 SME 0.25–0.5 mS/cm

Comments: Keep plugs under short days to avoid premature flowering.

Snapdragon **LIBERTY™ CLASSIC** *F1 Antirrhinum majus*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	6–7 weeks	1	Yes	5 days	72–75 °F (22–24 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: High pH levels (above 6.2) may promote iron deficiency causing chlorotic young leaves. Overly wet conditions or watering late in the day can cause shoot tip abortion. Keeping the media too wet can also lead to root rot diseases such as Pythium.

Snapdragon **MADAME BUTTERFLY™** *F1 Antirrhinum majus*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	6–7 weeks	1	Yes	5 days	72–75 °F (22–24 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: High pH levels (above 6.2) may promote iron deficiency causing chlorotic young leaves. Overly wet conditions or watering late in the day can cause shoot tip abortion. Keeping the media too wet can also lead to root rot diseases such as Pythium.

Snapdragon **SNAPTASTIC™** *F1 Antirrhinum majus*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw, Pelleted	6–7 weeks	1	Yes	5 days	72–75 °F (22–24 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: High pH levels (above 6.2) may promote iron deficiency causing chlorotic young leaves. Overly wet conditions or watering late in the day can cause shoot tip abortion. Keeping the media too wet can also lead to root rot diseases such as Pythium.

Snapdragon Dwarf **SNAPTINI™** *F1 Antirrhinum majus*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw, Pelleted	5–6 weeks	1	Yes	5 days	72–75 °F (22–24 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: High pH levels (above 6.2) may promote iron deficiency causing chlorotic young leaves. Overly wet conditions or watering late in the day can cause shoot tip abortion. Keeping the media too wet can also lead to root rot diseases such as Pythium.

Sunflower **SUNFINITY®** *F1 Helianthus hybrida*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
72-cell	Raw	4 weeks	1	Yes	5–6 days	68–72 °F (20–22 °C)	Not required for germination	pH: 5.5–5.8 SME 1.0–1.5 mS/cm

Comments: Apply a Bonzi (paclobutrazol) srench at 2–3 ppm within 48 hours of sowing (3–5 quarts per 100 sq ft.) to control hypocotyl stretch. Plugs must be propagated under long day (+13 hour) photoperiods in order to prevent delays in flowering. For more information on Sunfinity® visit us at www.syngentaflowers-us.com/sunfinity.

Torenia **DUCHESS™** *F1 Torenia fournieri*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Pelleted	4–5 weeks	1	No	4–6 days	75 °F (24 °C)	Required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: High light levels can cause leaf scorch. Very wet conditions will promote damping-off diseases.

Torenia **HI-LITE™** *F1 Torenia fournieri*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Pelleted	4–5 weeks	1	No	4–6 days	75 °F (24 °C)	Required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: High light levels can cause leaf scorch. Very wet conditions will promote damping-off diseases.

Verbena **OBSESSION™** *OP Verbena hybrida*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw, Primed	6–7 weeks	1	Yes	4–7 days	73–76 °F (23–24 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Verbena need to be germinated on the dry side at moisture level 3. It is best to water in plug trays to moisture level 3 prior to sow, sow the seeds and then irrigate lightly only when needed to maintain moisture level 3.

Verbena **OBSESSION™ CASCADE** *OP Verbena hybrida*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw, Primed	6–7 weeks	1	Yes	4–7 days	73–76 °F (23–24 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Verbena need to be germinated on the dry side at moisture level 3. It is best to water in plug trays to moisture level 3 prior to sow, sow the seeds and then irrigate lightly only when needed to maintain moisture level 3.

Verbena **TUSCANY®** *OP Verbena hybrida*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw, Primed	6–7 weeks	1	Yes	4–7 days	73–76 °F (23–24 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Verbena need to be germinated on the dry side at moisture level 3. It is best to water in plug trays to moisture level 3 prior to sow, sow the seeds and then irrigate lightly only when needed to maintain moisture level 3.

Vinca **BLOCKBUSTER™** *F1 Catharanthus roseus*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	5 weeks	1	Yes	7–8 days	75–78 °F (24–25 °C)	Not required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Soil temperatures lower than 75 °F (23 °C) during germination may decrease germination rates. Keeping media pH at 5.8 or lower will help reduce the likelihood of Thielaviopsis infections.

Vinca **CORA® CASCADE** *F1 Catharanthus roseus*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	5 weeks	1	Yes	7–8 days	76–78 °F (24–25 °C)	Not required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Soil temperatures lower than 75 °F (23 °C) during germination may decrease germination rates. Keeping media pH at 5.8 or lower will help reduce the likelihood of Thielaviopsis infections.

Vinca **CORA® CLASSIC** *F1 Catharanthus roseus*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	5 weeks	1	Yes	7–8 days	76–78 °F (24–25 °C)	Not required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Soil temperatures lower than 75 °F (23 °C) during germination may decrease germination rates. Keeping media pH at 5.8 or lower will help reduce the likelihood of Thielaviopsis infections.

Vinca **CORA® XDR** *F1 Catharanthus roseus*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	5 weeks	1	Yes	7–8 days	76–78 °F (24–25 °C)	Not required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Soil temperatures lower than 75 °F (23 °C) during germination may decrease germination rates. Keeping media pH at 5.8 or lower will help reduce the likelihood of Thielaviopsis infections.

Vinca **SUNSTORM®** *OP Catharanthus roseus*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	5 weeks	1	Yes	7–8 days	76–78 °F (24–25 °C)	Not required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Soil temperatures lower than 75 °F (23 °C) during germination may decrease germination rates. Keeping media pH at 5.8 or lower will help reduce the likelihood of Thielaviopsis infections.

Vinca **VITESSE™** *F1 Catharanthus roseus*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	5 weeks	1	Yes	7–8 days	75–78 °F (24–25 °C)	Not required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Soil temperatures lower than 75 °F (23 °C) during germination may decrease germination rates. Keeping media pH at 5.8 or lower will help reduce the likelihood of Thielaviopsis infections.

Viola **DELTINI™** *F1 Viola cornuta*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw, PreNova	4–5 weeks	1	Yes	5 days	65–68 °F (18–20 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Keep media pH below 5.8 to help avoid Thielaviopsis infections. Under hot temperatures provide lower light levels to reduce heat stress. Also, if very frequent irrigation occurs due to high temperatures, apply a supplemental feed of Solubor® to avoid Boron deficiency.

Viola **ENDURIO®** *F1 Viola cornuta*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	PreNova	4–5 weeks	1	Yes	5 days	65–68 °F (18–20 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Keep media pH below 5.8 to help avoid Thielaviopsis infections. Under hot temperatures provide lower light levels to reduce heat stress. Also, if very frequent irrigation occurs due to high temperatures, apply a supplemental feed of Solubor® to avoid Boron deficiency.

Viola **PENNY™** *F1 Viola cornuta*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw, PreNova	4–5 weeks	1	Yes	5 days	65–68 °F (18–20 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Keep media pH below 5.8 to help avoid Thielaviopsis infections. Under hot temperatures, provide lower light levels to reduce heat stress. Also, if very frequent irrigation occurs due to high temperatures, apply a supplemental feed of Solubor® to avoid Boron deficiency.

Viola **TIGER EYE™** *F1 Viola cornuta*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Primed	4–5 weeks	1	Yes	5 days	65–68 °F (18–20 °C)	Required for germination	pH: 5.5–5.9 SME 0.9–1.3 mS/cm

Comments: Keep media pH below 5.8 to help avoid Thielaviopsis infections. Under hot temperatures, provide lower light levels to reduce heat stress. Also, if frequent irrigation occurs due to high temperatures, apply a supplemental feed of Solubor® to avoid Boron deficiency.

Wallflower **SUGAR RUSH™** *F1 Cheiranthus cheiri*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Raw	4–5 weeks	1	Yes	9–10 days	68–72 °F (20–22 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: It is important to treat with Bonzi® early in the plug cycle, as stated above to help create a stronger main stem.

Zinnia **MAGELLAN™** F1 *Zinnia elegans*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Detailed, SatinCoat™	2–3 weeks	1	Yes	1 day	70–75 °F (21–24 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Transplant Zinnias on time. Stress in the plug can lead to premature flowering.

Zinnia **SHORT STUFF™** F1 *Zinnia elegans*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	SatinCoat™	2–3 weeks	1	Yes	1 day	70–75 °F (21–24 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Transplant Zinnias on time. Stress in the plug can lead to premature flowering.

Zinnia **SWIZZLE™** F1 *Zinnia elegans*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Detailed, SatinCoat™	2–3 weeks	1	Yes	1 day	70–75 °F (21–24 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Transplant Zinnias on time. Stress in the plug can lead to premature flowering.

Zinnia **UPROAR™** F1 *Zinnia elegans*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Detailed, SatinCoat™	2–3 weeks	1	Yes	1 day	70–75 °F (21–24 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Transplant Zinnias on time. Stress in the plug can lead to premature flowering.

Zinnia **ZOWIE!™** F1 *Zinnia elegans*

REC TRAY	FORMS	PLUG TIME	SEEDS/CELL	SEED COVER	GERM TIME	SOIL TEMP	GERM LIGHT	MEDIA pH/EC
288-cell tray	Detailed, SatinCoat™	2–3 weeks	1	Yes	1 day	70–75 °F (21–24 °C)	Not required for germination	pH: 5.5–5.9 SME 0.5–0.75 mS/cm

Comments: Transplant Zinnias on time. Stress in the plug can lead to premature flowering.

FotoFinish™ Pink

Seed Finishing

FotoFinish™ Pink



Begonia **BADA BING®/BADA BOOM™** *F1 Begonia semperflorens*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	66–68 °F (19–20 °C)	64–66 °F (18–19 °C)	125–175 ppm N	Packs 1 ppp 4–5 weeks 1 pt. 1 ppp 5–6 weeks 1 qt. 1–2 ppp 5–6 weeks 1.25 qt. 3 ppp 5–7 weeks 1.5 gal. HB 5–6 ppp 7–8 weeks	Aphids, Thrips	Botrytis

Begonia **BOSSA NOVA™** *F1 Begonia boliviensis*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	2,000–4,000 foot candles	Obligate long day	66–68 °F (19–20 °C)	58–60 °F (14–16 °C)	200–250 ppm N	1 pt. 1 ppp 7–8 weeks 1 qt. 1 ppp 8–9 weeks 1.25 qt. 1–2 ppp 8–10 weeks 2.5 qt. 1–2 ppp 8–10 weeks 3 qt. 3–5 ppp 8–10 weeks 1.5 gal. HB 3–5 ppp 8–10 weeks	Fungus gnats and Shoreflies (during propagation) and Thrips	Pythium and Botrytis

Begonia **EUREKA™** *F1 Begonia semperflorens*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	66–68 °F (19–20 °C)	64–66 °F (18–19 °C)	125–175 ppm N	Packs 1 ppp 5–6 weeks Large Packs 1 ppp 5–6 weeks 1 pt. 1 ppp 6–7 weeks 1 qt. 1–2 ppp 6–7 weeks 1.25 qt. 3 ppp 6–8 weeks 2.5 qt. 3 ppp 6–8 weeks 1.5 gal. HB 5–6 ppp 8–9 weeks	Aphids, Thrips	Botrytis

Begonia **TOPSPIN™** *F1 Begonia semperflorens*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	66–68 °F (19–20 °C)	64–66 °F (18–19 °C)	125–175 ppm N	Packs 1 ppp 4–5 weeks 1 pt. 1 ppp 5–6 weeks 1 qt. 1–2 ppp 5–6 weeks 1.25 qt. 3 ppp 5–7 weeks 2.5 qt. 3 ppp 5–7 weeks 1.5 gal. HB 5–6 ppp 7–8 weeks	Aphids, Thrips	Botrytis

Begonia Interspecific **BOWLER™** *F1 Begonia × hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day neutral	66–68 °F (19–20 °C)	64–66 °F (18–19 °C)	125–175 ppm N	Large Packs 1 ppp 4–5 weeks 1 pt. 1 ppp 4–5 weeks 1 qt. 1 ppp 4–5 weeks 1.25 qt. 1 ppp 5–6 weeks 2.5 qt. 1 ppp 5–6 weeks 3 qt. 2–3 ppp 6–7 weeks 1.5 gal. HB 3 ppp 7–8 weeks	Aphids, Thrips	Botrytis

Begonia Interspecific **TOPHAT™** *F1 Begonia × hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	66–68 °F (19–20 °C)	64–66 °F (18–19 °C)	125–175 ppm N	Large Packs 1 ppp 4–5 weeks 1 pt. 1 ppp 4–5 weeks 1 qt. 1 ppp 4–5 weeks 1.25 qt. 1 ppp 5–6 weeks 2.5 qt. 1 ppp 5–6 weeks 3 qt. 2–3 ppp 6–7 weeks 1.5 gal. HB 3 ppp 7–8 weeks	Aphids, Thrips	Botrytis

Calendula **COSTA™** *OP Calendula officinalis*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative long day	66–68 °F (19–20 °C)	52–54 °F (11–12 °C)	125–175 ppm N	Packs 1 ppp 4–5 weeks Large Packs 1 ppp 4–5 weeks 1 pt. 1 ppp 5–6 weeks 1 qt. 1 ppp 5–6 weeks 1.25 qt. 1 ppp 6–8 weeks 2.5 qt. 1 ppp 6–8 weeks 3 qt. 2–3 ppp 7–8 weeks 1.5 gal. pot 3–4 ppp 8–10 weeks	Whitefly and Thrips	Powdery Mildew, Botrytis and Pythium

FINISH PGRs	TECH TIPS
<p>Usually not required. Plant growth can be controlled best through proper moisture, feed and temperature management. If needed due to environmental conditions sprays of Cycocel® at 500-1,000 ppm or B-Nine® WSG/Cycocel® tank mixes at 1,500 ppm B-Nine® WSG/300 ppm Cycocel® are effective. Avoid spraying with B-Nine® WSG during the last few weeks of crop time to avoid reducing flower size.</p>	<p>Avoid overwatering to help prevent excess algae growth and to promote root growth into the media. If germinating on the bench it is helpful to cover trays with Reemay® or similar to help retain humidity and reduce irrigation frequency. When irrigating use low pressure/volume nozzles/breakers to avoid moving seeds around in the cell. If the daily light integral (DLI) is less than 12 mols/day adding supplemental HID light will promote a more uniform crop. Do not use plug trays that have been used previously and had a crop treated with paclobutrazol grown in them. Most Begonia semperflorens will stop growing if exposed to any level of paclobutrazol. Do not irrigate with recycled water for this reason.</p>
FINISH PGRs	TECH TIPS
<p>Proper management of moisture, fertilizer, and light is the best way to control growth. If needed, Bossa Nova Begonia responds well to sprays of B-Nine® WSG at 1,500-2,500 ppm.</p>	<p>Irrigate early in the day to avoid leaf scorch when high light levels are present. Allowing the soil surface to dry between irrigations will reduce algae growth. Light is not essential for emergence, but additional light at 14 hours per day will greatly enhance germination and early growth. Maintain high humidity until day 14 when it can be reduced to around 50%. Once out of the chamber, it is helpful to cover trays with Reemay® or similar to help retain humidity and reduce irrigation frequency. Avoid irrigating with cold water. 65° is ideal.</p>
FINISH PGRs	TECH TIPS
<p>Usually not required. Plant growth can be controlled best through proper moisture, feed and temperature management. If needed due to environmental conditions sprays of Cycocel® at 500-1,000 ppm or B-Nine® WSG/Cycocel® tank mixes at 1,500 ppm B-Nine® WSG/300 ppm Cycocel® are effective. Avoid spraying with B-Nine® WSG during the last few weeks of crop time to avoid reducing flower size.</p>	<p>Avoid overwatering to help prevent excess algae growth and to promote root growth into the media. If germinating on the bench it is helpful to cover trays with Reemay® or similar to help retain humidity and reduce irrigation frequency. When irrigating use low pressure/volume nozzles/breakers to avoid moving seeds around in the cell. If the daily light integral (DLI) is less than 12 mols/day adding supplemental HID light will promote a more uniform crop. Do not use plug trays that have been used previously and had a crop treated with paclobutrazol grown in them. Most Begonia semperflorens will stop growing if exposed to any level of paclobutrazol. Do not irrigate with recycled water for this reason.</p>
FINISH PGRs	TECH TIPS
<p>Usually not required. Plant growth can be controlled best through proper moisture, feed and temperature management. If needed due to environmental conditions sprays of Cycocel® at 500-1,000 ppm or B-Nine® WSG/Cycocel® tank mixes at 1,500 ppm B-Nine® WSG/300 ppm Cycocel® are effective. Avoid spraying with B-Nine® WSG during the last few weeks of crop time to avoid reducing flower size.</p>	<p>Avoid overwatering to help prevent excess algae growth and to promote root growth into the media. If germinating on the bench it is helpful to cover trays with find and replace all Reemay® or similar to help retain humidity and reduce irrigation frequency. When irrigating use low pressure/volume nozzles/breakers to avoid moving seeds around in the cell. If the daily light integral (DLI) is less than 12 mols/day adding supplemental HID light will promote a more uniform crop. Do not use plug trays that have been used previously and had a crop treated with paclobutrazol grown in them. Most Begonia semperflorens will stop growing if exposed to any level of paclobutrazol. Do not irrigate with recycled water for this reason.</p>
FINISH PGRs	TECH TIPS
<p>Bowler is genetically compact and highly branching and will require few PGRs. For small containers, such as 306 packs, a spray of B-Nine® WSG at 1,500 to 2,500 ppm about halfway through the finishing cycle will provide excellent control of leaf and plant size without reducing flower size. Bonzi® sprays are not recommended since flower size will be significantly reduced. Plant growth regulators are usually not required for gallon containers and larger. Plant growth is best controlled through proper moisture, feed, and temperature management.</p>	<p>Avoid overwatering to prevent excess algae growth and to promote root growth into the media. If germinating on the bench, it is helpful to cover trays with find and replace all Reemay® or similar to help retain humidity and reduce irrigation frequency. When irrigating, use low pressure/volume nozzles/breakers to avoid moving seeds around in the cell. If the daily light integral (DLI) is less than 12 mols/day, adding supplemental HID light will promote a more uniform crop.</p>
FINISH PGRs	TECH TIPS
<p>For small containers, such as 306 packs, a Bonzi® drench at 0.25 ppm about half way through the finishing cycle will provide excellent control of leaf and plant size, but will reduce flower size about 10% temporarily. Bonzi sprays are not recommended since flower size reduction is significant. For gallons to 10" hanging baskets, sprays of B-Nine® WSG at 2,500 ppm or B-Nine® WSG/Cycocel® tank mixes at 1,500 ppm B-Nine® WSG/300 ppm Cycocel® are effective in reducing leaf size and stem elongation and will not significantly reduce flower size. PGRs are usually not required for containers larger than 10" hanging baskets. Plant growth can be best controlled through proper moisture, feed, and temperature management.</p>	<p>Avoid overwatering to help prevent excess algae growth and to promote root growth into the media. If germinating on the bench, it is helpful to cover trays with Reemay® or similar to help retain humidity and reduce irrigation frequency. When irrigating, use low pressure/volume nozzles/breakers to avoid moving seeds around in the cell. If the daily light integral (DLI) is less than 12 mols/day, adding supplemental HID light will promote a more uniform crop.</p>
FINISH PGRs	TECH TIPS
<p>High light, cool temperatures, and proper water management is the best way to control growth. Under warmer conditions, B-Nine® WSG sprays at 2,500-3,500 ppm can be effective to prevent stretch.</p>	<p>Grow on the cool side. Calendulas are not recommended for fall crops where cool conditions cannot be maintained.</p>

SEED FINISHING

Celosia **BRIGHT SPARKS™** *OP Celosia plumosa erecta*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative short day	68–70 °F (20–21 °C)	60–62 °F (16–17 °C)	125–175 ppm N	1 pt. l 1 ppp 5–6 weeks 1 qt. l 1 ppp 6–8 weeks 1.25 qt. l 1 ppp 7–9 weeks 2.5 qt. l 1 ppp 7–9 weeks 3 qt. l 2–3 ppp 6–7 weeks 1.5 gal. pot 3–4 ppp 6–7 weeks	Spider Mites, Thrips and Aphids	Botrytis, Pythium and Powdery Mildew

Cleome **SPARKLER™ 2.0** *F1 Cleome hassleriana*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 2.3–2.8 mS/cm, PourThru EC: 3.5–4.2 mS/cm	4,000–6,000 foot candles	Facultative long day	76–78 °F (24–26 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1.25 qt. l 1–2 ppp 10–12 weeks 2.5 qt. l 1–2 ppp 10–12 weeks	Fungus Gnats	Pythium, Powdery Mildew

Cosmos **APOLLO™** *OP Cosmos bipinnatus*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative short day	66–68 °F (19–20 °C)	60–62 °F (16–17 °C)	125–175 ppm N	Packs l 1 ppp 4–5 weeks Large Packs l 1 ppp 4–5 weeks 1 pt. l 1 ppp 6–7 weeks 1 qt. l 1 ppp 6–7 weeks 1.25 qt. l 1 ppp 7–8 weeks 2.5 qt. l 1 ppp 7–8 weeks 3 qt. l 3–4 ppp 6–7 weeks 1.5 gal. pot 3–4 ppp 7–8 weeks	Aphids and Thrips.	Powdery Mildew and Botrytis

Cuphea **SRIRACHA™** *F1 Cuphea llavea*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative short day	78–80 °F (26–27 °C)	68–70 °F (20–21 °C)	125–175 ppm N	1 qt. l 1 ppp 8–9 weeks 1.25 qt. l 1 ppp 8–9 weeks 2.5 qt. l 2 ppp 8–9 weeks 3 qt. l 3 ppp 8–9 weeks	Aphids, Thrips, and Whiteflies.	Fusarium, Pythium, and Thielaviopsis.

Dahlia **FRESCO™** *OP Dahlia hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative short day	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	125–175 ppm N	Large Packs 1 pt. l 1 ppp 6–8 weeks 1 qt. l 1 ppp 6–8 weeks	Aphids, Thrips	Powdery mildew, Pythium, Botrytis

Dahlia **HARLEQUIN™** *OP Dahlia hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative short day	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	125–175 ppm N	1 pt. l 1 ppp 6–7 weeks 1 qt. l 1 ppp 6–7 weeks 1.25 qt. l 2–3 ppp 6–7 weeks	Aphids, Thrips.	Powdery mildew, Pythium, Botrytis.

Dianthus **DIABUNDA®** *F1 Dianthus × barbatus*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	3,500–4,500 foot candles (700–900 micro mols)	Facultative long day	62–64 °F (17–18 °C)	62–64 °F (17–18 °C)	125–175 ppm N	Packs l 1 ppp 5–7 weeks 1 pt. l 1 ppp 6–8 weeks 1 qt. l 1–2 ppp 6–9 weeks 1.25 qt. l 3 ppp 6–9 weeks 2.5 qt. l 3 ppp 6–9 weeks	Aphids, Thrips, Spider Mites	Fusarium, Alternaria, Botrytis

Dianthus **SUPER PARFAIT™** *F1 Dianthus chinensis*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	3,500–4,500 foot candles (700–900 micro mols)	Facultative long day	62–64 °F (17–18 °C)	62–64 °F (17–18 °C)	125–175 ppm N	Packs l 1 ppp 9–11 weeks 1 pt. l 1 ppp 9–11 weeks 1 qt. l 1–2 ppp 10–12 weeks 1.25 qt. l 3 ppp 10–12 weeks 2.5 qt. l 3 ppp 10–12 weeks	Aphids, Thrips, Spider Mites	Fusarium, Alternaria, Botrytis

	FINISH PGRs	TECH TIPS
	If grown in smaller containers or under suboptimal conditions, sprays of B-Nine® WSG at 2,500 ppm are effective at reducing stem length and leaf size. Do not spray after buds have started to show color or flower size will be reduced.	Bright Sparks is a facultative short day variety and will flower faster under short days. If sowing under short days, it is vital to grow the plugs under a day length of at least 14 hours to promote sufficient vegetative growth before flowering.
	PGRs are necessary to control plant height and create a fuller plant. Recommended are three sprays of Bonzi® at 25 ppm or B-Nine® WSG at 5,000 ppm applied 7-10 days apart, beginning two weeks after transplant. B-Nine® WSG may delay flowering by 4-7 days. A Bonzi® drench at 2-4 ppm when the plant has reached the desired height will help prevent stretch at retail.	A 15 °F positive DIF is recommended for best germination results. Cleome is a heavy feeder; start feeding in the plug about two weeks after sowing.
	Containers 1 pint and larger, PGRs are usually not necessary. If needed, for pack production spray with B-Nine® WSG at 2,500 to 5,000 ppm to help control plant height.	Cosmos will flower early under short days, so to allow bulking of the plug provide a 14 hour day length during propagating.
	To control growth, apply one or two applications of Bonzi® either as a spray at 20-40 ppm or as a drench at 0.5-1.0 ppm.	Only the first application of plant growth regulators (PGR) is necessary for the plug. After two weeks, you can alternate moisture between 2 and 4 to help tone the plugs. Provide supplemental lighting if possible if DLI is less than 8 mols/day.
	If needed, spray with B-Nine® WSG at 2,500-5,000 ppm.	Provide day extension lighting to 12– 14 hours/day to help prevent premature flower bud set.
	If needed, spray with B-Nine® WSG at 2,500-5,000 ppm.	Provide day extension lighting to 12-14 hours/day to help prevent premature flower bud set.
	If needed, spray with Bonzi® at 5-8 ppm.	Providing high light and dropping the temperature to an ADT of 60 °F (21 °C) will reduce the need for PGRs. Day extension lighting to 14 hours will hasten flowering of the finished plant.
	If needed, spray with Bonzi® at 5-8 ppm.	Providing high light and dropping the temperature to an ADT of 60 °F (21 °C) will reduce the need for PGRs. Day extension lighting to 14 hours will hasten flowering of the finished plant.

Dianthus **VENTI PARFAIT™** *F1 Dianthus chinensis*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	3,500–4,500 foot candles (700–900 micro mols)	Facultative long day	62–64 °F (17–18 °C)	62–64 °F (17–18 °C)	125–175 ppm N	Packs 1 ppp 9–11 weeks Large Packs 1 ppp 9–11 weeks 1 pt. 1 ppp 9–11 weeks 1 qt. 1–2 ppp 10–12 weeks 1.25 qt. 3 ppp 10–12 weeks 2.5 qt. 3 ppp 10–12 weeks	Aphids, Thrips, Spider Mites	Fusarium, Alternaria, Botrytis

English Daisy / Bellis **BAM BAM™** *OP Bellis perennis*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Day neutral	62–64 °F (17–18 °C)	48–50 °F (9–10 °C)	125–175 ppm N	Packs 1 ppp 11–13 weeks Large Packs 1 ppp 11–13 weeks 1 pt. 1 ppp 13–15 weeks 1 qt. 1 ppp 13–15 weeks 1.25 qt. 1–2 ppp 13–15 weeks	Aphids, Thrips	Crown Rot, Phoma, Rust

Gazania **BIG KISS™** *F1 Gazania rigens*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	6,000–8,000 foot candles	Facultative long day	70–72 °F (21–22 °C)	58–60 °F (14–16 °C)	125–175 ppm N	1 pt. 1 ppp 8–10 weeks 1 qt. 1 ppp 9–11 weeks 1.25 qt. 2–3 ppp 9–11 weeks 2.5 qt. 2–3 ppp 9–11 weeks 3 qt. 3–4 ppp 9–11 weeks	Aphids, Thrips, Spider Mites	Botrytis, Rhizoctonia, Sclerotinia

Gazania **FROSTY KISS™** *F1 Gazania rigens*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	6,000–8,000 foot candles	Facultative long day	70–72 °F (21–22 °C)	58–60 °F (14–16 °C)	125–175 ppm N	Packs 1 ppp 8–9 weeks Large Packs 1 ppp 8–9 weeks 1 pt. 1 ppp 8–10 weeks 1 qt. 1–2 ppp 9–11 weeks 1.25 qt. 3 ppp 9–11 weeks 2.5 qt. 3 ppp 9–11 weeks	Aphids, Thrips, Spider Mites	Botrytis, Rhizoctonia, Sclerotinia

Gazania **GAZOO™** *OP Gazania rigens*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	6,000–8,000 foot candles	Facultative long day	70–72 °F (21–22 °C)	58–60 °F (14–16 °C)	125–175 ppm N	1 pt. 1 ppp 8–10 weeks 1 qt. 1–2 ppp 9–11 weeks 1.25 qt. 3 ppp 9–11 weeks 2.5 qt. 3 ppp 9–11 weeks 3 qt. 3–4 ppp 9–11 weeks	Aphids, Thrips, Spider Mites	Botrytis, Rhizoctonia, Sclerotinia

Gazania **KISS™** *F1 Gazania rigens*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	6,000–8,000 foot candles	Facultative long day	70–72 °F (21–22 °C)	58–60 °F (14–16 °C)	125–175 ppm N	Large Packs 1 ppp 8–9 weeks 1 pt. 1 ppp 8–10 weeks 1 qt. 1–2 ppp 9–11 weeks 1.25 qt. 3 ppp 9–11 weeks 2.5 qt. 3 ppp 9–11 weeks	Aphids, Thrips, Spider Mites	Botrytis, Rhizoctonia, Sclerotinia

Geranium **BULLSEYE™** *F1 Pelargonium × hortorum*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 6.1–6.5 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	6,000–8,000 foot candles	Day neutral	70–72 °F (21–22 °C)	60–62 °F (16–17 °C)	200–250 ppm N	1 pt. 1 ppp 7–10 weeks 1 qt. 1 ppp 8–10 weeks 1.25 qt. 1 ppp 8–10 weeks 2.5 qt. 2 ppp 10–12 weeks 3 qt. 3 ppp 10–12 weeks 1.5 gal. HB 3–5 ppp 10–12 weeks 1.5 gal. pot 3–5 ppp 10–12 weeks 2 gal. HB 5 ppp 10–12 weeks	Thrips, Aphids	Botrytis, Pythium, Alternaria, Rust, Bacterial root and leaf diseases

	FINISH PGRs	TECH TIPS
	If needed, spray with Bonzi® at 5-8 ppm.	Providing high light and dropping the temperature to an ADT of 60 °F (21 °C) will reduce the need for PGRs. Day extension lighting to 14 hours will hasten flowering of the finished plant.
	FINISH PGRs	TECH TIPS
	Bam Bam is naturally compact and should not require any PGR treatments, especially if grown cool and under high light. During fall growing conditions, when growing conditions are not optimum, sprays of B-Nine® WSG at 1,000-2,000 ppm are effective in controlling plant growth.	As plugs mature, reduce irrigation frequency to tone plants.
	FINISH PGRs	TECH TIPS
	Usually not needed.	Growing Gazania plugs on the dry side and keeping them moderately cool will help prevent leaf stretch.
	FINISH PGRs	TECH TIPS
	Usually not needed.	Growing Gazania plugs on the dry side and keeping them moderately cool will help prevent leaf stretch.
	FINISH PGRs	TECH TIPS
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	FINISH PGRs	TECH TIPS
	Usually not needed.	Growing Gazania plugs on the dry side and keeping them moderately cool will help prevent leaf stretch.
	FINISH PGRs	TECH TIPS
	A total of 3-5 sprays of Cycocel® at 750 ppm will help control growth and speed flowering. Do not apply more than 750 ppm Cycocel® or leaf edge yellowing may occur. Using a spray adjuvant such as Capsil will reduce the chance of leaf edge yellowing. Spray every ten days to two weeks depending on environmental conditions and plant growth. Stop applying Cycocel® when flower buds are plainly visible. Late Cycocel® sprays can result in small and/or malformed flowers.	Geraniums are irradiance plants so the more light they receive the faster they will flower. Under short days or cloudy conditions it is beneficial to provide supplemental lighting of around 400 foot candles (4,000 lux) especially in the plug tray to speed up flowering. All geraniums are especially sensitive to bacterial diseases so be sure to start with clean plug trays, media and propagation areas. Geranium seed does not carry bacterial diseases so if you start clean you can stay clean. Do not subirrigate or use recycled water. Media pH should not drop below 6.0 or the plants may suffer from iron and/or manganese toxicity.

Geranium **MAVERICK™** *F1 Pelargonium × hortorum*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 6.1–6.5 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	6,000–8,000 foot candles	Day neutral	70–72 °F (21–22 °C)	60–62 °F (16–17 °C)	200–250 ppm N	1 qt. 1 ppp 8–10 weeks 1.25 qt. 1 ppp 8–10 weeks 2.5 qt. 2 ppp 10–12 weeks 3 qt. 3 ppp 10–12 weeks 1.5 gal. HB 3–5 ppp 10–12 weeks 1.5 gal. pot 3–5 ppp 10–12 weeks 2 gal. HB 5 ppp 10–12 weeks	Thrips, Aphids	Botrytis, Pythium, Alternaria, Rust, Bacterial root and leaf diseases

Geranium **MULTIBLOOM™** *F1 Pelargonium × hortorum*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 6.1–6.5 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	6,000–8,000 foot candles	Day neutral	70–72 °F (21–22 °C)	60–62 °F (16–17 °C)	200–250 ppm N	Packs 1 ppp 6–7 weeks Large Packs 1 pt. 1 ppp 6–8 weeks 1 qt. 1 ppp 7–9 weeks 1.25 qt. 1 ppp 8–10 weeks	Thrips, Aphids	Botrytis, Pythium, Alternaria, Rust, Bacterial root and leaf diseases

Geranium **PINTO™ PREMIUM** *F1 Pelargonium × hortorum*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 6.1–6.5 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	6,000–8,000 foot candles	Day neutral	70–72 °F (21–22 °C)	60–62 °F (16–17 °C)	200–250 ppm N	1 pt. 1 ppp 7–10 weeks 1 qt. 1 ppp 8–10 weeks 1.25 qt. 1 ppp 8–10 weeks 2.5 qt. 2 ppp 10–12 weeks 3 qt. 3 ppp 10–12 weeks 1.5 gal. HB 3–5 ppp 10–12 weeks 1.5 gal. pot 3–5 ppp 10–12 weeks 2 gal. HB 5 ppp 10–12 weeks	Thrips, Aphids	Botrytis, Pythium, Alternaria, Rust, Bacterial root and leaf diseases

Geranium **QUANTUM™** *F1 Pelargonium × hortorum*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 6.1–6.5 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	6,000–8,000 foot candles	Day neutral	70–72 °F (21–22 °C)	60–62 °F (16–17 °C)	200–250 ppm N	Large Packs 1 ppp 9–11 weeks 1 pt. 1 ppp 11–12 weeks 1 qt. 1 ppp 11–12 weeks 1.25 qt. 1 ppp 12–13 weeks 2.5 qt. 1 ppp 12–13 weeks 3 qt. 3–5 ppp 12–13 weeks 1.5 gal. pot 3–5 ppp 12–13 weeks	Thrips, Aphids	Botrytis, Pythium, Alternaria, Rust, Bacterial root and leaf diseases

Geranium **RINGO 2000™** *F1 Pelargonium × hortorum*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 6.1–6.5 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	6,000–8,000 foot candles	Day neutral	70–72 °F (21–22 °C)	60–62 °F (16–17 °C)	200–250 ppm N	Packs 1 ppp 7–8 weeks Large Packs 1 ppp 7–8 weeks 1 pt. 1 ppp 6–8 weeks 1 qt. 1 ppp 8–10 weeks 1.25 qt. 1 ppp 8–10 weeks 1.5 gal. HB 4–5 ppp 10–12 weeks	Thrips, Aphids	Botrytis, Pythium, Alternaria, Rust, Bacterial root and leaf diseases

Geranium lvy **REACH OUT™** *F1 Pelargonium peltatum*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Day neutral	66–68 °F (19–20 °C)	60–62 °F (16–17 °C)	125–175 ppm N	1 pt. 1 ppp 8–9 weeks 1 qt. 1 ppp 9–10 weeks 1.25 qt. 2–3 ppp 9–10 weeks 2.5 qt. 2–3 ppp 9–10 weeks 3 qt. 2–3 ppp 9–10 weeks 1.5 gal. HB 3–5 ppp 10–12 weeks	Fungus Gnats, Shoreflies and Thrips	Botrytis, Rhizoctonia, Pythium, Thielaviopsis and Bacterial root and leaf diseases

Geranium lvy **TORNADO™** *F1 Pelargonium peltatum*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Day neutral	68–70 °F (20–21 °C)	60–62 °F (16–17 °C)	125–175 ppm N	1 qt. 1 ppp 8–9 weeks 1.25 qt. 2–3 ppp 9–10 weeks 2.5 qt. 2–3 ppp 9–10 weeks 3 qt. 3–4 ppp 10–11 weeks 1.5 gal. HB 3–5 ppp 10–11 weeks	Fungus Gnats, Shoreflies and Thrips	Botrytis, Rhizoctonia, Pythium, Thielaviopsis and Bacterial root and leaf diseases

FINISH PGRs	TECH TIPS
<p>A total of 3-5 sprays of Cycocel® at 750 ppm will help control growth and speed flowering. Do not apply more than 750 ppm Cycocel® or leaf edge yellowing may occur. Using a spray adjuvant such as Capsil will reduce the chance of leaf edge yellowing. Spray every ten days to two weeks depending on environmental conditions and plant growth. Stop applying Cycocel® when flower buds are plainly visible. Late Cycocel® sprays can result in small and/or malformed flowers.</p>	<p>Geraniums are irradiance plants so the more light they receive the faster they will flower. Under short days or cloudy conditions it is beneficial to provide supplemental lighting of around 400 foot candles (4,000 lux) especially in the plug tray to speed up flowering. All geraniums are especially sensitive to bacterial diseases so be sure to start with clean plug trays, media and propagation areas. Geranium seed does not carry bacterial diseases so if you start clean you can stay clean. Do not subirrigate or use recycled water. Media pH should not drop below 6.0 or the plants may suffer from iron and/or manganese toxicity.</p>
FINISH PGRs	TECH TIPS
<p>A total of 2-3 sprays of Cycocel® at 750 ppm will help control growth and speed flowering, and is recommended for pack production. Depending on environmental conditions pints may not need any PGR applications except in the plug stage. Do not apply more than 750 ppm Cycocel® or leaf edge yellowing may occur. Using a spray adjuvant such as Capsil will reduce the chance of leaf edge yellowing. Spray every ten days to two weeks depending on environmental conditions and plant growth. Stop applying Cycocel® when flower buds are plainly visible. Late Cycocel® sprays can result in small and/or malformed flowers.</p>	<p>Geraniums are irradiance plants so the more light they receive the faster they will flower. Under short days or cloudy conditions it is beneficial to provide supplemental lighting of around 400 foot candles (4,000 lux) especially in the plug tray to speed up flowering. All geraniums are especially sensitive to bacterial diseases so be sure to start with clean plug trays, media and propagation areas. Geranium seed does not carry bacterial diseases so if you start clean you can stay clean. Do not subirrigate or use recycled water. Media pH should not drop below 6.0 or the plants may suffer from iron and/or manganese toxicity.</p>
FINISH PGRs	TECH TIPS
<p>A total of 3-5 sprays of Cycocel® at 750 ppm will help control growth and speed flowering. Do not apply more than 750 ppm Cycocel® or leaf edge yellowing may occur. Using a spray adjuvant such as Capsil will reduce the chance of leaf edge yellowing. Spray every ten days to two weeks depending on environmental conditions and plant growth. Stop applying Cycocel® when flower buds are plainly visible. Late Cycocel® sprays can result in small and/or malformed flowers.</p>	<p>Geraniums are irradiance plants so the more light they receive the faster they will flower. Under short days or cloudy conditions it is beneficial to provide supplemental lighting of around 400 foot candles (4,000 lux) especially in the plug tray to speed up flowering. All geraniums are especially sensitive to bacterial diseases so be sure to start with clean plug trays, media and propagation areas. Geranium seed does not carry bacterial diseases so if you start clean you can stay clean. Do not subirrigate or use recycled water. Media pH should not drop below 6.0 or the plants may suffer from iron and/or manganese toxicity.</p>
FINISH PGRs	TECH TIPS
<p>A total of 3-5 sprays of Cycocel® at 750 ppm will help control growth and speed flowering. Do not apply more than 750 ppm Cycocel® or leaf edge yellowing may occur. Using a spray adjuvant such as CapSil® will reduce the chance of leaf edge yellowing. Spray every 10 days to two weeks, depending on environmental conditions and plant growth. Stop applying Cycocel® when flower buds are visible. Late Cycocel® sprays can result in small and/or malformed flowers.</p>	<p>Geraniums are irradiance plants; the more light they receive, the faster they will flower. Under short days or cloudy conditions, it is beneficial to provide supplemental lighting of around 400 foot candles (4,000 lux), especially in the plug tray to speed up flowering. All geraniums are especially sensitive to bacterial diseases, so be sure to start with clean plug trays, media and propagation areas. Geranium seed does not carry bacterial diseases, so if you start clean you can stay clean. Do not subirrigate or use recycled water. Media pH should not drop below 6.0, or the plants may suffer from iron and/or manganese toxicity.</p>
FINISH PGRs	TECH TIPS
<p>A total of 2-3 sprays of Cycocel® at 750 ppm will help control growth and speed flowering. Do not apply more than 750 ppm Cycocel® or leaf edge yellowing may occur. Using a spray adjuvant such as CapSil® will reduce the chance of leaf edge yellowing. Spray every ten days to two weeks depending on environmental conditions and plant growth. Stop applying Cycocel® when flower buds are plainly visible. Late Cycocel® sprays can result in small and/or malformed flowers.</p>	<p>Geraniums are irradiance plants so the more light they receive the faster they will flower. Under short days or cloudy conditions it is beneficial to provide supplemental lighting of around 400 foot candles (4,000 lux) especially in the plug tray to speed up flowering. All geraniums are especially sensitive to bacterial diseases so be sure to start with clean plug trays, media and propagation areas. Geranium seed does not carry bacterial diseases so if you start clean you can stay clean. Do not subirrigate or use recycled water. Media pH should not drop below 6.0 or the plants may suffer from iron and/or manganese toxicity.</p>
FINISH PGRs	TECH TIPS
<p>If necessary, sprays of Cycocel® at 300-500 ppm will help control growth. Do not apply more than 750 ppm Cycocel® or leaf edge yellowing may occur. Using a spray adjuvant such as CapSil® will reduce the chance of leaf edge yellowing. Do not apply Cycocel® when flower buds are visible. Late Cycocel® sprays can result in small and/or malformed flowers.</p>	<p>Geraniums are irradiance plants so the more light they receive the faster they will flower. Under short days or cloudy conditions it is beneficial to provide supplemental lighting of around 400 foot candles (4,000 lux) especially in the plug tray to speed up flowering. All geraniums are especially sensitive to bacterial diseases so be sure to start with clean plug trays, media and propagation areas. Geranium seed does not carry bacterial diseases so if you start clean you can stay clean. Do not subirrigate or use recycled water. Media pH should not drop below 6.0 or the plants may suffer from iron and/or manganese toxicity, cled water.</p>
FINISH PGRs	TECH TIPS
<p>If necessary sprays of Cycocel® at 300-500 ppm will help control growth. Do not apply more than 750 ppm Cycocel® or leaf edge yellowing may occur. Using a spray adjuvant such as CapSil® will reduce the chance of leaf edge yellowing. Do not apply Cycocel® when flower buds are plainly visible. Late Cycocel® sprays can result in small and/or malformed flowers.</p>	<p>Geraniums are irradiance plants so the more light they receive the faster they will flower. Under short days or cloudy conditions it is beneficial to provide supplemental lighting of around 400 foot candles (4,000 lux) especially in the plug tray to speed up flowering. All geraniums are especially sensitive to bacterial diseases so be sure to start with clean plug trays, media and propagation areas. Geranium seed does not carry bacterial diseases so if you start clean you can stay clean. Do not subirrigate or use recycled water. Media pH should not drop below 6.0 or the plants may suffer from iron and/or manganese toxicity.</p>

SEED FINISHING

Gerbera **BENGAL™** F1 *Gerbera jamesonii*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative short day	70–72 °F (21–22 °C)	66–68 °F (19–20 °C)	125–175 ppm N	1.25 qt. 1 ppp 10–11 weeks 2.5 qt. 1 ppp 10–11 weeks 3 qt. 3 ppp 11–12 weeks 1.5 gal. HB 3 ppp 11–12 weeks 1.5 gal. pot 3 ppp 11–12 weeks	Aphids, Fungus gnats, Shore flies, Broad mites, Cyclamen mites, Spider mites, Thrips, Whiteflies and Leafminers.	Alternaria, Botrytis, Powdery mildew, Phytophthora, Rhizoctonia and Pythium.

Gerbera **CARTWHEEL®** F1 *Gerbera jamesonii*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative short day	70–72 °F (21–22 °C)	66–68 °F (19–20 °C)	125–175 ppm N	1.25 qt. 1 ppp 10–11 weeks 2.5 qt. 1 ppp 10–11 weeks 3 qt. 3 ppp 11–12 weeks 1.5 gal. pot 3 ppp 11–12 weeks	Aphids, Fungus gnats, Shore flies, Broad mites, Cyclamen mites, Spider mites, Thrips, Whiteflies and Leafminers.	Alternaria, Botrytis, Powdery mildew, Phytophthora, Rhizoctonia and Pythium.

Gerbera **ELEPHANT™** F1 *Gerbera jamesonii*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative short day	70–72 °F (21–22 °C)	66–68 °F (19–20 °C)	125–175 ppm N	1.25 qt. 1 ppp 9–10 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 2–3 ppp 10–11 weeks 1.5 gal. pot 3 ppp 10–11 weeks	Aphids, Fungus gnats, Shore flies, Broad mites, Cyclamen mites, Spider mites, Thrips, Whiteflies and Leafminers.	Alternaria, Botrytis, Powdery mildew, Phytophthora, Rhizoctonia and Pythium.

Gerbera **JAGUAR™** F1 *Gerbera jamesonii*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative short day	70–72 °F (21–22 °C)	66–68 °F (19–20 °C)	125–175 ppm N	1 pt. 1 ppp 9–10 weeks 1 qt. 1 ppp 9–11 weeks 1.25 qt. 1-2 ppp 9–11 weeks 2.5 qt. 2–3 ppp 9–11 weeks 3 qt. 3–5 ppp 10–12 weeks 1.5 gal. HB 3–5 ppp 10–12 weeks	Aphids, Fungus gnats, Shore flies, Broad mites, Cyclamen mites, Spider mites, Thrips, Whiteflies and Leafminers.	Alternaria, Botrytis, Powdery mildew, Phytophthora, Rhizoctonia and Pythium.

Hibiscus **HONEYMOON™** F1 *Hibiscus moscheutos*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 6.1–6.5 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	6,000–8,000 foot candles	Obligate long day	76–78 °F (24–26 °C)	68–70 °F (20–21 °C)	200–250 ppm N	1 pt. 1 ppp 7–9 weeks 1 qt. 1 ppp 7–9 weeks 1.25 qt. 1 ppp 8–10 weeks 2.5 qt. 1 ppp 8–10 weeks 3 qt. 1 ppp 9–11 weeks 1.5 gal. pot 1 ppp 9–11 weeks	Whitefly, Spider Mites, Thrips and Aphids	Botrytis

Impatiens **ACCENT™** F1 *Impatiens walleriana*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	2,000–4,000 foot candles	Day neutral	72–74 °F (22–23 °C)	62–64 °F (17–18 °C)	75–125 ppm N	Packs 1 ppp 5–6 weeks Large Packs 1 ppp 5–6 weeks 1 pt. 1 ppp 6–7 weeks 1 qt. 1–2 ppp 6–7 weeks 1.25 qt. 2–3 ppp 7–8 weeks 2.5 qt. 3–4 ppp 7–8 weeks 3 qt. 5–7 ppp 9–10 weeks 1.5 gal. HB 5–7 ppp 9–10 weeks 1.5 gal. pot 5–7 ppp 9–10 weeks	Thrips, fungus gnats, aphids and spider mites	Impatiens Downy Mildew, Pythium root rot, Botrytis blight, INSV, TSWV, Pseudomonas, Rhizoctonia and Alternaria leaf spot

FINISH PGRs	TECH TIPS
<p>If needed sprays of B-Nine® at 2,500-5,000 ppm or A-Rest® at 1-3 ppm are effective. Under long day conditions leaves will be larger so more frequent PGR applications may be necessary. Do not apply PGRs once the buds reach 1 cm in diameter (pea size) since this can cause smaller flower and short flower stems.</p>	<p>Under low light conditions provide supplemental HID light if possible; do not extend daylength as this will extend the time to flower. It is critical to allow adequate dry back between irrigations to prevent stunted and distorted growth. Because of this do not mist at night. If germinating on a bench it is best to use a tent system to increase humidity and reduce the frequency of irrigations/misting.</p>
FINISH PGRs	TECH TIPS
<p>If needed sprays of B-Nine® at 2,500-5,000 ppm or A-Rest® at 1-3 ppm are effective. Under long day conditions leaves will be larger so more frequent PGR applications may be necessary. Do not apply PGRs once the buds reach 1 cm in diameter (pea size) since this can cause smaller flower and short flower stems.</p>	<p>Under low light conditions provide supplemental HID light if possible; do not extend daylength as this will extend the time to flower. It is critical to allow adequate dry back between irrigations to prevent stunted and distorted growth. Because of this do not mist at night. If germinating on a bench it is best to use a tent system to increase humidity and reduce the frequency of irrigations/misting.</p>
FINISH PGRs	TECH TIPS
<p>If needed sprays of B-Nine® at 2,500-5,000 ppm or A-Rest® at 1-3 ppm are effective. Under long day conditions leaves will be larger so more frequent PGR applications may be necessary. Do not apply PGRs once the buds reach 1 cm in diameter (pea size) since this can cause smaller flower and short flower stems.</p>	<p>Under low light conditions provide supplemental HID light if possible; do not extend daylength as this will extend the time to flower. It is critical to allow adequate dry back between irrigations to prevent stunted and distorted growth. Because of this do not mist at night. If germinating on a bench it is best to use a tent system to increase humidity and reduce the frequency of irrigations/misting.</p>
FINISH PGRs	TECH TIPS
<p>If needed sprays of B-Nine® at 2,500-5,000 ppm or A-Rest® at 1-3 ppm are effective. Under long day conditions leaves will be larger so more frequent PGR applications may be necessary. Do not apply PGRs once the buds reach 1 cm in diameter (pea size) since this can cause smaller flower and short flower stems.</p>	<p>Under low light conditions provide supplemental HID light if possible; do not extend daylength as this will extend the time to flower. It is critical to allow adequate dry back between irrigations to prevent stunted and distorted growth. Because of this do not mist at night. If germinating on a bench it is best to use a tent system to increase humidity and reduce the frequency of irrigations/misting.</p>
FINISH PGRs	TECH TIPS
<p>A combination spray of B-Nine® WSG at 2,500 ppm and Cycocel® at 800 ppm two weeks after transplant is highly effective for reducing height and producing a compact, well-branched plant. In warmer conditions, a second application is beneficial.</p>	<p>If Cycocel® is applied, seedlings may temporarily yellow. Begin feeding at 75 ppm N at radical emergence.</p>
FINISH PGRs	TECH TIPS
<p>Impatiens are responsive to B-Nine® WSG, Bonzi® and Sumagic®.</p>	<p>Use a calcium based fertilizer and feed once a week at most to avoid soft growth and stretching of plugs. Do not let plants go into the night with wet foliage or tip abortion may occur. Downward cupping or twisting of immature leaves may be caused by overuse of PGRs. Subdue Maxx® and/or Segway® drenches are recommended plug stage fungicides for disease management.</p>

Impatiens **ACCENT™ PREMIUM** *F1 Impatiens walleriana*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	2,000–4,000 foot candles	Day neutral	72–74 °F (22–23 °C)	62–64 °F (17–18 °C)	75–125 ppm N	Packs 1 ppp 5-6 weeks Large Packs 1 ppp 5–6 weeks 1 pt. 1 ppp 6–7 weeks 1 qt. 1–2 ppp 6–7 weeks 1.25 qt. 2-3 ppp 7–8 weeks 2.5 qt. 3–4 ppp 7–8 weeks 3 qt. 5–7 ppp 9–10 weeks 1.5 gal. HB 5–7 ppp 9–10 weeks 1.5 gal. pot 5–7 ppp 9–10 weeks	Thrips, fungus gnats, aphids and spider mites	Impatiens Downy Mildew, Pythium root rot, Botrytis blight, INSV, TSWV, Pseudomonas, Rhizoctonia and Alternaria leaf spot

Impatiens **ATHENA™** *F1 Impatiens walleriana*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	2,000–4,000 foot candles	Day Neutral	72–74 °F (22–23 °C)	62–64 °F (17–18 °C)	75–125 ppm N	Large Packs 1 ppp 5–6 weeks 1 pt. 1 ppp 5–6 weeks 1 qt. 1 ppp 6–7 weeks 1.25 qt. 1–3 ppp 7–8 weeks 2.5 qt. 1–3 ppp 7–8 weeks 3 qt. 5–7 ppp 8–10 weeks 1.5 gal. HB 5–7 ppp 8–10 weeks 1.5 gal. pot 5–7 ppp 8–10 weeks 2 gal. HB 5-7 ppp 8–10 weeks	Thrips, fungus gnats, aphids and spider mites	Impatiens Downy Mildew, Pythium root rot, Botrytis blight, INSV, TSWV, Pseudomonas, Rhizoctonia and Alternaria leaf spot

Impatiens **IMARA™ XDR** *F1 Impatiens walleriana*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	2,000–4,000 foot candles	Day neutral	72–74 °F (22–23 °C)	62–64 °F (17–18 °C)	75–125 ppm N	Packs 1 ppp 4-5 weeks Large Packs 1 ppp 4–5 weeks 1 pt. 1 ppp 6–7 weeks 1 qt. 1–2 ppp 6–7 weeks 1.25 qt. 1–3 ppp 7–8 weeks 2.5 qt. 3–4 ppp 7–8 weeks 3 qt. 5–7 ppp 9–10 weeks 1.5 gal. HB 5–7 ppp 9–10 weeks 1.5 gal. pot 5–7 ppp 9–10 weeks	Thrips, fungus gnats, aphids and spider mites	Pythium root rot, Botrytis blight, INSV, TSWV, Pseudomonas, Rhizoctonia and Alternaria leaf spot

Impatiens **XTREME™** *F1 Impatiens walleriana*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	2,000–4,000 foot candles	Day neutral	72–74 °F (22–23 °C)	62–64 °F (17–18 °C)	75–125 ppm N	Packs 1 ppp 5-6 weeks Large Packs 1 ppp 5–6 weeks 1 pt. 1 ppp 6–7 weeks 1 qt. 1–2 ppp 6–7 weeks 1.25 qt. 2-3 ppp 7–8 weeks 1.5 gal. HB 5–7 ppp 9–10 weeks 1.5 gal. pot 5–7 ppp 9–10 weeks	Thrips, fungus gnats, aphids and spider mites	Impatiens Downy Mildew, Pythium root rot, Botrytis blight, INSV, TSWV, Pseudomonas, Rhizoctonia and Alternaria leaf spot

Impatiens New Guinea **FLORIFIC®** *F1 Impatiens hawkeri*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	2,000–4,000 foot candles	Day neutral	76–78 °F (24–26 °C)	66–68 °F (19–20 °C)	75–125 ppm N	Large Packs 1 ppp 7–9 weeks 1 pt. 1 ppp 7–9 weeks 1 qt. 1 ppp 7–9 weeks 1.25 qt. 1-2 ppp 7–9 weeks 2.5 qt. 2–3 ppp 8–10 weeks 1.5 gal. HB 3–5 ppp 8–10 weeks	Fungus Gnats, Spider Mites, Thrips	Botrytis, Pythium, Rhizoctonia, Tomato Spotted Wilt Virus, Impatiens Necrotic Spot Virus, Florific New Guinea Impatiens are highly resistant to Impatiens Downy Mildew.

Marigold African **ANTIGUA™** *F1 Tagetes erecta*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 0 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative short day	68–70 °F (20–21 °C)	58–60 °F (14–16 °C)	125–175 ppm N	Packs 1 ppp 6-7 weeks Large Packs 1 ppp 7–8 weeks 1 qt. 1 ppp 7–8 weeks	Spider mites, Thrips, Leafminer, Aphids and Whitefly.	Alternaria leaf spot, Botrytis and Pythium.

FINISH PGRs	TECH TIPS
Impatiens are responsive to B-Nine® WSG, Bonzi® and Sumagic®.	Use a calcium based fertilizer and feed once a week at most to avoid soft growth and stretching of plugs. Do not let plants go into the night with wet foliage or tip abortion may occur. Downward cupping or twisting of immature leaves may be caused by overuse of PGRs. Subdue Maxx® and/or Segway® drenches are recommended plug stage fungicides for disease management.

FINISH PGRs	TECH TIPS
Impatiens are responsive to B-Nine® WSG, Bonzi® and Sumagic®.	Use a calcium-based fertilizer and feed once a week at most to avoid soft growth and stretching of plugs. Do not let plants go into the night with wet foliage or tip abortion may occur. Downward cupping or twisting of immature leaves may be caused by overuse of PGRs. Subdue Maxx® and/or Segway® drenches are recommended plug stage fungicides for disease management.

FINISH PGRs	TECH TIPS
Impatiens are responsive to B-Nine® WSG, Bonzi® and Sumagic®.	Use a calcium based fertilizer and feed once a week at most to avoid soft growth and stretching of plugs. Do not let plants go into the night with wet foliage or tip abortion may occur. Downward cupping or twisting of immature leaves may be caused by overuse of PGRs. Subdue Maxx® and/or Segway® drenches are recommended plug stage fungicides for disease management, and rotations of Mural® and Micora® sprays and Segovis® sprays or drenches are recommended for the finishing stage. For more information on Imara™ XDR visit us at www.syngentaflowers-us.com/Imara .

FINISH PGRs	TECH TIPS
Responsive to B-Nine® WSG, Bonzi® and Sumagic®. Xtreme Impatiens are bred to be more compact than standard Impatiens so may require less PGRs.	Use a calcium based fertilizer and feed once a week at most to avoid soft growth and stretching of plugs. Do not let plants go into the night with wet foliage or tip abortion may occur. Downward cupping or twisting of immature leaves may be caused by overuse of PGRs. Subdue Maxx® and/or Segway® drenches are recommended plug stage fungicides for disease management.

FINISH PGRs	TECH TIPS
Usually not required in larger containers. In small pots/packs or under low light conditions spray with Bonzi® at 1-3 ppm as needed.	Ensure a good scouting program for Thrips is in place.

FINISH PGRs	TECH TIPS
Usually not required, especially when finished during short days. If necessary under low light or high temperature/humidity conditions spray with B-Nine® at 5,000 ppm before buds are wider than 1 cm (pea size). Later PGR sprays may reduce flower size or cause flowering in the foliage.	Easy to germinate on the bench. Maintain media pH above 6.2 to avoid iron/manganese toxicity. Short days will shorten time to flower.

Marigold African **BIG TOP™** *F1 Tagetes erecta*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 6.1–6.5 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative short day	68–70 °F (20–21 °C)	58–60 °F (14–16 °C)	125–175 ppm N	1 pt. 1 ppp 7–8 weeks 1 qt. 1 ppp 7–8 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 8–9 weeks 3 qt. 1.3 ppp 8–9 weeks 1.5 gal. pot 3–4 ppp 8–10 weeks	Spider mites, Thrips, Leafminer, Aphids and Whitefly	Alternaria leaf spot, Botrytis and Pythium

Marigold African **INCA II™** *F1 Tagetes erecta*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 0 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative short day	68–70 °F (20–21 °C)	58–60 °F (14–16 °C)	125–175 ppm N	Large Packs 1 ppp 7–8 weeks 1 qt. 1 ppp 8–9 weeks 1.25 qt. 1 ppp 9–10 weeks	Spider mites, Thrips, Leafminer, Aphids and Whitefly.	Alternaria leaf spot, Botrytis and Pythium.

Marigold African **PERFECTION™** *F1 Tagetes erecta*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 0 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative short day	68–70 °F (20–21 °C)	58–60 °F (14–16 °C)	125–175 ppm N	1 qt. 1 ppp 9–10 weeks 1.25 qt. 1 ppp 9–10 weeks 2.5 qt. 1–2 ppp 9–10 weeks	Spider mites, Thrips, Leafminer, Aphids and Whitefly.	Alternaria leaf spot, Botrytis and Pythium.

Marigold French anemone **ALUMIA™** *OP Tagetes patula nana*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 6.1–6.5 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day neutral	66–68 °F (19–20 °C)	62–64 °F (17–18 °C)	125–175 ppm N	Packs 1 ppp 3–4 weeks Large Packs 1 ppp 3–4 weeks 1 pt. 1 ppp 3–4 weeks 1 qt. 1–2 ppp 5–6 weeks 1.25 qt. 2–3 ppp 5–6 weeks 2.5 qt. 2–3 ppp 5–6 weeks	Aphids, Whiteflies, Thrips, Spider Mites, Leafminers	Pythium, Botrytis, Bacterial Leafspot, Alternaria Leafspot

Marigold French dwarf crested **HAPPY™** *OP Tagetes patula nana*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 6.1–6.5 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day neutral	66–68 °F (19–20 °C)	62–64 °F (17–18 °C)	125–175 ppm N	Packs 1 ppp 3–4 weeks Large Packs 1 ppp 3–4 weeks 1 pt. 1 ppp 3–4 weeks 1 qt. 1–2 ppp 4–5 weeks 1.25 qt. 2–3 ppp 4–5 weeks	Aphids, Whiteflies, Thrips, Spider Mites, Leafminers	Pythium, Botrytis, Bacterial Leafspot, Alternaria Leafspot

Marigold Interspecific **ENDURANCE™** *F1 Tagetes triploid*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 6.1–6.5 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative short day	66–68 °F (19–20 °C)	62–64 °F (17–18 °C)	125–175 ppm N	Large Packs 1 ppp 4–5 weeks 1 qt. 1 ppp 5–6 weeks 1.25 qt. 2–3 ppp 5–6 weeks 2.5 qt. 2–3 ppp 5–6 weeks 3 qt. 4–5 ppp 6–7 weeks 1.5 gal. pot 4–5 ppp 6–7 weeks	Aphids, Whiteflies, Thrips, Spider mites, Leafminers	Pythium, Botrytis, Bacterial leaf spot, Alternaria leaf spot

Marigold Interspecific **ZENITH™** *F1 Tagetes triploid*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 6.1–6.5 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day neutral	66–68 °F (19–20 °C)	62–64 °F (17–18 °C)	125–175 ppm N	Packs 1 ppp 4–5 weeks Large Packs 1 ppp 4–5 weeks 1 pt. 1 ppp 5–6 weeks 1 qt. 1 ppp 5–6 weeks 1.25 qt. 2–3 ppp 6–7 weeks 2.5 qt. 2–3 ppp 6–7 weeks 3 qt. 3 ppp 6–7 weeks 1.5 gal. pot 3–4 ppp 6–7 weeks	Aphids, Whiteflies, Thrips, Spider Mites, Leafminers	Pythium, Botrytis, Bacterial Leaf spot, Alternaria Leaf spot

FINISH PGRs	TECH TIPS
Usually not required, especially when finished during short days. If necessary, under low light or high temperature/humidity conditions spray with B-Nine® WSG at 5,000 ppm before buds are wider than 1 cm (pea size). Later PGR sprays may reduce flower size or cause flowering in the foliage.	Easy to germinate on the bench. Maintain media pH above 6.2 to avoid iron/manganese toxicity. Short days reduces time to flower.
FINISH PGRs	TECH TIPS
Usually not required, especially when finished during short days. If necessary under low light or high temperature/humidity conditions spray with B-Nine® at 5,000 ppm before buds are wider than 1 cm (pea size). Later PGR sprays may reduce flower size or cause flowering in the foliage.	Easy to germinate on the bench. Maintain media pH above 6.2 to avoid iron/manganese toxicity. Short days will shorten time to flower.
FINISH PGRs	TECH TIPS
Usually not required, especially when finished during short days. If necessary under low light or high temperature/humidity conditions spray with B-Nine® at 5,000 ppm before buds are wider than 1 cm (pea size). Later PGR sprays may reduce flower size or cause flowering in the foliage.	Easy to germinate on the bench. Maintain media pH above 6.2 to avoid iron/manganese toxicity. Short days will shorten time to flower.
FINISH PGRs	TECH TIPS
Since Alumia is naturally compact, PGRs are not usually necessary. If needed, spray with B-Nine® WSG at 2,500-5,000 ppm.	Very easy to germinate on the bench. If seedlings get stretched, they can be planted deep at transplanting, and new roots will form along the stems. Do not hold too long in the plug tray or stress-induced flowering may occur, and plants will flower before bulking up to a satisfactory size.
FINISH PGRs	TECH TIPS
Since Happy is a genetic dwarf, plant growth regulators (PGRs) are not usually necessary. If needed, spray with B-Nine® WSG at 2,500-5,000 ppm.	Very easy to germinate on the bench. If seedlings get stretched, they can be planted deep at transplanting, and new roots will form along the stems. Do not hold too long in the plug tray or stress-induced flowering may occur, and plants will flower before bulking up to a satisfactory size. Happy is a genetically compact series, so chemical growth regulators are usually not necessary. Control can also be gained by good moisture management and applications of various growth regulators if needed.
FINISH PGRs	TECH TIPS
Usually not required, especially when finished during short days. If necessary under low light or high temperature/humidity conditions, spray with B-Nine® WSG at 2,500- 5,000 ppm before buds are wider than 1 cm (pea size). Later PGR sprays may reduce flower size or cause flowering in the foliage.	Very easy to germinate on the bench. If seedlings get stretched, they can be planted deep at transplanting and new roots will form along the stems. Do not hold too long in the plug tray or stress-induced flowering may occur and plants will flower before bulking up to a satisfactory size.
FINISH PGRs	TECH TIPS
Growth can be controlled naturally through proper moisture management. If needed to control height, spray with B-Nine® WSG at 2,500-5,000 ppm, Bonzi® at 15-30 ppm, or Sumagic® at 5-10 ppm. To help control growth in the retail environment® drench with Bonzi at 2-5 ppm or Sumagic® at 1-2 ppm when plants are up to size and flowering.	Very easy to germinate on the bench. If seedlings get stretched, they can be planted deep at transplanting, and new roots will form along the stems. Do not hold too long in the plug tray or stress-induced flowering may occur, and plants will flower before bulking up to a satisfactory size.

Mimulus **MAGIC™** *F1 Mimulus × hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	2,000–4,000 foot candles	Obligate long day	58–60 °F (14–16 °C)	52–54 °F (11–12 °C)	125–175 ppm N	Packs 1 ppp 4-5 weeks Large Packs 1 ppp 4–5 weeks 1 pt. 1 ppp 5–6 weeks 1 qt. 1 ppp 5–6 weeks 1.25 qt. 1-3 ppp 5–6 weeks 2.5 qt. 1–3 ppp 5–6 weeks 3 qt. 3 ppp 6–7 weeks 1.5 gal. HB 4–5 ppp 6–7 weeks 1.5 gal. pot 3–4 ppp 7–8 weeks 2 gal. HB 4-5 ppp 7–8 weeks	Thrips and Whiteflies	Pythium, Rhizoctonia, INSV and Botrytis

Nicotiana **PERFUME™** *F1 Nicotiana × sandrea*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day neutral	66–68 °F (19–20 °C)	66–68 °F (19–20 °C)	125–175 ppm N	Packs 1 ppp 4-5 weeks* Large Packs 1 ppp 4–5 weeks* 1 pt. 1 ppp 5–6 weeks* 1 qt. 1 ppp 5–6 weeks* 1.25 qt. 1 ppp 9–11 weeks** 2.5 qt. 1 ppp 9–11 weeks** 3 qt. 1-3 ppp 9–11 weeks 1.5 gal. pot 3 ppp 10–12 weeks * Green Plant ** Flowering Plant	Aphids, Whiteflies, Thrips, Cutworms	Downy Mildew

Nicotiana **SARATOGA™** *F1 Nicotiana × alata*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day neutral	66–68 °F (19–20 °C)	66–68 °F (19–20 °C)	125–175 ppm N	Packs 1 ppp 5-6 weeks 1 qt. 1 ppp 6–7 weeks 1.25 qt. 1-2 ppp 7–8 weeks 2.5 qt. 2–3 ppp 7–8 weeks	Aphids, Whiteflies, Thrips, Cutworms	Downy Mildew

Osteospermum **ASTI™** *F1 Osteospermum ecklonis*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day neutral	60–62 °F (16–17 °C)	52–54 °F (11–12 °C)	125–175 ppm N	1 qt. 1 ppp 10–14 weeks 1.25 qt. 2-3 ppp 12–15 weeks 2.5 qt. 2–3 ppp 12–15 weeks	Fungus Gnats, Shore Flies, Thrips, Aphids	Pythium, Rhizoctonia, Botrytis

Pansy **COLOSSUS™** *F1 Viola × wittrockiana*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative long day	64–66 °F (18–19 °C)	64–66 °F (18–19 °C)	75–125 ppm N	Packs 1 ppp 4-7 weeks Large Packs 1 ppp 5–7 weeks 1 pt. 1 ppp 5–7 weeks 1 qt. 1 ppp 5–7 weeks 1.25 qt. 2-3 ppp 6–8 weeks 1.5 gal. HB 5–6 ppp 6–8 weeks	Aphids, Thrips	Alternaria, Downy Mildew, Thielaviopsis, Cercospora, Botrytis

Pansy **DELTA™** *F1 Viola × wittrockiana*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative long day	64–66 °F (18–19 °C)	64–66 °F (18–19 °C)	75–125 ppm N	Packs 1 ppp 4-5 weeks Large Packs 1 ppp 5–6 weeks 1 pt. 1 ppp 5–6 weeks 1 qt. 1 ppp 5–6 weeks 1.25 qt. 2-3 ppp 5–6 weeks 1.5 gal. HB 5–6 ppp 5–7 weeks	Aphids, Thrips	Alternaria, Downy Mildew, Thielaviopsis, Cercospora, Botrytis

Pansy **DELTA™ PREMIUM** *F1 Viola × wittrockiana*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative long day	64–66 °F (18–19 °C)	64–66 °F (18–19 °C)	75–125 ppm N	Packs 1 ppp 4-5 weeks Large Packs 1 ppp 5–6 weeks 1 pt. 1 ppp 5–6 weeks 1 qt. 1 ppp 5–6 weeks 1.25 qt. 2-3 ppp 5–6 weeks 1.5 gal. HB 5–6 ppp 5–7 weeks	Aphids, Thrips	Alternaria, Downy Mildew, Thielaviopsis, Cercospora, Botrytis

FINISH PGRs	TECH TIPS
Under proper growing conditions, PGRs are usually not needed. If warm and/or dark conditions exist, sprays of B-Nine® WSG at 2,500 ppm are effective.	Provide day extension lighting to 14 hours under short days using mum type lights (10 foot candles). Using HID lights can promote too early of flowering.

FINISH PGRs	TECH TIPS
If needed to control height, spray with B-Nine® WSG at 2,500-5,000 ppm, A-Rest® at 3-7 ppm, Bonzi® at 10-30 ppm, or Sumagic® at 5-10 ppm.	Cool days with high light will reduce the need to apply PGRs.

FINISH PGRs	TECH TIPS
If needed to control height, spray with B-Nine® WSG at 2,500-5,000 ppm, A-Rest® at 3-7 ppm, Bonzi® at 10-30 ppm or Sumagic® at 5-10 ppm.	Cool days with high light will reduce the need to apply PGRs.

FINISH PGRs	TECH TIPS
If grown cool and under high light, PGRs will not be necessary. Under suboptimal conditions spray with B-Nine® WSG at 2,500-5,000 ppm or Cycocel® at 750-1,000 ppm as needed.	It is very important to spray the plugs with Cycocel® at 300 ppm about 10 days after sowing to help reduce hypocotyl stretch. Shorter hypocotyls will result in a stronger central stem after transplant and will reduce floppiness in the finished plant.

FINISH PGRs	TECH TIPS
Usually not required if growing cool. If conditions are warmer or darker than ideal spray with B-Nine® at 2,500-5,000 ppm.	Keep media pH below 5.8 to help avoid Thielaviopsis infections. Under hot temperatures provide lower light levels to reduce heat stress. Do not hold Pansy plugs - transplant before plugs get root bound.

FINISH PGRs	TECH TIPS
Usually not required if growing cool. If conditions are warmer or darker than ideal spray with B-Nine® at 2,500-5,000 ppm.	Keep media pH below 5.8 to help avoid Thielaviopsis infections. Under hot temperatures provide lower light levels to reduce heat stress. Do not hold Pansy plugs - transplant before plugs get root bound.

FINISH PGRs	TECH TIPS
Usually not required if growing cool. If conditions are warmer or darker than ideal spray with B-Nine® at 2,500-5,000 ppm.	Keep media pH below 5.8 to help avoid Thielaviopsis infections. Under hot temperatures provide lower light levels to reduce heat stress. Do not hold Pansy plugs - transplant before plugs get root bound.

Pansy **DELTA™ SPEEDY** *F1 Viola × wittrockiana*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative long day	64–66 °F (18–19 °C)	64–66 °F (18–19 °C)	75–125 ppm N	Packs 1 ppp 4–5 weeks Large Packs 1 ppp 5–6 weeks 1 pt. 1 ppp 5–6 weeks 1 qt. 1 ppp 5–6 weeks	Aphids, Thrips	Alternaria, Downy Mildew, Thielaviopsis, Cercospora, Botrytis

Pansy Spreading **FREEFALL™** *F1 Viola × wittrockiana*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative long day	64–66 °F (18–19 °C)	64–66 °F (18–19 °C)	75–125 ppm N	Large Packs 1 ppp 4–5 weeks 1 pt. 1 ppp 5–6 weeks 1 qt. 1 ppp 5–6 weeks 1.25 qt. 2–3 ppp 6–7 weeks 2.5 qt. 2–3 ppp 6–7 weeks 1.5 gal. HB 6–7 ppp 7–9 weeks	Aphids, Thrips	Alternaria, Downy Mildew, Thielaviopsis, Cercospora, Botrytis

Pansy Spreading **FREEFALL™ XL** *F1 Viola × wittrockiana*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative long day	64–66 °F (18–19 °C)	64–66 °F (18–19 °C)	75–125 ppm N	Large Packs 1 ppp 4–5 weeks 1 pt. 1 ppp 5–6 weeks 1 qt. 1 ppp 5–6 weeks 1.25 qt. 2–3 ppp 6–7 weeks 2.5 qt. 2–3 ppp 6–7 weeks 1.5 gal. HB 6–7 ppp 7–9 weeks	Aphids, Thrips	Alternaria, Downy Mildew, Thielaviopsis, Cercospora, Botrytis

Penstemon **ARABESQUE®** *F1 Penstemon hartwegii*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	6,000–8,000 foot candles	Facultative long day	68–70 °F (20–21 °C)	60–62 °F (16–17 °C)	200–250 ppm N	1 qt. 1 ppp 11–13 weeks 1.25 qt. 2 ppp 11–13 weeks 2.5 qt. 2 ppp 11–13 weeks 3 qt. 3 ppp 11–13 weeks 1.5 gal. pot 3–5 ppp 11–13 weeks	Aphids, Fungus Gnats, Thrips	Botrytis, Pythium, Rhizoctonia, Thielaviopsis, INSV (Impatiens Necrotic Spot Virus)

Penstemon **PARTYBELLS™** *F1 Penstemon hartwegii*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	6,000–8,000 foot candles	Facultative long day	68–70 °F (20–21 °C)	60–62 °F (16–17 °C)	125–175 ppm N	1 qt. 1 ppp 11–12 weeks 1.25 qt. 1–2 ppp 11–12 weeks 2.5 qt. 1–2 ppp 11–12 weeks 3 qt. 3–4 ppp 11–12 weeks 1.5 gal. pot 3–4 ppp 11–12 weeks	Aphids, Fungus Gnats, Thrips	Botrytis, Pythium, Rhizoctonia, Thielaviopsis, INSV (Impatiens Necrotic Spot Virus)

Pentas **BEEBRIGHT™** *F1 Pentas lanceolata*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 6.1–6.5 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative long day	70–72 °F (21–22 °C)	66–68 °F (19–20 °C)	75–125 ppm N	Packs 1 ppp 7–8 weeks Large Packs 1 ppp 7–8 weeks 1 pt. 1 ppp 7–8 weeks 1 qt. 1 ppp 7–8 weeks 1.25 qt. 2 ppp 7–8 weeks 2.5 qt. 2–3 ppp 7–8 weeks	Thrips, Whiteflies, Aphids, Spider Mites	Pythium, Botrytis, Rhizoctonia

Pentas **HONEYCLUSTER™** *F1 Pentas lanceolata*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 6.1–6.5 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative long day	70–72 °F (21–22 °C)	66–68 °F (19–20 °C)	75–125 ppm N	1 qt. 1 ppp 7–8 weeks 1.25 qt. 1 ppp 7–8 weeks 2.5 qt. 1 ppp 7–8 weeks 3 qt. 2–3 ppp 8–9 weeks	Thrips, Whiteflies, Aphids, Spider Mites	Pythium, Botrytis, Rhizoctonia

FINISH PGRs	TECH TIPS
Usually not required if growing cool. If conditions are warmer or darker than ideal spray with B-Nine® at 2,500-5,000 ppm.	Keep media pH below 5.8 to help avoid Thielaviopsis infections. Under hot temperatures provide lower light levels to reduce heat stress. Do not hold Pansy plugs - transplant before plugs get root bound.
FINISH PGRs	TECH TIPS
Usually not required if growing cool. If conditions are warmer or darker than ideal spray with B-Nine® WSG at 2,500-5,000 ppm.	Keep media pH below 5.8 to help avoid Thielaviopsis infections. Under hot temperatures provide lower light levels to reduce heat stress. Also if very frequent irrigation occurs due to high temperatures apply a supplemental feed of Solubor® to avoid Boron deficiency.
FINISH PGRs	TECH TIPS
Usually not required if growing cool. If conditions are warmer or darker than ideal spray with B-Nine® WSG at 2,500-5,000 ppm.	Keep media pH below 5.8 to help avoid Thielaviopsis infections. Under hot temperatures, provide lower light levels to reduce heat stress. If frequent irrigation occurs due to high temperatures, apply a supplemental feed of Solubor® to avoid Boron deficiency.
FINISH PGRs	TECH TIPS
Under most growing environments, chemical growth regulation is required to control stem elongation of Arabesque Penstemon. For growth control, use sprays of Sumagic® at 5-10 ppm or a tank mix of B-Nine® WSG at 1,500 ppm plus Cycocel® at 750 ppm. Alternatively, drench with Bonzi® at 0.5-2.0 ppm. One to two applications are generally needed.	Warm day temperatures can promote soft growth and excessive stem elongation.
FINISH PGRs	TECH TIPS
Partybells Penstemon, if grown cool will likely not require PGR applications. However, if needed, spray applications of Bonzi® at 10-15 ppm or Sumagic® at 5 ppm are effective in controlling stem elongation.	Warm day temperatures can promote soft growth and excessive stem elongation.
FINISH PGRs	TECH TIPS
BeeBright Pentas are genetically compact, and typically do not require PGR applications. If needed, the following PGRs are effective as sprays: B-Nine® WSG at 2,500-5,000 ppm, Cycocel® at 750-1,000 ppm, Bonzi® at 5-10 ppm, or A-Rest® at 3-5 ppm.	Provide supplemental lighting when DLI is less than 12 mols/day. Monitor pH and maintain above 6.1, or growth can stall.
FINISH PGRs	TECH TIPS
If needed the following PGRs are effective as sprays: B-Nine® WSG at 2,500-5,000 ppm, Cycocel® at 750-1,000 ppm, Bonzi® at 5-10 ppm or A-Rest® at 3-5 ppm.	Provide supplemental lighting when DLI is less than 12 mols/day. Monitor pH levels and maintain above 6.1, or growth can stall.

SEED FINISHING

Petunia grandiflora **DUVET™** F1 *Petunia grandiflora*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	68–70 °F (20–21 °C)	58–60 °F (14–16 °C)	125–175 ppm N	Packs 1 ppp 4–5 weeks Large Packs 1 ppp 5–6 weeks 1 pt. 1 ppp 5–6 weeks 1 qt. 1 ppp 5–6 weeks 1.25 qt. 2–3 ppp 6–7 weeks 2.5 qt. 3 ppp 6–7 weeks 1.5 gal. HB 3–4 ppp 7–8 weeks	Thrips, Aphids	Botrytis, Rhizoctonia

Petunia grandiflora **FROST™** F1 *Petunia grandiflora*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	68–70 °F (20–21 °C)	58–60 °F (14–16 °C)	125–175 ppm N	Packs 1 ppp 4–5 weeks Large Packs 1 ppp 5–6 weeks 1 pt. 1 ppp 5–6 weeks 1 qt. 1 ppp 5–6 weeks 1.25 qt. 2–3 ppp 6–7 weeks 2.5 qt. 3 ppp 6–7 weeks 3 qt. 3–4 ppp 7–8 weeks 1.5 gal. HB 3–4 ppp 7–8 weeks 1.5 gal. pot 3–4 ppp 7–8 weeks	Thrips, Aphids	Botrytis, Rhizoctonia

Petunia grandiflora **TRITUNIA™** F1 *Petunia grandiflora*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	68–70 °F (20–21 °C)	58–60 °F (14–16 °C)	125–175 ppm N	Packs 1 ppp 4–5 weeks Large Packs 1 ppp 4–5 weeks 1 pt. 1 ppp 5–6 weeks 1 qt. 1 ppp 5–6 weeks 1.25 qt. 2–3 ppp 6–7 weeks 2.5 qt. 3 ppp 6–7 weeks 3 qt. 3–4 ppp 7–8 weeks 1.5 gal. HB 3–4 ppp 7–8 weeks 1.5 gal. pot 3–4 ppp 7–8 weeks	Thrips, Aphids	Botrytis, Rhizoctonia

Petunia milliflora **PICOBELLA™** F1 *Petunia milliflora*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	68–70 °F (20–21 °C)	58–60 °F (14–16 °C)	125–175 ppm N	Packs 1 ppp 4–5 weeks Large Packs 1 ppp 5–6 weeks 1 qt. 1 ppp 5–6 weeks	Thrips, Aphids	Botrytis, Rhizoctonia

FINISH PGRs	TECH TIPS	VARIETY	VIGOR	TIMING	MPR
Duvet is a genetically compact Petunia so requires significantly less PGRs than standard Petunias. It is best to control growth by providing optimal growing conditions. Suboptimal growing conditions (too warm, too humid, overwatering, low light) can promote soft, stretchy growth. If growth control is necessary, Duvet responds well to sprays of B-Nine® WSG at 2,500-3,500 ppm or Bonzi® at 5-15 ppm. Bonzi® drenches are not recommended.	Covering seed is not necessary but a light vermiculite coating will help maintain moisture levels in drier climates. Keep pelleted seed at moisture level 5 the first several days to ensure the pellet is completely dissolved. Providing long days in the plug stage will reduce overall time to flower. Low boron levels can induce tip abortion. Spraying an uneven plug tray with B-Nine® WSG at 1,500 ppm may help even the growth in the tray.	Duvet™ Blue 70040974 Duvet™ Burgundy 70059297 Duvet™ Mix 70048780 Duvet™ Pink 70040978 Duvet™ Red 70040981 Duvet™ Salmon 70040985 Duvet™ White 70040988		M M M M E-M E-M	11.5 hrs. 10.5 hrs. 11.5 hrs. 13.5 hrs. 10.5 hrs. 10.5 hrs.

FINISH PGRs	TECH TIPS
It is best to be proactive in applying PGRs on Petunias. Anticipate changes in weather or other conditions that can cause plant stretch and apply PGRs before plant stretch begins. Petunias respond well to B-Nine® WSG sprays at 2,500-3,500 ppm. Do not apply B-Nine® WSG after bud formation or flowers may reduce in size and/or become distorted. Bonzi® drenches at 1-2 ppm during later stages in the crop will reduce stretch and will not affect flowering as much as B-Nine® WSG.	Covering seed is not necessary but a light vermiculite coating will help maintain moisture levels in drier climates. Keep pelleted seed at moisture level 5 the first several days to ensure the pellet is completely dissolved. Providing long days in the plug stage will reduce overall time to flower. Low boron levels can induce tip abortion. Spraying an uneven plug tray with B-Nine® WSG at 1,500 ppm may help even the growth in the tray.

FINISH PGRs	TECH TIPS	VARIETY	VIGOR	TIMING	MPR
It is best to be proactive in applying PGRs on Petunias. Anticipate changes in weather or other conditions that can cause plant stretch and apply PGRs before plant stretch begins. Petunias respond well to B-Nine® WSG sprays at 2,500-3,500 ppm. Do not apply B-Nine® WSG after bud formation or flowers may reduce in size and/or become distorted. Bonzi® drenches at 1-2 ppm during later stages in the crop will reduce stretch and will not affect flowering as much as B-Nine® WSG.	Covering seed is not necessary but a light vermiculite coating will help maintain moisture levels in drier climates. Keep pelleted seed at moisture level 5 the first several days to ensure the pellet is completely dissolved. Providing long days in the plug stage will reduce overall time to flower. Low boron levels can induce tip abortion. Spraying an uneven plug tray with B-Nine® WSG at 1,500 ppm may help even the growth in the tray.	TriTunia™ Blue 70065664 TriTunia™ Blue Star 70065668 TriTunia™ Blue Veined 70065676 TriTunia™ Burgundy 70065667 TriTunia™ Crimson Star 70065681 TriTunia™ Fresh White 70007924 TriTunia™ Lavender 70065666 TriTunia™ Mix 70065675 TriTunia™ Pink 70065685 TriTunia™ Pink Morn 70065679 TriTunia™ Pink Veined 70037057 TriTunia™ Plum 70065678 TriTunia™ ProFormula Mix 70067443 TriTunia™ Purple 70000762 TriTunia™ Purple Star 70065677 TriTunia™ Red 70065673 TriTunia™ Red Star 70065669 TriTunia™ Rose 70065670 TriTunia™ Rose Star 70065671 TriTunia™ Salmon 70040996 TriTunia™ Salmon Veined 70065674 TriTunia™ Sky Blue 70065684 TriTunia™ Star Mix 70065672 TriTunia™ Veined Mix 70065665 TriTunia™ Violet 70065680 TriTunia™ White Imp. 70000745		M-L M-L M-L L L E M-L E-M M M M E M-L M-L M-L M M-L M-L M-L M-L M-L M-L E M-L E	12.5 hrs. 11.5 hrs. 10.5 hrs. 11.5 hrs. 13.5 hrs. 10.5 hrs. 10.5 hrs. 10.5 hrs. 10.5 hrs. 10.5 hrs. 10.5 hrs. 10.5 hrs. 11.5 hrs. 10.5 hrs. 11.5 hrs. 10.5 hrs. 10.5 hrs. 10.5 hrs. 10.5 hrs. 12.5 hrs. 12.5 hrs. 12.5 hrs. 10.5 hrs.

FINISH PGRs	TECH TIPS	VARIETY	VIGOR	TIMING	MPR
Picobella is a genetically compact Petunia so usually does not need any PGR applications. If grown too warm or under low light conditions a spray of B-Nine® WSG at 1,500-2,500 ppm will help keep the growth more compact. Do not spray with B-Nine® WSG after bud formation; Picobellas is a milliflora Petunia so has many small flowers and late PGR applications may reduce flower size unacceptably.	Covering seed is not necessary but a light vermiculite coating will help maintain moisture levels in drier climates. Keep pelleted seed at moisture level 5 the first several days to ensure the pellet is completely dissolved. Providing long days in the plug stage will reduce overall time to flower. Low boron levels can induce tip abortion.	Picobella™ Blue 70007665 Picobella™ Carmine 70007666 Picobella™ Lavender Imp. 70054309 Picobella™ Mix 70007838 Picobella™ Pink 70054306 Picobella™ Red 70035048 Picobella™ Rose 70007668 Picobella™ Rose Morn 70024118 Picobella™ Rose Star 70024119 Picobella™ Salmon Imp. 70035049 Picobella™ White 70007670		E E-M M M E-M M M M-L M	10.5 hrs. 10.5 hrs. 9.5 hrs. 12.5 hrs. 10.5 hrs. 10.5 hrs. 10.5 hrs. 12.5 hrs. 10.5 hrs.

Petunia multiflora **DAMASK™** F1 *Petunia multiflora*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	68–70 °F (20–21 °C)	58–60 °F (14–16 °C)	125–175 ppm N	Packs 1 ppp 4–5 weeks Large Packs 1 ppp 5–6 weeks 1 pt. 1 ppp 5–6 weeks 1 qt. 1 ppp 5–6 weeks 1.25 qt. 2–3 ppp 6–7 weeks 2.5 qt. 3 ppp 6–7 weeks 1.5 gal. HB 3–4 ppp 7–8 weeks	Thrips, Aphids	Botrytis, Rhizoctonia

Petunia multiflora **HURRAH™** F1 *Petunia multiflora*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	68–70 °F (20–21 °C)	58–60 °F (14–16 °C)	125–175 ppm N	Packs 1 ppp 4–5 weeks Large Packs 1 ppp 5–6 weeks 1 pt. 1 ppp 5–6 weeks 1 qt. 1 ppp 5–6 weeks 1.25 qt. 2–3 ppp 6–7 weeks 2.5 qt. 3 ppp 6–7 weeks 3 qt. 3–4 ppp 7–8 weeks 1.5 gal. HB 3–4 ppp 7–8 weeks 1.5 gal. pot 3–4 ppp 7–8 weeks	Thrips, Aphids	Botrytis, Rhizoctonia

Petunia spreading **FOTOFINISH™** F1 *Petunia pendula*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	68–70 °F (20–21 °C)	58–60 °F (14–16 °C)	125–175 ppm N	Large Packs 1 ppp 4–5 weeks 1 qt. 1 ppp 4–5 weeks 1.25 qt. 1–2 ppp 5–7 weeks 2.5 qt. 1–2 ppp 5–7 weeks 1.5 gal. HB 3 ppp 7–8 weeks 1.5 gal. pot 3 ppp 7–8 weeks 2 gal. HB 5 ppp 7–8 weeks	Thrips, Aphids	Botrytis, Rhizoctonia

Petunia spreading grandiflora **SKYBOX™** F1 *Petunia pendula*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative long day	68–70 °F (20–21 °C)	58–60 °F (14–16 °C)	125–175 ppm N	1 qt. 1 ppp 5–8 weeks 1.25 qt. 1 ppp 6–7 weeks 2.5 qt. 1 ppp 7–8 weeks 1.5 gal. HB 3–4 ppp 8–9 weeks	Thrips, Aphids	Botrytis, Rhizoctonia

Petunia spreading milliflora **FLASHFORWARD™** F1 *Petunia pendula*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	68–70 °F (20–21 °C)	58–60 °F (14–16 °C)	125–175 ppm N	Large Packs 1 ppp 5–6 weeks 1 qt. 1 ppp 5–6 weeks 1.25 qt. 1–2 ppp 6–7 weeks 2.5 qt. 2–3 ppp 6–7 weeks 1.5 gal. HB 3–5 ppp 7–8 weeks 2 gal. HB 4–5 ppp 9–10 weeks	Thrips, Aphids	Botrytis, Rhizoctonia

FINISH PGRs	TECH TIPS
Damask is a genetically compact Petunia so requires significantly less PGRs than standard Petunias. It is best to control growth by providing optimal growing conditions. Suboptimal growing conditions (too warm, too humid, overwatering, low light) can promote soft, stretchy growth. If growth control is necessary, Damask responds well to sprays of B-Nine® WSG at 2,500-3,500 ppm or Bonzi® at 5-15 ppm. Bonzi® drenches are not recommended.	Covering seed is not necessary but a light vermiculite coating will help maintain moisture levels in drier climates. Keep pelleted seed at moisture level 5 the first several days to ensure the pellet is completely dissolved. Providing long days in the plug stage will reduce overall time to flower. Low boron levels can induce tip abortion. Spraying an uneven plug tray with B-Nine® WSG at 1,500 ppm may help even the growth in the tray.

FINISH PGRs	TECH TIPS
It is best to be proactive in applying PGRs on Petunias. Anticipate changes in weather or other conditions that can cause plant stretch and apply PGRs before plant stretch begins. Petunias respond well to B-Nine® WSG sprays at 2,500-3,500 ppm. Do not apply B-Nine® WSG after bud formation or flowers may reduce in size and/or become distorted. Bonzi® drenches at 1-2 ppm during later stages in the crop will reduce stretch and will not affect flowering as much as B-Nine® WSG.	Covering seed is not necessary but a light vermiculite coating will help maintain moisture levels in drier climates. Keep pelleted seed at moisture level 5 the first several days to ensure the pellet is completely dissolved. Providing long days in the plug stage will reduce overall time to flower. Low boron levels can induce tip abortion. Spraying an uneven plug tray with B-Nine® WSG at 1,500 ppm may help even the growth in the tray.

FINISH PGRs	TECH TIPS	VARIETY	VIGOR	TIMING	MPR
It is best to be proactive in applying plant growth regulators (PGRs) on Petunias. Anticipate changes in weather or other conditions that can cause plant stretch and apply PGRs before plant stretch begins. Petunias respond well to B-Nine® WSG sprays at 2,500-3,500 ppm. Do not apply B-Nine® WSG after bud formation or flowers may reduce in size and/or become distorted. Bonzi® drenches at 1-2 ppm during later stages in the crop will reduce stretch and will not affect flowering as much as B-Nine® WSG.	Covering seed is not necessary, but a light vermiculite coating will help maintain moisture levels in drier climates. Keep pelleted seed at moisture level 5 the first several days to ensure the pellet is completely dissolved. Providing long days in the plug stage will reduce overall time to flower. Low boron levels can induce tip abortion. Spraying an uneven plug tray with B-Nine® WSG at 1,500 ppm may help even the growth in the tray.	FotoFinish™ Blue 70061717		E-M	12.5 hrs.
		FotoFinish™ Burgundy 70061720		E-M	12.5 hrs.
		FotoFinish™ Mix 70099727			
		FotoFinish™ Patriot Mix 70099524			
		FotoFinish™ Pink 70067220		M	12.5 hrs.
		FotoFinish™ Red 70067221		M-L	12.5 hrs.
		FotoFinish™ Rose Morn 70083160		M-L	12.5 hrs.
		FotoFinish™ Rose Star 70083162		E-M	11.5 hrs.
		FotoFinish™ Salmon 70065697		E-M	10.5 hrs.
FotoFinish™ White 70083138		E-M	12.5 hrs.		

FINISH PGRs	TECH TIPS	VARIETY	VIGOR	TIMING	MPR
It is best to be proactive in applying PGRs on Petunias. Anticipate changes in weather or other conditions that can cause plant stretch and apply PGRs before plant stretch begins. Petunias respond well to B-Nine® WSG sprays at 2,500-3,500 ppm. Do not apply B-Nine® WSG after bud formation or flowers may reduce in size and/or become distorted. Bonzi® drenches at 1-2 ppm during later stages in the crop will reduce stretch and will not affect flowering as much as B-Nine® WSG.	Covering seed is Not necessary but a light vermiculite coating will help maintain moisture levels in drier climates. Keep pelleted seed at moisture level 5 the first several days to ensure the pellet is completely dissolved. Providing long days in the plug stage will reduce overall time to flower. Low boron levels can induce tip abortion.	Skybox™ Rose Star 70067243		E-M	10.5 hrs.

FINISH PGRs	TECH TIPS	VARIETY	VIGOR	TIMING	MPR
FlashForward™ is a genetically compact Petunia so will need less PGRs than other Petunias. It is best to be proactive in applying PGRs on Petunias. Anticipate changes in weather or other conditions that can cause plant stretch and apply PGRs before plant stretch begins. FlashForward™ Petunias respond well to B-Nine® WSG sprays at 1,500-2,500 ppm. Do not apply B-Nine® WSG after bud formation or flowers may reduce in size and/or become distorted. Bonzi® drenches at 0.5-1.0 ppm during later stages in the crop will reduce stretch and will not affect flowering as much as B-Nine® WSG.	Covering seed is not necessary but a light vermiculite coating will help maintain moisture levels in drier climates. Keep pelleted seed at moisture level 5 the first several days to ensure the pellet is completely dissolved. Providing long days in the plug stage will reduce overall time to flower. Low boron levels can induce tip abortion. Spraying an uneven plug tray with B-Nine® WSG at 1,500 ppm may help even the growth in the tray.	FlashForward™ Blue 70099066		E-M	11.5 hrs.
		FlashForward™ Burgundy 70099091		L	12.5 hrs.
		FlashForward™ Cool Waters Mix 70099093			
		FlashForward™ Coral 70099064		M	10.5 hrs.
		FlashForward™ Lavender 70099068		M	11 hrs.
		FlashForward™ Mix 70099092			
		FlashForward™ Patriot Mix 70099069			
		FlashForward™ Pink 70099065		M	12.5 hrs.
		FlashForward™ Pink Glo 70098898		M	11 hrs.
		FlashForward™ Purple 70099067		M	12.5 hrs.
		FlashForward™ Red 70098899		E-M	12.5 hrs.
		FlashForward™ Salmon 70098897		M	12.5 hrs.
		FlashForward™ Sky Blue 70098900		M-L	10.5 hrs.
		FlashForward™ White 70099063		E-M	10.5 hrs.

Phlox **POPSTARS™** F1 *Phlox drummondii*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Day neutral	60–62 °F (16–17 °C)	56–58 °F (13–14 °C)	125–175 ppm N	Packs 1 ppp 5–6 weeks Large Packs 1 ppp 5–6 weeks 1 pt. 1 ppp 5–6 weeks 1 qt. 1 ppp 5–6 weeks 1.25 qt. 3 ppp 5–6 weeks 2.5 qt. 3 ppp 5–6 weeks 3 qt. 3–4 ppp 5–6 weeks 1.5 gal. HB 5 ppp 6–7 weeks	Thrips	Powdery Mildew, Rhizoctonia, Pythium

Primula **LIBRE™** F1 *Primula obconica*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	2,000–4,000 foot candles	Facultative short day	62–64 °F (17–18 °C)	60–62 °F (16–17 °C)	75–125 ppm N	1 qt. 1 ppp 8–9 weeks 1.25 qt. 1 ppp 10–12 weeks 2.5 qt. 1 ppp 10–12 weeks 3 qt. 2–3 ppp 10–12 weeks	Whiteflies, Leaf Miners, Aphids, Thrips	Pythium, Tospovirus

Primula **PRIMERA™** F1 *Primula acaulis*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	2,000–4,000 foot candles	Facultative long day	50–52 °F (10–11 °C)	54–52 °F (12–13 °C)	75–125 ppm N	1 pt. 1 ppp 13–14 weeks 1 qt. 1 ppp 13–14 weeks	Whiteflies, Fungus Gnats, Leaf Miners, Aphids, Thrips	Ramularia, Botrytis

Ranunculus **MACHÉ™** F1 *Ranunculus asiaticus*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative long day	52–54 °F (11–12 °C)	50–52 °F (10–11 °C)	125–175 ppm N	1 qt. 1 ppp 12–15 weeks 1.25 qt. 1 ppp 13–16 weeks 2.5 qt. 1–2 ppp 13–16 weeks	Aphids, Whiteflies, Leafminer, Thrips, Fungus Gnats	Cercospora, Pythium, Botrytis, Tospovirus, Xanthomonas

Ranunculus **MAGIC™** F1 *Ranunculus asiaticus*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative long day	52–54 °F (11–12 °C)	50–52 °F (10–11 °C)	125–175 ppm N	1 pt. 1 ppp 14–16 weeks 1 qt. 1 ppp 14–16 weeks	Aphids, Whiteflies, Leaf Miners, Thrips, Fungus Gnats	Cercospora, Pythium, Botrytis, Tospovirus, Xanthomonas

Salvia **MOJAVE™** OP *Salvia splendens*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative long day	66–68 °F (19–20 °C)	62–64 °F (17–18 °C)	125–175 ppm N	Large Packs 1 ppp 5–6 weeks 1 pt. 1 ppp 5–7 weeks 1 qt. 1–2 ppp 6–7 weeks 1.25 qt. 2–3 ppp 6–7 weeks 2.5 qt. 2–3 ppp 6–7 weeks 3 qt. 3–4 ppp 5–6 weeks 1.5 gal. pot 4 ppp 6–7 weeks	Aphids, Thrips, Spider Mites, Leaf Miners and Whiteflies	Botrytis, Alternaria Leaf Spot, Corynospora Leaf Spot and Rust

Salvia **SENTRY™** OP *Salvia splendens*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative long day	66–68 °F (19–20 °C)	62–64 °F (17–18 °C)	125–175 ppm N	Packs 1 ppp 3–4 weeks Large Packs 1 ppp 4–5 weeks 1 pt. 1 ppp 4–5 weeks 1 qt. 1–2 ppp 5–6 weeks 1.25 qt. 2–3 ppp 5–6 weeks 2.5 qt. 2–3 ppp 5–6 weeks 1.5 gal. pot 4–5 ppp 6–7 weeks	Aphids, Thrips, Spider Mites, Leaf Miners and Whiteflies	Botrytis, Alternaria Leaf Spot, Corynospora Leaf Spot and Rust

Salvia **SIZZLER™** OP *Salvia splendens*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative long day	66–68 °F (19–20 °C)	62–64 °F (17–18 °C)	125–175 ppm N	Packs 1 ppp 4–5 weeks Large Packs 1 ppp 4–5 weeks 1 pt. 1 ppp 5–6 weeks 1 qt. 1–2 ppp 5–6 weeks 1.25 qt. 2–3 ppp 5–6 weeks 2.5 qt. 2–3 ppp 5–6 weeks 1.5 gal. pot 4–5 ppp 6–7 weeks	Aphids, Thrips, Spider Mites, Leaf Miners and Whiteflies	Botrytis, Alternaria Leaf Spot, Corynospora Leaf Spot and Rust

	FINISH PGRs	TECH TIPS
	PGRs are usually not necessary under proper (cool with high light) growing conditions. If needed due to low light and/or high temperatures, sprays of Bonzi® at 15-20 ppm or B-Nine® WSG at 5,000 ppm are effective. The best time to apply PGRs is about two weeks after transplant; later treatments will give more height control but will delay flowering. Popstars also respond well to a negative DIF.	Keep EC less than 0.75 mS/cm as Phlox drummondii are sensitive to high salts. Keep EC less than 0.75 mS/cm and avoid the dry-growing method of growth control, as Phlox drummondii are sensitive to high salts.
	FINISH PGRs	TECH TIPS
	If needed, sprays of B-Nine® WSG at 2,500-5,000 can be effective.	Control Thrips to avoid Tospovirus.
	FINISH PGRs	TECH TIPS
	If grown at the recommended temperatures, PGR applications should not be necessary. If needed, sprays of B-Nine® WSG at 2,500-5,000 ppm are effective in helping control leaf size.	Grow plugs on the dry side to avoid excessive algae growth.
	FINISH PGRs	TECH TIPS
	Ranunculus responds well to sprays of B-Nine® WSG at 2,500-5,000 ppm. If grown cool, PGR applications are usually not necessary. Under warm conditions, 1-3 sprays of B-Nine® WSG may be beneficial to control leaf size.	Control Thrips to avoid Tospovirus.
	FINISH PGRs	TECH TIPS
	Since Ranunculus Magic is a genetically compact plant PGRs are not needed.	Control Thrips to avoid Tospovirus.
	FINISH PGRs	TECH TIPS
	If needed to control height, spray with B-Nine® WSG at 2,500 ppm, Bonzi® at 10-30 ppm, or A-Rest® at 5-10 ppm.	Salvia is sensitive to high salts in the plug tray, so do not let the EC rise above 1.5 mS/cm. After fertilization, rinse the plants off with clear water to avoid burning the young growing tips.
	FINISH PGRs	TECH TIPS
	If needed to control height, spray with B-Nine® WSG at 2,500 ppm, Bonzi® at 10-30 ppm, or A-Rest® at 5-10 ppm.	Salvia is sensitive to high salts in the plug tray, so do not let the EC rise above 1.5 mS/cm. After fertilization, rinse the plants off with clear water to avoid burning the young growing tips.
	FINISH PGRs	TECH TIPS
	If needed to control height, spray with B-Nine® WSG at 2,500 ppm, Bonzi® at 10-30 ppm, or A-Rest® at 5-10 ppm.	Salvia is sensitive to high salts in the plug tray so do not let the EC rise above 1.5 mS/cm. After fertilization, rinse the plants off with clear water to avoid burning the young growing tips.

Salvia **VICTORIA™** *OP Salvia farinacea*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative long day	66–68 °F (19–20 °C)	62–64 °F (17–18 °C)	125–175 ppm N	Packs 1 ppp 8–9 weeks Large Packs 1 ppp 8–9 weeks 1 pt. 1 ppp 9–10 weeks 1 qt. 1 ppp 9–10 weeks 1.25 qt. 1–3 ppp 10–11 weeks 2.5 qt. 1–3 ppp 10–11 weeks 3 qt. 3 ppp 11–12 weeks 1.5 gal. pot 3–4 ppp 11–12 weeks	Aphids, Thrips, Whiteflies	Pythium, Botrytis

Sanvitalia **QUEEN OF SUNLIGHT™** *Sanvitalia speciosa*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Day Neutral	66–68 °F (19–20 °C)	60–62 °F (16–17 °C)	125–175 ppm N	1 pt. 1 ppp 12–13 weeks 1 qt. 1 ppp 12–13 weeks 1.25 qt. 1–2 ppp 12–13 weeks 1.5 gal. HB 3–4 ppp 14–15 weeks	Thrips, Aphids	Botrytis, Pythium

Schizanthus **ATLANTIS™** *F1 Schizanthus × wisetonensis*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	2,000–4,000 foot candles	Obligate long day	60–62 °F (16–17 °C)	56–58 °F (13–14 °C)	125–175 ppm N	1 qt. 1 ppp 7–9 weeks 1.25 qt. 1 ppp 8–10 weeks 2.5 qt. 1 ppp 8–10 weeks	Thrips, Whiteflies, Aphids, Spider Mites	Botrytis, Tospovirus

Snapdragon **LIBERTY™ CLASSIC** *F1 Antirrhinum majus*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative long day	64–66 °F (18–19 °C)	56–58 °F (13–14 °C)	125–175 ppm N	Large Packs 1 ppp 6–8 weeks* 1 qt. 1–2 ppp 10–12 weeks 1.25 qt. 2–3 ppp 10–12 weeks 2.5 qt. 3 ppp 10–12 weeks 3 qt. 3–5 ppp 10–12 weeks	Thrips, Aphids, and Spider Mites	Botrytis, Downy Mildew, Powdery Mildew, Pythium, Rust, TSWV, and INSV

* Green Plants

Snapdragon **MADAME BUTTERFLY™** *F1 Antirrhinum majus*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative long day	64–66 °F (18–19 °C)	56–58 °F (13–14 °C)	125–175 ppm N	1 qt. 1–2 ppp 10–12 weeks 1.25 qt. 2–3 ppp 10–12 weeks 2.5 qt. 3 ppp 10–12 weeks 3 qt. 3–5 ppp 10–12 weeks	Thrips, Aphids, Spider Mites	Botrytis, Downy Mildew, Powdery Mildew, Pythium, Rust, TSWV, INSV

Snapdragon **SNAPTASTIC™** *F1 Antirrhinum majus*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Day neutral	64–66 °F (18–19 °C)	56–58 °F (13–14 °C)	125–175 ppm N	Large Packs 1 ppp 5–7 weeks 1 pt. 1 ppp 7–8 weeks 1 qt. 1 ppp 7–8 weeks 1.25 qt. 1–2 ppp 7–8 weeks 2.5 qt. 1–2 ppp 7–8 weeks 3 qt. 3 ppp 7–8 weeks 1.5 gal. pot 3–5 ppp 7–8 weeks	Thrips, Aphids, and Spider Mites.	Botrytis, Downy Mildew, Powdery Mildew, Pythium, Rust, TSWV, and INSV.

Snapdragon Dwarf **SNAPTINI™** *F1 Antirrhinum majus*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Day neutral	64–66 °F (18–19 °C)	64–66 °F (18–19 °C)	125–175 ppm N	Packs 1 ppp 4–5 weeks Large Packs 1 ppp 5–6 weeks 1 pt. 1 ppp 5–6 weeks	Thrips, Aphids and Spider Mites.	Botrytis, Downy Mildew, Powdery Mildew, Pythium, Rust, TSWV and INSV.

Sunflower **SUNFINITY®** *F1 Helianthus hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–6 SME 1.2–1.75 mS/cm	3,500–4,500 foot candles	Facultative long day	70–75 °F (21–24 °C)	65–68 °F (20–24 °C)	150–200 ppm N	2.5 qt. 1 ppp 7–8 weeks 3 qt. 1 ppp 7–8 weeks 1.5 gal. pot 1–2 ppp 7–8 weeks	Aphid, spider mite, thrips, whitefly, caterpillars	Botrytis, Pythium, Powdery Mildew, Downy Mildew, Rust

	FINISH PGRs	TECH TIPS
	If needed to control height, spray with B-Nine® WSG at 2,500 ppm, Bonzi® at 5-15 ppm, or A-Rest® at 3-10 ppm.	Salvia is sensitive to high salts in the plug tray, so do not let the EC rise above 1.5 mS/cm. After fertilization, rinse the plug off with clear water to avoid burning the young growing tips. Salvia farinacea is a long day crop so extending the daylength to 16hrs with HID lights at true leaf stage is beneficial.
	FINISH PGRs	TECH TIPS
	If needed to prevent stretch under low light conditions spray with B-Nine® at 2,500-5,000 ppm.	Providing supplemental HID light will speed germination and improve plug quality. Sensitive to high salts; keep EC less than 0.5 mS/cm in the plug.
	FINISH PGRs	TECH TIPS
	PGRs are usually not required when grown under the recommended temperatures. If needed, spray with B-Nine® WSG at 1,500-3,000 ppm._x0001_	Keep plugs under short days to avoid premature flowering.
	FINISH PGRs	TECH TIPS
	Spray applications of B-Nine® WSG at 2,500-5,000 ppm, Bonzi® at 15-20 ppm or Sumagic® at 10-15 ppm are effective to control growth; 1-2 applications are usually sufficient. Do not apply Bonzi drenches after visible buds to prevent clubby flowers.	High pH levels (above 6.2) may promote iron deficiency causing chlorotic young leaves. Overly wet conditions or watering late in the day can cause shoot tip abortion. Keeping the media too wet can also lead to root rot diseases such as Pythium.
	FINISH PGRs	TECH TIPS
	Spray applications of B-Nine® WSG at 2,500-5,000 ppm, Bonzi® at 15-20 ppm or Sumagic® at 10-15 ppm are effective to control growth; 1-2 applications are usually sufficient. Do not apply Bonzi® drenches after visible buds to prevent clubby flowers.	High pH levels (above 6.2) may promote iron deficiency causing chlorotic young leaves. Overly wet conditions or watering late in the day can cause shoot tip abortion. Keeping the media too wet can also lead to root rot diseases such as Pythium.
	FINISH PGRs	TECH TIPS
	Snaptastic is grown cool and under high light, and rarely needs PGRs. However, if needed spray applications of B-Nine® WSG at 2,500-5,000 ppm, Bonzi® at 15-20 ppm or Sumagic® at 10-15 ppm are effective to reduce stretch under suboptimal environmental conditions. Do not apply Bonzi drenches after visible buds to prevent clubby flowers.	High pH levels (above 6.2) may promote iron deficiency causing chlorotic young leaves. Overly wet conditions or watering late in the day can cause shoot tip abortion. Keeping the media too wet can also lead to root rot diseases such as Pythium.
	FINISH PGRs	TECH TIPS
	Snaptini is grown cool and under high light, and rarely needs PGRs. However, if needed spray applications of B-Nine® WSG at 1,500-2,500 ppm, Bonzi® at 5-10 ppm or Sumagic® at 2.5-5 ppm are effective in reducing stretch under suboptimal environmental conditions. Bonzi can also be drenched at 1-2 ppm. Do not apply Bonzi after visible buds to prevent clubby flowers.	High pH levels (above 6.2) may promote iron deficiency causing chlorotic young leaves. Overly wet conditions or watering late in the day can cause shoot tip abortion. Keeping the media too wet can also lead to root rot diseases such as Pythium.
	FINISH PGRs	TECH TIPS
	Apply 3-4 ppm Bonzi® (paclobutrazol) drench 1-2 weeks after pinch; 3-4 ppm drench at first sign of visible buds; 3-4 ppm drench when flowers start cracking color to hold for finish. Higher concentrations may be necessary under high temperature and long day conditions, but do not exceed 6 ppm for each drench.	Apply a Bonzi (paclobutrazol) sprinch at 2-3 ppm within 48 hours of sowing (3-5 quarts per 100 sq ft.) to control hypocotyl stretch. Plugs must be propagated under long day (+13 hour) photoperiods in order to prevent delays in flowering. For more information on Sunfinity® visit us at www.syngentaflowers-us.com/sunfinity .

Torenia **DUCHESS™** *F1 Torenia fournieri*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative long day	68–70 °F (20–21 °C)	60–62 °F (16–17 °C)	75–125 ppm N	Packs 1 ppp 7-8 weeks 1 qt. 1 ppp 8–9 weeks	Aphids, Thrips	Botrytis, Pythium

Torenia **HI-LITE™** *F1 Torenia fournieri*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative long day	68–70 °F (20–21 °C)	68–70 °F (20–21 °C)	75–125 ppm N	Packs 1 ppp 6-7 weeks Large Packs 1 ppp 6–7 weeks 1 pt. 1 ppp 6–7 weeks 1 qt. 1 ppp 6–7 weeks 1.25 qt. 2-3 ppp 6–7 weeks 1.5 gal. HB 3–5 ppp 8–9 weeks	Aphids, Thrips	Botrytis, Pythium

Verbena **OBSESSION™** *OP Verbena hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative long day	70–72 °F (21–22 °C)	64–66 °F (18–19 °C)	125–175 ppm N	Packs 1 ppp 5-6 weeks 1 pt. 1 ppp 5–6 weeks 1 qt. 1 ppp 6–8 weeks	Fungus Gnats, Shore Flies, Thrips, Aphids, Spider Mites	Pythium, Rhizoctonia, Powdery Mildew, Tospovirus (Tomato Spotted Wilt Virus or Impatiens Necrotic Spot Virus)

Verbena **OBSESSION™ CASCADE** *OP Verbena hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative long day	70–72 °F (21–22 °C)	64–66 °F (18–19 °C)	125–175 ppm N	1 qt. 1 ppp 7–8 weeks 1.25 qt. 1-2 ppp 7–8 weeks 2.5 qt. 1–2 ppp 7–8 weeks 3 qt. 2–3 ppp 8–9 weeks 1.5 gal. HB 3–4 ppp 8–9 weeks 1.5 gal. pot 3–4 ppp 8–9 weeks	Fungus Gnats, Shore Flies, Thrips, Aphids, Spider Mites	Pythium, Rhizoctonia, Powdery Mildew, Tospovirus (Tomato Spotted Wilt Virus or Impatiens Necrotic Spot Virus)

Verbena **TUSCANY®** *OP Verbena hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative long day	70–72 °F (21–22 °C)	64–66 °F (18–19 °C)	125–175 ppm N	Large Packs 1 ppp 6–7 weeks 1 pt. 1 ppp 6–8 weeks 1 qt. 1 ppp 7–9 weeks 2.5 qt. 2–3 ppp 9–10 weeks	Fungus Gnats, Shore Flies, Thrips, Aphids, Spider Mites	Pythium, Rhizoctonia, Powdery Mildew, Tospovirus (Tomato Spotted Wilt Virus or Impatiens Necrotic Spot Virus)

Vinca **BLOCKBUSTER™** *F1 Catharanthus roseus*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	6,000–8,000 foot candles	Day Neutral	76–78 °F (24–26 °C)	64–66 °F (18–19 °C)	125–175 ppm N	Packs 1 ppp 3-4 weeks Large Packs 1 ppp 4–5 weeks 1 pt. 1 ppp 4–5 weeks 1 qt. 1 ppp 5–6 weeks 1.25 qt. 1-3 ppp 6–8 weeks 2.5 qt. 1–3 ppp 6–8 weeks 3 qt. 2–3 ppp 7–8 weeks 1.5 gal. pot 3–4 ppp 7–8 weeks	Thrips, Fungus Gnats and Shore Flies	Thielaviopsis, Rhizopus, Rhizoctonia, Pythium and Tospovirus (INSV and TSWV)

Vinca **CORA® CASCADE** *F1 Catharanthus roseus*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	6,000–8,000 foot candles	Day neutral	76–78 °F (24–26 °C)	64–66 °F (18–19 °C)	125–175 ppm N	1 qt. 1-2 ppp 8–9 weeks 1.25 qt. 2-3 ppp 8–9 weeks 2.5 qt. 2–3 ppp 8–9 weeks 3 qt. 3 ppp 9–10 weeks 1.5 gal. HB 3–5 ppp 10–11 weeks	Thrips, Fungus Gnats and Shore Flies	Thielaviopsis, Rhizopus, Rhizoctonia, Pythium and Tospovirus (INSV and TSWV)

FINISH PGRs	TECH TIPS
Usually not needed.	High light levels can cause leaf scorch. Very wet conditions will promote damping-off diseases.

FINISH PGRs	TECH TIPS
Usually not needed, but if needed B-Nine® WSG sprays of 1,250-2,500 ppm are effective.	High light levels can cause leaf scorch. Very wet conditions will promote damping-off diseases.

FINISH PGRs	TECH TIPS
Spray with B-Nine® at 2,500-5,000 ppm as needed.	Verbena need to be germinated on the dry side at moisture level 3. It is best to water in plug trays to moisture level 3 prior to sow, sow the seeds and then irrigate lightly only when needed to maintain moisture level 3.

FINISH PGRs	TECH TIPS
Drench with Bonzi at 1-3 ppm as needed to control growth. Also responds to sprays of Bonzi at 10-20 ppm or B-Nine® at 3,500-5,000 ppm.	Verbena need to be germinated on the dry side at moisture level 3. It is best to water in plug trays to moisture level 3 prior to sow, sow the seeds and then irrigate lightly only when needed to maintain moisture level 3.

FINISH PGRs	TECH TIPS
Spray with B-Nine® at 2,500-5,000 ppm as needed.	Verbena need to be germinated on the dry side at moisture level 3. It is best to water in plug trays to moisture level 3 prior to sow, sow the seeds and then irrigate lightly only when needed to maintain moisture level 3.

FINISH PGRs	TECH TIPS
If needed sprays of B-Nine® WSG at 2,500-5,000 ppm or A-Rest® at 2-4 ppm may be applied.	Soil temperatures lower than 75 °F (23 °C) during germination may decrease germination rates. Keeping media pH at 5.8 or lower will help reduce the likelihood of Thielaviopsis infections.

FINISH PGRs	TECH TIPS
If needed sprays of B-Nine® WSG at 2,500-5,000 ppm or A-Rest® at 2-4 ppm may be applied.	Soil temperatures lower than 75 °F (23 °C) during germination may decrease germination rates. Keeping media pH at 5.8 or lower will help reduce the likelihood of Thielaviopsis infections.

Vinca **CORA® CLASSIC** F1 *Catharanthus roseus*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	6,000–8,000 foot candles	Day neutral	76–78 °F (24–26 °C)	64–66 °F (18–19 °C)	125–175 ppm N	Packs 1 ppp 5-8 weeks Large Packs 1 ppp 5–8 weeks 1 pt. 1 ppp 7–8 weeks 1 qt. 1–2 ppp 8–9 weeks 1.25 qt. 3 ppp 8–9 weeks 2.5 qt. 3 ppp 8–9 weeks	Thrips, Fungus Gnats and Shore Flies	Thielaviopsis, Rhizopus, Rhizoctonia, Pythium and Tospovirus (INSV and TSWV)

Vinca **CORA® XDR** F1 *Catharanthus roseus*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	6,000–8,000 foot candles	Day neutral	76–78 °F (24–26 °C)	64–66 °F (18–19 °C)	125–175 ppm N	Packs 1 ppp 5-8 weeks Large Packs 1 ppp 5–8 weeks 1 pt. 1 ppp 5–9 weeks 1 qt. 1–2 ppp 5–9 weeks 1.25 qt. 1 ppp 5–9 weeks 2.5 qt. 1–3 ppp 6–10 weeks 1.5 gal. HB 4–5 ppp 8–9 weeks	Thrips, Fungus Gnats and Shore Flies	Thielaviopsis, Rhizopus, Rhizoctonia, Pythium and Tospovirus (INSV and TSWV)

Vinca **SUNSTORM®** OP *Catharanthus roseus*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	6,000–8,000 foot candles	Day neutral	76–78 °F (24–26 °C)	64–66 °F (18–19 °C)	125–175 ppm N	Packs 1 ppp 4-6 weeks 1 pt. 1 ppp 5–8 weeks 1 qt. 1–2 ppp 6–8 weeks 1.25 qt. 3 ppp 7–8 weeks	Thrips, Fungus Gnats and Shore Flies	Aerial Phytophthora, Thielaviopsis, Rhizopus, Rhizoctonia, Pythium and Tospovirus (INSV and TSWV)

Vinca **VITESSE™** F1 *Catharanthus roseus*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	6,000–8,000 foot candles	Day neutral	76–78 °F (24–26 °C)	64–66 °F (18–19 °C)	125–175 ppm N	1 pt. 1 ppp 4–5 weeks 1 qt. 1 ppp 5–6 weeks 1.25 qt. 1–3 ppp 6–8 weeks 2.5 qt. 1–3 ppp 6–8 weeks 3 qt. 2–3 ppp 7–8 weeks 1.5 gal. pot 3–4 ppp 7–8 weeks	Thrips, Fungus Gnats and Shore Flies	Thielaviopsis, Rhizopus, Rhizoctonia, Pythium and Tospovirus (INSV and TSWV)

Viola **DELTINI™** F1 *Viola cornuta*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Day neutral	64–66 °F (18–19 °C)	64–66 °F (18–19 °C)	75–125 ppm N	Packs 1 ppp 3-4 weeks Large Packs 1 ppp 4–5 weeks 1 pt. 1–2 ppp 5–6 weeks 1 qt. 1–2 ppp 5–6 weeks	Aphids, Thrips	Alternaria, Downy Mildew, Thielaviopsis, Cercospora, Botrytis

Viola **ENDURIO®** F1 *Viola cornuta*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative long day	64–66 °F (18–19 °C)	64–66 °F (18–19 °C)	75–125 ppm N	Large Packs 1–2 ppp 5–6 weeks 1 qt. 1–2 ppp 5–6 weeks 1.25 qt. 2–3 ppp 6–7 weeks 2.5 qt. 2–3 ppp 6–7 weeks 1.5 gal. HB 5 ppp 7–9 weeks	Aphids, Thrips	Alternaria, Downy Mildew, Thielaviopsis, Cercospora, Botrytis

Viola **PENNY™** F1 *Viola cornuta*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative long day	64–66 °F (18–19 °C)	64–66 °F (18–19 °C)	75–125 ppm N	Packs 1 ppp 4-5 weeks Large Packs 1–2 ppp 5–6 weeks 1 pt. 1–2 ppp 5–6 weeks 1 qt. 1–2 ppp 5–6 weeks 1.25 qt. 3 ppp 6–7 weeks	Aphids, Thrips	Alternaria, Downy Mildew, Thielaviopsis, Cercospora, Botrytis

FINISH PGRs	TECH TIPS
If needed sprays of B-Nine® WSG at 2,500-5,000 ppm or A-Rest® at 2-4 ppm may be applied.	Soil temperatures lower than 75 °F (23 °C) during germination may decrease germination rates. Keeping media pH at 5.8 or lower will help reduce the likelihood of Thielaviopsis infections.

FINISH PGRs	TECH TIPS
If needed sprays of B-Nine® WSG at 2,500-5,000 ppm or A-Rest® at 2-4 ppm may be applied.	Soil temperatures lower than 75 °F (23 °C) during germination may decrease germination rates. Keeping media pH at 5.8 or lower will help reduce the likelihood of Thielaviopsis infections.

FINISH PGRs	TECH TIPS
If needed sprays of B-Nine® WSG at 2,500-5,000 ppm or A-Rest® at 2-4 ppm may be applied.	Soil temperatures lower than 75 °F (23 °C) during germination may decrease germination rates. Keeping media pH at 5.8 or lower will help reduce the likelihood of Thielaviopsis infections.

FINISH PGRs	TECH TIPS
If needed, sprays of B-Nine® WSG at 2,500-5,000 ppm or A-Rest® at 2-4 ppm may be applied.	Soil temperatures lower than 75 °F (23 °C) during germination may decrease germination rates. Keeping media pH at 5.8 or lower will help reduce the likelihood of Thielaviopsis infections.

FINISH PGRs	TECH TIPS
Usually not required if growing cool. If conditions are warmer or darker than ideal, spray with B-Nine® WSG at 2,500-5,000 ppm.	Keep media pH below 5.8 to help avoid Thielaviopsis infections. Under hot temperatures provide lower light levels to reduce heat stress. Also, if very frequent irrigation occurs due to high temperatures, apply a supplemental feed of Solubor® to avoid Boron deficiency.

FINISH PGRs	TECH TIPS
Usually not required if growing cool. If conditions are warmer or darker than ideal spray with B-Nine® WSG at 2,500-5,000 ppm.	Keep media pH below 5.8 to help avoid Thielaviopsis infections. Under hot temperatures provide lower light levels to reduce heat stress. Also, if very frequent irrigation occurs due to high temperatures, apply a supplemental feed of Solubor® to avoid Boron deficiency.

FINISH PGRs	TECH TIPS
Usually not required if growing cool. If conditions are warmer or darker than ideal spray with B-Nine® WSG at 2,500-5,000 ppm.	Keep media pH below 5.8 to help avoid Thielaviopsis infections. Under hot temperatures, provide lower light levels to reduce heat stress. Also, if very frequent irrigation occurs due to high temperatures, apply a supplemental feed of Solubor® to avoid Boron deficiency.

Viola **TIGER EYE™** *F1 Viola cornuta*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative long day	64–66 °F (18–19 °C)	64–66 °F (18–19 °C)	75–125 ppm N	Packs 1 ppp 4–5 weeks Large Packs 1–2 ppp 5–6 weeks 1 pt. 1–2 ppp 5–6 weeks 1 qt. 1–2 ppp 5–6 weeks 1.25 qt. 3 ppp 5–6 weeks 1.5 gal. pot 4–5 ppp 7–8 weeks	Aphids, Thrips	Alternaria, Downy Mildew, Thielaviopsis, Cercospora, Botrytis

Wallflower **SUGAR RUSH™** *F1 Cheiranthus cheiri*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative long day	60–62 °F (16–17 °C)	58–60 °F (14–16 °C)	125–175 ppm N	Packs 1 ppp 5–6 weeks Large Packs 1 ppp 5–6 weeks 1 pt. 1 ppp 6–7 weeks 1 qt. 1 ppp 6–7 weeks 1.25 qt. 3 ppp 6–7 weeks 2.5 qt. 3 ppp 6–7 weeks 3 qt. 3–4 ppp 7–8 weeks 1.5 gal. pot 4–5 ppp 7–8 weeks	Thrips, Spider Mites, Aphids	Botrytis, Sclerotinia, Powdery Mildew, Pythium, Rhizoctonia

Zinnia **MAGELLAN™** *F1 Zinnia elegans*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative short day	74–76 °F (23–24 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1 qt. 1 ppp 7–8 weeks 1.25 qt. 2–3 ppp 7–8 weeks 2.5 qt. 3 ppp 7–8 weeks	Aphids, Whitefly, Thrips	Powdery Mildew, Botrytis, Bacterial Leaf Spot, Alternaria Leaf Spot

Zinnia **SHORT STUFF™** *F1 Zinnia elegans*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative short day	74–76 °F (23–24 °C)	62–64 °F (17–18 °C)	200–250 ppm N	Packs 1 ppp 6–7 weeks 1 qt. 1 ppp 7–8 weeks	Aphids, Whitefly, Thrips	Powdery Mildew, Botrytis, Bacterial Leaf Spot, Alternaria Leaf Spot

Zinnia **SWIZZLE™** *F1 Zinnia elegans*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative short day	74–76 °F (23–24 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1 qt. 1 ppp 7–8 weeks 1.25 qt. 2–3 ppp 7–8 weeks 2.5 qt. 3 ppp 7–8 weeks	Aphids, Whitefly, Thrips	Powdery Mildew, Botrytis, Bacterial Leaf Spot, Alternaria Leaf Spot

Zinnia **UPROAR™** *F1 Zinnia elegans*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative short day	74–76 °F (23–24 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1.25 qt. 2–3 ppp 7–8 weeks 2.5 qt. 3 ppp 7–8 weeks 1.5 gal. pot 5 ppp 8–9 weeks	Aphids, Whitefly, Thrips	Powdery Mildew, Botrytis, Bacterial Leaf Spot, Alternaria Leaf Spot

Zinnia **ZOWIE!™** *F1 Zinnia elegans*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	FINISHING PROGRAM	PESTS	DISEASES
pH: 5.5–5.9 SME 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm	4,000–6,000 foot candles	Facultative short day	74–76 °F (23–24 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1.25 qt. 2–3 ppp 7–8 weeks 2.5 qt. 3 ppp 7–8 weeks 1.5 gal. pot 5 ppp 8–9 weeks	Aphids, Whitefly, Thrips	Powdery Mildew, Botrytis, Bacterial Leaf Spot, Alternaria Leaf Spot

FINISH PGRs	TECH TIPS
Usually not required if growing cool. If conditions are warmer or darker than ideal, spray with B-Nine® WSG at 2,500-5,000 ppm.	Keep media pH below 5.8 to help avoid Thielaviopsis infections. Under hot temperatures, provide lower light levels to reduce heat stress. Also, if frequent irrigation occurs due to high temperatures, apply a supplemental feed of Solubor® to avoid Boron deficiency.
FINISH PGRs	TECH TIPS
Under favorable conditions, growing on the dry side will control growth adequately. Fall crops usually require a PGR application due to the warmer temperatures. Sprays of B-Nine® WSG at 2,500 ppm plus Cycocel® at 1,000 ppm are effective as are sprays of Bonzi® at 20 ppm.	It is important to treat with Bonzi® early in the plug cycle, as stated above to help create a stronger main stem.
FINISH PGRs	TECH TIPS
Spray with B-Nine® at 2,500-5,000 ppm 1-3 times depending on container size and environmental conditions. Start PGR applications early - about one week after transplant. To prevent late flower stem stretch drench with Bonzi at 1-2 ppm when flowers start to show color.	Transplant Zinnias on time. Stress in the plug can lead to premature flowering.
FINISH PGRs	TECH TIPS
Short Stuff Zinnia is genetically compact so does not require as much PGR as other Zinnias. Usually only Short Stuff grown in packs requires a PGR application. If needed spray with B-Nine® at 2,500-5,000 ppm.	Transplant Zinnias on time. Stress in the plug can lead to premature flowering.
FINISH PGRs	TECH TIPS
Spray with B-Nine® at 2,500-5,000 ppm 1-3 times depending on container size and environmental conditions. Start PGR applications early - about one week after transplant. To prevent late flower stem stretch drench with Bonzi at 1-2 ppm when flowers start to show color.	Transplant Zinnias on time. Stress in the plug can lead to premature flowering.
FINISH PGRs	TECH TIPS
Spray with B-Nine® at 2,500-5,000 ppm 1-3 times depending on container size and environmental conditions. Start PGR applications early - about one week after transplant. To prevent late flower stem stretch drench with Bonzi at 1-2 ppm when flowers start to show color.	Transplant Zinnias on time. Stress in the plug can lead to premature flowering.
FINISH PGRs	TECH TIPS
Spray with B-Nine® at 2,500-5,000 ppm 1-3 times depending on container size and environmental conditions. Start PGR applications early - about one week after transplant. To prevent late flower stem stretch drench with Bonzi at 1-2 ppm when flowers start to show color.	Transplant Zinnias on time. Stress in the plug can lead to premature flowering.

Hot Blooded® Red

Vegetative Propagation

Hot Blooded® Red



Angelonia **CARITA™** *Angelonia angustifolia*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Recommended	3.5-4 Weeks	72-74 °F (22-23 °C)

Comments: Carita has moderate vigor and will generally need a PGR treatment in propagation. To control growth after rooting, sprays of B-Nine® WSG (1,500 ppm), or a tank-mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (1,500 ppm) are sufficient. Do not spray Florel® on angelonias since this can burn foliage and cause significant flower delay. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Angelonia **CARITA™ CASCADE** *Angelonia angustifolia*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger	URC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Recommended	3.5-4 Weeks	72-74 °F (22-23 °C)

Comments: Carita Cascade has moderate vigor and will generally need a PGR treatment in propagation. To control growth after rooting, sprays of B-Nine® WSG (1,500 ppm) or a tank-mix spray of Cycocel® (1,000 ppm) + B-Nine® (1,500 ppm) are normally sufficient. Do not spray Florel® on angelonia since this can burn foliage and cause significant flower delay. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Argyranthemum **SASSY®** *Argyranthemum frutescens*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Not Recommended	3.5-4 Weeks	72-74 °F (22-23 °C)

Comments: Sassy has moderate vigor and will generally need a PGR treatment in propagation. To control growth after rooting, a tank-mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm) is normally sufficient. It is also becoming popular for growers to combine Florel® at 350-500 ppm with the B-Nine® WSG solution listed above to increase growth control and to improve branching. These Florel® + B-Nine® WSG combo sprays should be applied to actively growing plants. Do not spray B-Nine® WSG or Florel® + B-Nine® WSG tank mixes on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Bacopa **CALYPSO™** *Sutera cordata*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger	URC, Pre-Pinch, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Recommended	3.5-4 Weeks	72-74 °F (22-23 °C)

Comments: Calypso has moderate vigor and will generally need a PGR treatment in propagation. To control growth after rooting, a spray of B-Nine® WSG (1,500 ppm) is sufficient. It is also becoming popular for growers to combine Florel® (200 ppm) with the B-Nine® WSG (1,500 ppm) to increase growth control and to improve branching. These Florel® + B-Nine® WSG combo sprays should be applied to actively growing plants. Do not spray B-Nine® WSG or Florel® + B-Nine® WSG tank mixes on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Begonia **FLORENCIO™** *Begonia hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
72-cell	URC	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Recommended	6 Weeks	72–75 °F (22–24 °C)

Comments: 500-1,000 ppm Cycocel®

Begonia **GRACE™** *Begonia hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
72-cell	URC	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Recommended	6 Weeks	72-75 °F (22-24 °C)

Comments: 500-1,000 ppm Cycocel®

Bidens **BRAZEN™** *Bidens ferulifolia*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: Brazen Samurai, Eternal Flame, and Rising Sun have moderate to high vigor and will generally need a PGR treatment in propagation. To control growth after rooting, a spray of B-Nine® (1500-2500 ppm) is effective. It is also becoming popular for growers to combine Florel® (350 ppm) with the B-Nine® WSG (1,500 ppm) to increase growth control and improve branching. These Florel® + B-Nine® WSG combo sprays should be applied to actively growing plants. Do not spray B-Nine® WSG or Florel® + B-Nine® WSG tank mixes on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue. Brazen Imperial Luck has relatively low vigor and generally needs little PGR treatment in propagation.

VEGETATIVE PROPAGATION

Bidens **MEXICAN GOLD™** *Bidens ferulifolia*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, Pre-Pinch, AutoStix™	Not Recommended	CapSii® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: Mexican Gold, Mexican Gold Jumbo, and Mexican Gold Semi-Double all have moderate vigor and will generally need a PGR treatment in propagation. To control growth after rooting, a spray of B-Nine® WSG (1,500-2,500 ppm) is sufficient. It is also becoming popular for growers to combine Florel® (350 ppm) with the B-Nine® WSG (1,500 ppm) to increase growth control and to improve branching. These Florel® + B-Nine® WSG combo sprays should be applied to actively growing plants. Do not spray B-Nine® WSG or Florel® + B-Nine® WSG tank mixes on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue. Mexican Gold Compact has very low vigor and generally needs little PGR treatment in propagation.

Calendula **CALEO™** *Calendula hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSii® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: To control growth after rooting, a spray of B-Nine® WSG (2,500-3,500 ppm) can be used. For all sprays listed above, the mist should be off for a minimum of one hour for the plant growth regulator (PGR) to absorb into the leaf tissue.

Calibrachoa **CABRIO™** *Calibrachoa hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Recommended	CapSii® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Recommended	4.5-5 Weeks	72-74 °F (22-23 °C)

Comments: Cabrio Calibrachoa are compact-medium growers and should not need the typical growth regular in propagation that other more vigorous varieties require. To keep plants under control, a spray of B-Nine® WSG at 1500-2500 ppm can be applied after cuttings are well-rooted and vegetative growth begins. It is also becoming popular for growers to combine Florel® at 350-500 ppm with the B-Nine® WSG solution listed above to increase growth control and to improve branching. These Florel® + B-Nine® WSG combo sprays should be applied to actively growing plants and done ideally before pinching. Do not spray B-Nine® or Florel® + B-Nine® tank mixes on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Calibrachoa **CALLIE®** *Calibrachoa hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Recommended	CapSii® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Recommended	4.5-5 Weeks	72-74 °F (22-23 °C)

Comments: Callie calibrachoa have a range of vigor, with some being relatively compact to others having more of a medium to medium-vigorous habit. To keep plants under control, a spray of B-Nine® WSG at 1,500-2,500 ppm can be applied after cuttings are well-rooted and vegetative growth begins. It is also becoming popular for growers to combine Florel® at 350-500 ppm with the B-Nine® WSG solution listed above to increase growth control and to improve branching. These Florel® + B-Nine® WSG combo sprays should be applied to actively growing plants and done ideally before pinching. Do not spray B-Nine® WSG or Florel® + B-Nine® WSG tank mixes on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to be absorbed into the leaf tissue.

Calocephalus **WHIMSY™** *Calocephalus brownii*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSii® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Not recommended	4.5-5 weeks	70–74 °F (21–23 °C)

Comments: Whimsy calocephalus is a compact, dense-growing plant. It should not require any chemical growth regulation.

Curry Plant **HELICHRYSUM ITALICUM** *Helichrysum italicum*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSii® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Not recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: Helichrysum italicum is a bushy, dense-growing plant. It typically does not require any chemical growth regulation in propagation. Transplant on time to avoid stretched growth. Use plastic tenting or ReeMay® fabric during propagation if needed to keep high humidity and to minimize excess water on the foliage.

Dahlia **CAFÉ AU LAIT** *Dahlia hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC	Not Recommended	CapSii® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Not Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: Café Au Lait has a moderately vigorous habit and may require a PGR treatment in propagation. If needed to control growth after rooting, sprays of B-Nine® WSG (1500 ppm) are usually sufficient. A tank-mix spray of Florel® (350-500 ppm) + B-Nine® (1500 ppm) can also be used to control growth and improve branching. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Dahlia **MOON LADY** *Dahlia hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Not Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: Moon Lady has a moderately vigorous habit and may require a PGR treatment in propagation. If needed to control growth after rooting, sprays of B-Nine® WSG (1500 ppm) are usually sufficient. A tank-mix spray of Florel® (350-500 ppm) + B-Nine® (1500 ppm) can also be used to control growth and improve branching. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Dahlia **DAHLEGRIA**® *Dahlia hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Not Recommended	3.5-4 Weeks	72-74 °F (22-23 °C)

Comments: Dahlegria is vigorous growing and will need a PGR treatment in propagation. To control growth after rooting, sprays of B-Nine® WSG (2500-3500 ppm) are usually sufficient. A tank-mix spray of Florel® (350-500 ppm) + B-Nine® WSG (2500 ppm) can also be used to control growth and improve branching. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Dahlia **GOLDALIA**™ *Dahlia hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Not Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: Goldalia has low vigor and will generally need little PGR use in propagation. To control growth after rooting, sprays of B-Nine® WSG (1,500-2,500 ppm) are usually sufficient. A tank-mix spray of Florel® (350-500 ppm) + B-Nine® WSG (1,500 ppm) can also be used to control growth and improve branching. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Dahlia **GRANDALIA**™ *Dahlia hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Not Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: Grandalia has moderate to high vigor and will generally need PGR use in propagation. To control growth after rooting, sprays of B-Nine® WSG (1,500-2,500 ppm) are usually sufficient. A tank-mix spray of Florel® (350-500 ppm) + B-Nine® WSG (1,500-2,500 ppm) can also be used to control growth and improve branching. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Dahlia **HAPPY DAYS**™ *Dahlia hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Not Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: Happy Days has moderate vigor and will generally need a PGR treatment in propagation. To control growth after rooting, sprays of B-Nine® WSG (1500-2500 ppm) are usually sufficient. A tank-mix spray of Florel® (350-500 ppm) + B-Nine® WSG (1500-2500 ppm) can also be used to control growth and improve branching. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Dahlia **KARMA** *Dahlia hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Not Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: Karma has a moderately vigorous habit and may require a PGR treatment in propagation. If needed to control growth after rooting, sprays of B-Nine® WSG (1500 ppm) are usually sufficient. A tank-mix spray of Florel® (350-500 ppm) + B-Nine® (1500 ppm) can also be used to control growth and improve branching. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Dahlia **SINCERITY** *Dahlia hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Not Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: Sincerity has a moderately vigorous habit and may require a PGR treatment in propagation. If needed to control growth after rooting, sprays of B-Nine® WSG (1500 ppm) are usually sufficient. A tank-mix spray of Florel® (350-500 ppm) + B-Nine® (1500 ppm) can also be used to control growth and improve branching. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

VEGETATIVE PROPAGATION

Diascia **DARLA**[®] *Diascia barberae*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: Darla has moderate vigor and will generally need a PGR treatment in propagation. To control growth after rooting, sprays of B-Nine® WSG (2,500 ppm) or Florel® (350 ppm) are sufficient. It is also becoming popular for growers to combine Florel® (350 ppm) with the B-Nine® WSG (1,500 ppm) to increase growth control and to improve branching. These Florel® + B-Nine® WSG combo sprays should be applied to actively growing plants. Do not spray B-Nine® WSG or Florel® + B-Nine® WSG tank mixes on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Dipladenia **MADINIA**[®] *Mandevilla hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC	Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Recommended	5-6 Weeks	72-74 °F (22-23 °C)

Comments: To control growth after rooting, a spray of B-Nine® WSG (3,500-4,000 ppm) can be used. Sprays of Configure® (150-300 ppm) or Atrimec® (200 ppm) can also be used to improve branching on the young rooted plants. These Configure or Atrimec sprays should be applied to actively growing plants and done ideally before pinching. Do not spray B-Nine® WSG, Configure, or Atrimec on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Dipladenia **MADINIA**[®] **MAXIMO** *Mandevilla hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC	Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Recommended	5-6 Weeks	72-74 °F (22-23 °C)

Comments: To control growth after rooting, a spray of B-Nine® WSG (3,500-4,000 ppm) can be used. Sprays of Configure® (150-300 ppm) or Atrimec® (200 ppm) can also be used to improve branching on the young rooted plants. These Configure or Atrimec sprays should be applied to actively growing plants and done ideally before pinching. Do not spray B-Nine® WSG, Configure, or Atrimec on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Dorotheanthus **MEZOO**[™] *Dorotheanthus bellidiformis*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Recommended	4.5-5 Weeks	72-74 °F (22-23 °C)

Comments: The use of plant growth regulators is generally not needed in propagation. Control growth by pinching if needed.

Euphorbia **EUPHORIC**[™] *Euphorbia hypericifolia*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Recommended	3.5-4 Weeks	72-74 °F (22-23 °C)

Comments: To control growth after rooting, a spray of B-Nine® WSG (1,500-2,500 ppm) can be used.

Geranium Interspecific **CALDERA**[™] *Pelargonium interspecific*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	4.5-5 Weeks	70-74 °F (21-23 °C)

Comments: To help reduce bottom leaf yellowing during propagation (e.g., on delayed shipments or where cuttings have gotten warm during shipping), Fascination® can be sprayed on the cuttings at 2.0–2.5 ppm within 24 hours after sticking. Caldera growth can be controlled using sprays of Cycocel™ at 1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm). Bonzi® sprays are not recommended in propagation because of the chance of getting into the rooting media and stunting the plant. Florel® can also be sprayed at 300–350 ppm 2.5–3 weeks after sticking and after good root formation to improve branching, reduce premature flowering, and to control growth. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Geranium Interspecific **CALIENTE**[®] *Pelargonium interspecific*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: To help reduce bottom leaf yellowing during propagation (e.g., on delayed shipments or where cuttings have gotten warm during shipping), Fascination® can be sprayed on the cuttings at 2.0–2.5 ppm within 24 hours after sticking. Caliente growth can be controlled using sprays of Cycocel® at 1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm). Bonzi® sprays are not recommended in propagation because of the chance of getting into the rooting media and stunting the plant. Florel® can also be sprayed at 300–350 ppm 2.5–3 weeks after sticking and after good root formation to improve branching, reduce premature flowering, and to control growth. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Geranium Interspecific **CALLIOPE® LARGE** *Pelargonium interspecific*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: To help reduce bottom leaf yellowing during propagation (e.g., on delayed shipments or where cuttings have gotten warm during shipping), Fascination® can be sprayed on the cuttings at 2.0–2.5 ppm within 24 hours after sticking. Calliope Large growth can be controlled using sprays of Cycocel® at 1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm). Bonzi® sprays are not recommended in propagation because of the chance of getting into the rooting media and stunting the plant. Florel® can also be sprayed at 300–350 ppm 2.5–3 weeks after sticking and after good root formation to improve branching, reduce premature flowering, and to control growth. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Geranium Interspecific **CALLIOPE® MEDIUM** *Pelargonium interspecific*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: To help reduce bottom leaf yellowing during propagation (e.g., on delayed shipments or where cuttings have gotten warm during shipping), Fascination® can be sprayed on the cuttings at 2.0–2.5 ppm within 24 hours after sticking. Calliope Medium growth can be controlled using sprays of Cycocel® at 750-1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm). Bonzi® sprays are not recommended in propagation because of the chance of getting into the rooting media and stunting the plant. Florel® can also be sprayed at 300–350 ppm 2.5–3 weeks after sticking and after good root formation to improve branching, reduce premature flowering, and to control growth. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the plant growth regulator (PGR) to absorb into the leaf tissue.

Geranium Interspecific **MOJO™** *Pelargonium interspecific*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: To help reduce bottom leaf yellowing during propagation (e.g., on delayed shipments or where cuttings have gotten warm during shipping), Fascination® can be sprayed on the cuttings at 2.0–2.5 ppm within 24 hours after sticking. Mojo growth can be controlled using sprays of Cycocel® at 750-1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm). Bonzi® sprays are not recommended in propagation because of the chance of getting into the rooting media and stunting the plant. Florel® can also be sprayed at 300–350 ppm 2.5–3 weeks after sticking and after good root formation to improve branching, reduce premature flowering, and to control growth. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Geranium Interspecific **MOXIE!™** *Pelargonium interspecific*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: To help reduce bottom leaf yellowing during propagation (e.g., on delayed shipments or where cuttings have gotten warm during shipping), Fascination® can be sprayed on the cuttings at 2.0–2.5 ppm within 24 hours after sticking. Moxie! growth can be controlled using sprays of Cycocel® at 750-1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm). Bonzi® sprays are not recommended in propagation because of the chance of getting into the rooting media and stunting the plant. Florel® can also be sprayed at 300–350 ppm 2.5–3 weeks after sticking and after good root formation to improve branching, reduce premature flowering, and to control growth. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Geranium Interspecific **PRETTY LITTLE™** *Pelargonium interspecific*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: To help reduce bottom leaf yellowing during propagation (e.g., on delayed shipments or where cuttings have gotten warm during shipping), Fascination® can be sprayed on the cuttings at 2.0–2.5 ppm within 24 hours after sticking. Pretty Little growth can be controlled using sprays of Cycocel® at 750-1,000 ppm. Bonzi® sprays are not recommended in propagation because of the chance of getting into the rooting media and stunting the plant. Florel® can also be sprayed at 300–350 ppm 2.5–3 weeks after sticking and after good root formation to improve branching, reduce premature flowering, and to control growth. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Geranium Ivy **BLIZZARD™** *Pelargonium peltatum*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	4.5-5 Weeks	70-74 °F (21-23 °C)

Comments: To help reduce bottom leaf yellowing during propagation (e.g., on delayed shipments or where cuttings have gotten warm during shipping), Fascination® can be sprayed on the cuttings at 2.0–2.5 ppm within 24 hours after sticking. Blizzard Ivy Geranium growth can be controlled using sprays of Cycocel® at 750-1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm). Bonzi® sprays are not recommended in propagation because of the chance of getting into the rooting media and stunting the plant. Florel® can also be sprayed at 300–350 ppm 2.5–3 weeks after sticking and after good root formation to improve branching, reduce premature flowering, and to control growth. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

VEGETATIVE PROPAGATION

Geranium Ivy **CASCADE** *Pelargonium peltatum*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	4.5-5 Weeks	70-74 °F (21-23 °C)

Comments: To help reduce bottom leaf yellowing during propagation (e.g., on delayed shipments or where cuttings have gotten warm during shipping), Fascination® can be sprayed on the cuttings at 2.0–2.5 ppm within 24 hours after sticking. Cascade growth can be controlled using sprays of Cycocel® at 750-1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm). Bonzi® sprays are not recommended in propagation because of the chance of getting into the rooting media and stunting the plant. Florel® can also be sprayed at 300–350 ppm 2.5–3 weeks after sticking and after good root formation to improve branching, reduce premature flowering, and to control growth. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Geranium Ivy **IVY LEAGUE™** *Pelargonium peltatum*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	4.5-5 Weeks	70-74 °F (21-23 °C)

Comments: To help reduce bottom leaf yellowing during propagation (e.g., on delayed shipments or where cuttings have gotten warm during shipping), Fascination® can be sprayed on the cuttings at 2.0–2.5 ppm within 24 hours after sticking. Ivy League growth can be controlled using sprays of Cycocel® at 750-1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm). Bonzi® sprays are not recommended in propagation because of the chance of getting into the rooting media and stunting the plant. Florel® can also be sprayed at 300–350 ppm 2.5–3 weeks after sticking and after good root formation to improve branching, reduce premature flowering, and to control growth. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Geranium Zonal **AMERICANA®** *Pelargonium zonale*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: To help reduce bottom leaf yellowing during propagation (e.g., on delayed shipments or where cuttings have gotten warm during shipping), Fascination® can be sprayed on the cuttings at 2.0–2.5 ppm within 24 hours after sticking. Americana growth can be controlled using sprays of Cycocel® at 750-1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm). Bonzi® sprays are not recommended in propagation because of the chance of getting into the rooting media and stunting the plant. Florel® can also be sprayed at 300–350 ppm 2.5–3 weeks after sticking and after good root formation to improve branching, reduce premature flowering, and to control growth. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Geranium Zonal **NOVELTY COLLECTION** *Pelargonium zonale*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: To help reduce bottom leaf yellowing during propagation (e.g., on delayed shipments or where cuttings have gotten warm during shipping), Fascination® can be sprayed on the cuttings at 2.0–2.5 ppm within 24 hours after sticking. Growth can be controlled using sprays of Cycocel® at 750-1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm). Bonzi® sprays are not recommended in propagation because of the chance of getting into the rooting media and stunting the plant. Florel® can also be sprayed at 300–350 ppm 2.5–3 weeks after sticking and after good root formation to improve branching, reduce premature flowering, and to control growth. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Geranium Zonal **ROCKY MOUNTAIN™** *Pelargonium zonale*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: To help reduce bottom leaf yellowing during propagation (e.g., on delayed shipments or where cuttings have gotten warm during shipping), Fascination® can be sprayed on the cuttings at 2.0–2.5 ppm within 24 hours after sticking. Rocky Mountain growth can be controlled using sprays of Cycocel® at 750-1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm). Bonzi® sprays are not recommended in propagation because of the chance of getting into the rooting media and stunting the plant. Florel® can also be sprayed at 300–350 ppm 2.5–3 weeks after sticking and after good root formation to improve branching, reduce premature flowering, and to control growth. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Geranium Zonal **TANGO™** *Pelargonium zonale*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: To help reduce bottom leaf yellowing during propagation (e.g., on delayed shipments or where cuttings have gotten warm during shipping), Fascination® can be sprayed on the cuttings at 2.0–2.5 ppm within 24 hours after sticking. Tango growth can be controlled using sprays of Cycocel® at 750-1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm). Bonzi® sprays are not recommended in propagation because of the chance of getting into the rooting media and stunting the plant. Florel® can also be sprayed at 300–350 ppm 2.5–3 weeks after sticking and after good root formation to improve branching, reduce premature flowering, and to control growth. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Heliotrope **SCENTROPIA™** *Heliotropium arborescens*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC	Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	4.5-5 weeks	72-74 °F (22-23 °C)

Comments: To control growth after rooting, a spray of B-Nine® WSG (1,500-2,500 ppm) can be used. A tank-mix spray of Florel® (350 ppm) + B-Nine® WSG (1,500-2,500 ppm) can also be applied to control growth and improve branching. Cuttings of Scentropia heliotrope are sensitive to chilling, so avoid storing cuttings <50 °F (10°C). Stick unrooted cuttings immediately upon arrival—they don't like to be stored. Avoid over-misting during propagation.

Impatiens **SILHOUETTE®** *Impatiens walleriana*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: To control growth, sprays of Bonzi® (5 ppm) can be applied. Growers can also try a combo spray of Florel® (350 ppm) + B-Nine® WSG (1,500 ppm) to control growth and improve branching. Silhouette impatiens are fast rooters and will be ready to transplant from propagation relatively quickly. Unrooted cuttings are sensitive to chilling, so avoid storing cuttings <50°F (10 °C).

Impatiens Interspecific New Guinea **SPECTRA™** *Impatiens interspecific*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: To control growth, sprays of Bonzi® (1-2 ppm) are generally used. Growers can also spray Florel® (250-300 ppm) at 1-2 days after sticking unrooted cuttings to reduce premature flower bud development and help provide more uniform (but delayed) flowering during finishing. This is a good strategy for baskets or large patio pots where early flowering is not desired.

Impatiens New Guinea **SONIC®** *Impatiens hawkeri*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: To control growth, sprays of Bonzi® (1-2 ppm) are generally used. Growers can also spray Florel® (250-300 ppm) at 1-2 days after sticking unrooted cuttings to reduce premature flower bud development and help provide more uniform (but delayed) flowering during finishing. This is a good strategy for baskets or large patio pots where early flowering is not desired.

Impatiens New Guinea **SUPER SONIC®** *Impatiens hawkeri*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger	URC	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: To control growth, sprays of Bonzi® (1-2 ppm) are generally used. Growers can also spray Florel® (250-300 ppm) at 1-2 days after sticking unrooted cuttings to reduce premature flower bud development and help provide more uniform (but delayed) flowering during finishing. This is a good strategy for baskets or large patio pots where early flowering is not desired.

Ipomoea **SIDEKICK™** *Ipomoea batatas*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: The use of plant growth regulators is generally not needed in propagation. Stick unrooted cuttings immediately to prevent dehydration. Plants are chilling sensitive, so avoid storing cuttings <50 °F (10°C).

Lantana **BANDANA®** *Lantana camara*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	4.5-5 Weeks	72-74 °F (22-23 °C)

Comments: To control growth after rooting, a spray of B-Nine® WSG (2,500 ppm) can be used. A tank-mix spray of Florel® (350 ppm) + B-Nine® WSG (2,500 ppm) can also be used to control growth and improve branching.

Lantana **BANDITO™** *Lantana camara*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	4.5-5 Weeks	72-74 °F (22-23 °C)

Comments: Bandito has low vigor and should need little PGR during propagation. If growth control is needed after rooting, a spray of B-Nine® WSG (2,500 ppm) can be used. A tank-mix spray of Florel® (350 ppm) + B-Nine® WSG (2,500 ppm) can also be used to control growth and improve branching.

VEGETATIVE PROPAGATION

Lantana **BANDOLERO™** *Lantana camara*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	4.5-5 Weeks	72-74 °F (22-23 °C)

Comments: To control growth after rooting, a tank-mix spray of B-Nine® WSG (2,500-3,500 ppm) + Cycocel® (1,000 ppm) can be used. A tank-mix spray of Florel® (350 ppm) + B-Nine® WSG (2,500-3,500 ppm) can also be used to control growth and improve branching.

Lantana **HOT BLOODED®** *Lantana camara*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	4.5-5 Weeks	72-74 °F (22-23 °C)

Comments: To control growth after rooting, a tank-mix spray of B-Nine® WSG (2,500-3,500 ppm) + Cycocel® (1,000 ppm) can be used. A tank-mix spray of Florel® (350 ppm) + B-Nine® WSG (2,500-3,500 ppm) can also be used to control growth and improve branching.

Lantana **LANDSCAPE BANDANA®** *Lantana camara*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	4.5-5 Weeks	72-74 °F (22-23 °C)

Comments: To control growth after rooting, a tank-mix spray of B-Nine® WSG (2,500-3,500 ppm) + Cycocel® (1,000 ppm) can be used. A tank-mix spray of Florel® (350 ppm) + B-Nine® WSG (2,500-3,500 ppm) can also be used to control growth and improve branching. Landscape Bandana varieties can be relatively vigorous and will typically need chemical growth control.

Licorice Plant **HELICHRYSUM PETIOLARE** *Helichrysum petiolare*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Not recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: Helichrysum petiolare is a relatively compact, semi-trailing plant. It typically does not require any chemical growth regulation in propagation. Transplant on time to avoid stretched growth.

Lobelia **TECHNO®** *Lobelia erinus*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: To control growth after rooting, sprays of B-Nine® WSG (1,500-2,500 ppm) is sufficient. It is also becoming popular for growers to combine Florel® (350 ppm) with the B-Nine® WSG (1,500 ppm) to increase growth control and to improve branching. These Florel® + B-Nine® WSG combo sprays should be applied to actively growing plants. Do not spray B-Nine® WSG or Florel® + B-Nine® WSG tank mixes on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Lobelia **TECHNO® UPRIGHT** *Lobelia erinus*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: To control growth after rooting, sprays of B-Nine® WSG (1,500-2,500 ppm) is sufficient. It is also becoming popular for growers to combine Florel® (350 ppm) with the B-Nine® WSG (1,500 ppm) to increase growth control and to improve branching. These Florel® + B-Nine® WSG combo sprays should be applied to actively growing plants. Do not spray B-Nine® WSG or Florel® + B-Nine® WSG tank mixes on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Lysimachia **GOLDII** *Lysimachia nummularia*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, Pre-Pinch, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Recommended	4 Weeks	70-74 °F (21-23 °C)

Comments: Lysimachia Goldii is a trailing plant that is typically pinched once in propagation to control growth. Syngenta Flowers offers Lysimachia Goldii as a pre-pinched cutting to decrease labor costs and provide the grower with a liner that develops roots faster and creates a denser liner. Transplant on time to avoid stretched growth and over-grown liners.

Osteospermum **TRADEWINDS®** *Osteospermum ecklonis*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Not Recommended	4.5-5 Weeks	70-74 °F (21-23 °C)

Comments: Do not reduce mist too soon during propagation. Continue light misting until all cuttings are rooted into the media. Reducing mist too early can result in slow and uneven rooting across the bench. To keep plants under control, a spray of B-Nine® WSG (2,500 ppm) or B-Nine® WSG (2,500 ppm) + Cycocel® (1,000 ppm) can be applied after cuttings are well-rooted and vegetative growth begins. It is also becoming popular for growers to combine Florel® (350 ppm) with the B-Nine® WSG (1,500-2,500 ppm) to increase growth control and to improve branching. These Florel® + B-Nine® WSG combo sprays should be applied to actively growing plants and done ideally before pinching. Do not spray B-Nine® WSG or Florel® + B-Nine® WSG tank mixes on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Penstemon **PHOENIX™** *Penstemon hartwegii*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: Sprays of B-Nine® WSG (2,500 ppm) or a tank-mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm) are generally sufficient. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Pentas **FALLING STAR™** *Pentas lanceolata*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC	Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Recommended	5 Weeks	72-74 °F (22-23 °C)

Comments: Falling Stars are slow rooters, so provide sufficient temperature during propagation. Sprays of B-Nine® WSG (2,500 ppm) are generally sufficient. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Pentas **STARCLUSTER™** *Pentas lanceolata*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC	Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Recommended	5 Weeks	72-74 °F (22-23 °C)

Comments: Starclusters are slow rooters, so provide sufficient temperature during propagation. Sprays of B-Nine® WSG (2,500 ppm) are generally sufficient. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Petunia **DEKKO™** *Petunia hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Not Recommended	3-3.5 Weeks	72-74 °F (22-23 °C)

Comments: Dekko has moderate vigor and generally is not as vigorous as many full-trailing petunia types. To control growth after rooting, sprays of B-Nine® WSG (2,500 ppm) are usually sufficient. A tank-mix spray of Florel® (350 ppm) + B-Nine® WSG (2,500 ppm) can also be used to control growth and improve branching. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Petunia **FUN HOUSE™** *Petunia hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Not recommended	3-3.5 Weeks	72-74 °F (22-23 °C)

Comments: Fun House has good vigor and generally will need chemical growth regulation in propagation. To control growth after rooting, sprays of B-Nine® WSG (2,500-3,500 ppm) are effective. A tank-mix spray of Florel® (350 ppm) + B-Nine® WSG (2,500 ppm) can also be used to control growth and improve branching. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Petunia **ITSY™** *Petunia hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Not Recommended	3-3.5 Weeks	70-74 °F (21-23 °C)

Comments: Itsy has moderate vigor and generally is not as vigorous as many full-trailing petunia types. To control growth after rooting, sprays of B-Nine® WSG (2,500 ppm) are usually sufficient. A tank-mix spray of Florel® (350 ppm) + B-Nine® WSG (2,500 ppm) can also be used to control growth and improve branching. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

VEGETATIVE PROPAGATION

Petunia **SANGUNA**[®] *Petunia hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Not Recommended	3-3.5 Weeks	70-74 °F (21-23 °C)

Comments: Sanguna has good vigor and generally will need chemical growth regulation in propagation. To control growth after rooting, sprays of B-Nine® WSG (2,500-3,500 ppm) are usually sufficient. A tank-mix spray of Florel® (350 ppm) + B-Nine® WSG (2,500 ppm) can also be used to control growth and improve branching. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Petunia **SANGUNA**[®] **PATIO** *Petunia hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Not Recommended	3-3.5 Weeks	70-74 °F (21-23 °C)

Comments: Sanguna Patio has compact-medium vigor and generally will need only moderate amounts of chemical growth regulation in propagation. To control growth after rooting, sprays of B-Nine® WSG (2,500 ppm) are usually sufficient. A tank-mix spray of Florel® (350 ppm) + B-Nine® WSG (2,500 ppm) can also be used to control growth and improve branching. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Petunia **SHORTCAKE**[™] *Petunia hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Not Recommended	3-3.5 Weeks	70-74 °F (21-23 °C)

Comments: Shortcake has moderate vigor and generally is not as vigorous as many full-trailing petunia types. To control growth after rooting, sprays of B-Nine® WSG (2500-3500 ppm) are usually sufficient. A tank-mix spray of Florel® (350 ppm) + B-Nine® WSG (2500-3500 ppm) can also be used to control growth and improve branching. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Salvia **VELOCITY**[™] *Salvia farinacea*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, Pre-Pinch, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Recommended	3.5-4 Weeks	70-74 °F (21-23 °C)

Comments: Velocity growth can be controlled in propagation using a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (1,500 ppm). For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Scaevola **BOMBAY**[®] *Scaevola aemula*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger	URC, CC, AutoStix™	Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Recommended	4.5-5 Weeks	72-74 °F (22-23 °C)

Comments: Bombay is typically slow rooting during propagation, especially Bombay Blue. Don't reduce mist too soon and continue to provide misting until all cuttings are rooted. To control growth after rooting, sprays of B-Nine® WSG (1,500-2,500 ppm) are usually sufficient. A tank-mix spray of Florel® (350-500 ppm) + B-Nine® WSG (1,500 ppm) can also be used to control growth and improve branching. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Variegated Swedish Ivy **PLECTRANTHUS COLEOIDES** *Plectranthus coleoides*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Recommended	2-3 Weeks	68–70 °F (20–21 °C)

Comments: B-Nine® WSG at 1,500-2,500 ppm can be used to control stem stretch.

Verbena **LANAI**[®] *Verbena hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, Pre-Pinch, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2–3 days and after cuttings become fully hydrated.	Recommended	3-3.5 Weeks	72-74 °F (22-23 °C)

Comments: Lanai has a range of vigor, with most varieties having medium to medium-vigorous growth habits. To control growth after rooting, sprays of B-Nine® WSG (2,500 ppm) are usually sufficient. A tank-mix spray of Florel® (350 ppm) + B-Nine® WSG (1,500-2,500 ppm) can also be used to control growth and improve branching. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Verbena **LANAI® COMPACT** *Verbena hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, Pre-Pinch, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Recommended	3-3.5 Weeks	72-74 °F (22-23 °C)

Comments: Lanai Compact has compact-medium vigor and should require only moderate amounts of chemical growth retardants in propagation. To control growth after rooting, sprays of B-Nine® WSG (1,500-2,500 ppm) are usually sufficient. A tank-mix spray of Florel® (350 ppm) + B-Nine® WSG (1,500 ppm) can also be used to control growth and improve branching. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Verbena **LANAI® UPRIGHT** *Verbena hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, Pre-Pinch, AutoStix™	Not Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2-3 days and after cuttings become fully hydrated.	Recommended	3-3.5 Weeks	72-74 °F (22-23 °C)

Comments: Lanai Upright has compact-medium to medium vigor and should require moderate amounts of chemical growth retardants in propagation. To control growth after rooting, sprays of B-Nine® WSG (1,500-2,500 ppm) are usually sufficient. A tank-mix spray of Florel® (350 ppm) + B-Nine® WSG (1,500-2,500 ppm) can also be used to control growth and improve branching. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Verbena **MAGELANA®** *Verbena hybrida*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, Pre-Pinch, AutoStix™	Not Recommended.	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2–3 days and after cuttings become fully hydrated.	Recommended	3-3.5 Weeks	70-74 °F (21-23 °C)

Comments: Magelana has compact-medium vigor and should require only moderate amounts of chemical growth retardants in propagation. To control growth after rooting, sprays of B-Nine® WSG (1,500-2,500 ppm) are usually sufficient. A tank-mix spray of Florel® (350 ppm) + B-Nine® WSG (1,500 ppm) can also be used to control growth and improve branching. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Vinca **NIRVANA® CASCADE** *Catharanthus roseus*

REC TRAY	PRODUCT FORM	ROOTING HORMONE	MIST TIME	PINCH	PROP TIME	BOTTOM HEAT
105-cell (30 mm) or larger.	URC, CC, AutoStix™	Recommended	CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.	Not Recommended	4.5-5 Weeks	72-74 °F (22-23 °C)

Comments: Avoid excessively cold mist water during propagation, or distorted young foliage can occur. Keep young plants fertilized during propagation to prevent bottom leaf yellowing. To control growth after rooting, sprays of Cycocel® (750 ppm), B-Nine® WSG (2,500 ppm), or Cycocel® (750 ppm) + B-Nine® WSG (2,500 ppm) can be used depending on the growth rate and vigor of the plant. The Cycocel® + B-Nine® WSG combo spray will have a more growth regulating effect than either the Cycocel® or B-Nine® WSG spray alone.

Itsy™ Magenta

Vegetative Finishing

Itsy™ Magenta



Angelonia **CARITA™** *Angelonia angustifolia*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	76–78 °F (24–26 °C)	70–72 °F (21–22 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 2–3 ppp 9–10 weeks 1.5 gal. pot 4 ppp 10–11 weeks

Tech Tips: Provide warm temperatures early on in finishing to allow plants to establish after transplant. Cold temperatures lead to bottom leaf yellowing, slow growth, and basal stem and root rots. Avoid over-watering the young transplants, especially in large patio containers. Apply a preventative fungicide drench if needed to prevent fungal root diseases. Scout and treat for thrips.

Angelonia **CARITA™ CASCADE** *Angelonia angustifolia*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	76–78 °F (24–26 °C)	70–72 °F (21–22 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 2–3 ppp 9–10 weeks 1.5 gal. HB 4 ppp 10–11 weeks 1.5 gal. pot 4 ppp 10–11 weeks 2 gal. HB 5 ppp 10–11 weeks

Tech Tips: Provide warm temperatures early on in finishing to allow plants to establish after transplant. Cold temperatures lead to bottom leaf yellowing, slow growth, and basal stem and root rots. Avoid over-watering the young transplants, especially in large patios and baskets. Apply a preventative fungicide drench if needed to prevent fungal root diseases. Scout and treat for thrips.

Argyranthemum **SASSY®** *Argyranthemum frutescens*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 2–3 ppp 9–10 weeks 1.5 gal. pot 5 ppp 10–11 weeks

Tech Tips: Growing under relatively cool temperatures and high light levels will produce high-quality Argyranthemum. If grown cool, little chemical growth regulators are needed during production. Scout and treat for Thrips, which can cause streaking and browning of the flower petals.

Bacopa **CALYPSO™** *Sutera cordata*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	125–175 ppm N	1-2 Pinches	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 2–3 ppp 9–10 weeks 1.5 gal. HB 4 ppp 10–11 weeks

Tech Tips: Calypso should be pinched during propagation, which results in a well-branched, mounded plug. Avoid keeping plants too wet and cold early on after transplant, which can result in root rot and tip chlorosis (iron deficiency), especially in large baskets and containers. High DLs and cool finishing temperatures produce high-quality bacopa. Plants can be pinched twice for baskets and large containers, which results in full, uniform plants. Monitor media pH and EC closely and avoid high EC levels to prevent damage roots. Do not let plants get extremely dry which results in necrotic foliage and root loss. Calypso has moderate vigor and will generally need a PGR treatment in propagation. To control growth after rooting, a spray of B-Nine® WSG (1,500 ppm) is sufficient. It is also becoming popular for growers to combine Florel® (200 ppm) with the B-Nine® WSG (1,500 ppm) to increase growth control and to improve branching. These Florel® + B-Nine® WSG combo sprays should be applied to actively growing plants. Do not spray B-Nine® WSG or Florel® + B-Nine® WSG tank mixes on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Begonia **FLORENCIO™** *Begonia hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	6,000–8,000 foot candles	Facultative short day	72–74 °F (22–23 °C)	72–74 °F (22–23 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 6–9 weeks 1.25 qt. 2–3 ppp 9–12 weeks 2.5 qt. 2–3 ppp 9–12 weeks 3 qt. 2–3 ppp 10–12 weeks 1.5 gal. HB 4–5 ppp 10–14 weeks 1.5 gal. pot 3–4 ppp 10–14 weeks 2 gal. HB 4–5 ppp 12–14 weeks

Tech Tips: Day extension lighting to 14 hours is recommended for the first weeks of finished production to bulk plant size. Lighting should be discontinued at least four weeks prior to shipping flowering plants.

Begonia **GRACE™** *Begonia hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	6,000–8,000 foot candles	Facultative short day	72–74 °F (22–23 °C)	72–74 °F (22–23 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 7–8 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 8–9 weeks 3 qt. 1 ppp 8–9 weeks 1.5 gal. HB 3 ppp 10–11 weeks 1.5 gal. pot 3 ppp 10–11 weeks 2 gal. HB 3 ppp 12–13 weeks

Tech Tips: Day extension lighting to 14 hours is recommended for the first weeks of finished production to bulk plant size. Lighting should be discontinued at least four weeks prior to shipping flowering plants.

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
	Thrips, Whiteflies	Root rots, Botrytis	B-Nine® (2500 ppm) or a tank-mix spray of Cycocel® (1000 ppm) + B-Nine® (2500 ppm). Do not spray Florel® on Angelonia since this can burn foliage and cause significant flower delay.	Carita™ Purple 70003174 Carita™ Raspberry 70003177 Carita™ White 70003175	C-M C C-M	E E E

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
	Thrips, Whiteflies	Root rot, Botrytis	B-Nine® (2500 ppm) or a tank-mix spray of Cycocel® (1000 ppm) + B-Nine® (2500 ppm). Do not spray Florel® on Angelonia since this can burn foliage and cause significant flower delay.	Carita™ Cascade Deep Purple 70003172 Carita™ Cascade Raspberry 70018119 Carita™ Cascade White 70003173	M C-M M	M M M

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
	Thrips, Aphids, Whiteflies, and Leafminers	Botrytis	Bonzi® (5-10 ppm), Sumagic® (4-5 ppm), and Cycocel® (1000 ppm) + B-Nine® (2500 ppm) tank-mix work to control growth. It is also becoming popular for growers to combine Florel® at 350-500 ppm with B-Nine® (2500) early on in production to control growth and improve branching. These Florel® + B-Nine® combo sprays should be applied to actively growing plants.	Sassy® Double Deep Rose 70036131 Sassy® Double Yellow 70051319 Sassy® Red 70006552 Sassy® Rose 70003326 Sassy® White 70066240	M-V C-M M M M	E E-M M-L E E

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
	Thrips, Aphids, and Whiteflies	Botrytis, Fungal root rot	B-Nine® (1500-2500 ppm). A Tank-mix spray of Florel® (200 ppm) + B-Nine® (1500 ppm) can also be used to control growth and improve branching early in production. Bonzi® drench (1 ppm) can be given 3-4 weeks before finishing.	Calypso™ Jumbo Deep Lavender 70060753 Calypso™ Jumbo Lilac 70071572 Calypso™ Jumbo Pink 70060755 Calypso™ Jumbo Rose 70071583 Calypso™ Jumbo White 70060751	C-M M C-M M C-M	E E E E E

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
	Thrips, Broad Mites	Botrytis, Tospovirus, Xanthomonas	500-1,000 ppm Cycocel®	Florencio™ Cerise 70105044 Florencio™ Orange 70091480 Florencio™ Pink 70091479 Florencio™ Red 70091476 Florencio™ White 70091478 Florencio™ Yellow 70091477	M M M M M M	M M M M M M

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
	Thrips, Broad Mites	Botrytis, Tospovirus, Xanthomonas	500-1,000 ppm Cycocel®	Grace™ Dark Red 70086288 Grace™ Orange 70086283 Grace™ Pink 70086285	M-V M-V M-V	M M M

Bidens **BRAZEN™** *Bidens ferulifolia*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day neutral	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	125–175 ppm N	1 Pinch	1 pt. 1 ppp 5–7 weeks 1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–10 weeks 2.5 qt. 1 ppp 8–10 weeks 3 qt. 2–4 ppp 9–10 weeks 1.5 gal. HB 3–4 ppp 10–11 weeks 1.5 gal. pot 4–5 ppp 10–11 weeks 2 gal. HB 4–5 ppp 10–11 weeks

Tech Tips: Brazen Bidens cuttings root quickly and should be transplanted on time. Plants have adequate vigor and flower relatively quickly allowing the plants to fill in containers quickly. Brazen Bidens forms a well-branched, upright to mounding plant with just one pinch. Brazen Imperial Luck is more compact and will take more time to fill out pots than the other varieties (Samurai, Eternal Flame, and Rising Sun).

Bidens **MEXICAN GOLD™** *Bidens ferulifolia*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day neutral	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	125–175 ppm N	1 Pinch	1 pt. 1 ppp 6 weeks 1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 3 ppp 9–10 weeks 1.5 gal. HB 3–4 ppp 10–11 weeks 1.5 gal. pot 4–5 ppp 10–11 weeks 2 gal. HB 4–5 ppp 10–11 weeks

Tech Tips: Mexican Gold cuttings root quickly and should be transplanted on time. Plants are moderately vigorous and early flowering, and will fill out containers quickly.

Calendula **CALEO™** *Calendula hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 2–3 ppp 9–10 weeks 1.5 gal. HB 4 ppp 10–11 weeks

Tech Tips: Varieties vary between single and semi-double type flowers. Plants are relatively fast growers and fill containers and baskets quickly. Caleo Calendulas tolerate a range of temperatures and growing conditions. However, the best plant quality occurs when plants are grown under relatively cool temperatures and high light intensities. Extremely high temperatures will result in reduced flower size and more open habits. Caleo was bred and selected for powdery mildew resistance, but plants should be inspected periodically under high disease pressure.

Calibrachoa **CABRIO™** *Calibrachoa hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 2–3 ppp 9–10 weeks 1.5 gal. HB 4 ppp 10–11 weeks 1.5 gal. pot 5 ppp 10–11 weeks 2 gal. HB 5 ppp 10–11 weeks

Tech Tips: Keep the pH down in the mid 5s to avoid tip yellowing—drench with iron chelate if necessary. Avoid overwatering of young plants. Plants can be pinched twice on baskets and larger containers (once in prop, once after transplant). An early Florel® or Florel® + B-Nine® WSG spray improves branching. Mid-season Bonzi® drenches are the key to beautiful mounded baskets. Watch for aphids. High DLIs and moderate-to-cool finishing temperatures produce high-quality calibrachoa. Cabrio Calibrachoa was bred and selected to flower under day lengths of 10.5 hours. Use proper sanitation when pinching or shearing calibrachoa to prevent possible virus spread.

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
	Whiteflies	Botrytis	B-Nine® (2500 ppm) can be used to control growth. A tank-mix spray of Florel® (350 ppm) + B-Nine® (1500 ppm) can also be used to control growth and improve branching early in production, especially if not given this treatment in propagation. A Bonzi drench (0.5-1 ppm) can be given 3-4 weeks before finishing and results in toned, high quality plants.	Brazen™ Eternal Flame 70091929 Brazen™ Imperial Luck 70091930 Brazen™ Rising Sun 70091925 Brazen™ Samurai 70091932	V C M M	E M M M

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
	Whiteflies	Botrytis	B-Nine® (2500 ppm) can be used to control growth. A tank-mix spray of Florel® (350 ppm) + B-Nine® (1500 ppm) can also be used to control growth and improve branching early in production, especially if not given this treatment in propagation. A Bonzi drench (0.5-1 ppm) can be given 3-4 weeks before finishing and results in toned, high quality plants.	Mexican Gold™ 70018300 Mexican Gold™ Jumbo 70003253	M-V V	E E

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
	Aphids, Whiteflies	Botrytis, Powdery Mildew	B-Nine® WSG (2,500-5,000 ppm), Sumagic® (1-2 ppm), or Bonzi® (2-4 ppm) can be applied to the plants as needed.	Caleo™ Orange 70054975 Caleo™ Yellow 70060726	M-V M-V	M M

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING	MPR
	Aphid, thrips, budworm	Botrytis, powdery mildew, viruses (TMV, TSWV)	Cabrio calibrachos are compact-medium growers and will need only moderate growth regulation after transplant. To keep plants under control, sprays of either B-Nine® (2500 ppm) or Sumagic® (10-15 ppm) can be applied to the plants as needed. A spray of Florel® (350-500 ppm) or Florel® (350-500 ppm) + B-Nine® (1500-2500 ppm) can also be done early on to control growth and improve branching. For the best looking plants, a Bonzi® drench (1-2 ppm) should be applied to the media about 4 weeks before full finish and sale. Be consistent in Bonzi® drench volumes since higher drench volumes can result in more growth retarding effect.	Cabrio™ Amethyst 70074743 Cabrio™ Burgundy 70075993 Cabrio™ Eclipse Lilac 70074753 Cabrio™ Eclipse Strawberry 70074722 Cabrio™ Grape 70074736 Cabrio™ Pink with Eye 70074739 Cabrio™ Sweet Peach 70073041 Cabrio™ Yellow 70074727	C-M C-M C-M M C-M M C C-M	M M-L M M M M M-L E-M	10.5 hrs. 10.5 hrs. 10.5 hrs. 10.5 hrs. 10.5 hrs. 10.5 hrs. 10.5 hrs. 10.5 hrs.

*MPR is Minimum Photoperiod Recommendation.

Calibrachoa **CALLIE®** *Calibrachoa hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.5–5.9 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 2–3 ppp 9–10 weeks 1.5 gal. HB 4 ppp 10–11 weeks 2 gal. HB 5 ppp 10–11 weeks

Tech Tips: Keep the pH down in the mid 5.0s to avoid tip yellowing—drench with iron chelate if necessary. Avoid overwatering of young plants. Plants can be pinched twice on baskets and larger containers (once in prop, once after transplant). An early Florel® or Florel® + B-Nine® WSG spray improves branching. Mid-season Bonzi® drenches are the key to beautiful mounded baskets. Watch for aphids. High DLIs and moderate-to-cool finishing temperatures produce high-quality calibrachoa. Use proper sanitation when pinching or shearing calibrachoa to prevent possible virus spread.

Calocephalus **WHIMSY™** *Calocephalus brownii*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day neutral	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	125–175 ppm N	1 Pinch	1 pt. 1 ppp 4–6 weeks 1 qt. 1 ppp 4–6 weeks 1.25 qt. 1 ppp 4–6 weeks

Tech Tips: Whimsy calocephalus is a compact plant that has low water and fertilizer requirements. Use plastic tenting or Reemay® fabric during propagation if needed to keep high humidity, and to minimize excess water on the foliage. Provide moderate to warm temperatures early on after transplant to get the plants established. Avoid over-saturated media and overly cool temperatures. Whimsy may form bright yellow flowers on very mature plants, but its main value is its unique silver foliage.

Curry Plant **HELICHRYSUM ITALICUM** *Helichrysum italicum*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day neutral	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	125–175 ppm N	1 Pinch	1 qt. 1 ppp 5–6 weeks 1.25 qt. 1-2 ppp 7–9 weeks 2.5 qt. 1-2 ppp 7–9 weeks 3 qt. 2–4 ppp 8–9 weeks 1.5 gal. pot 2–4 ppp 8–9 weeks

Tech Tips: Helichrysum italicum (Curry Plant) is a mounding plant that has low water and fertilizer requirements. Provide moderate to warm temperatures early on after transplant to get the plants established. Avoid over-saturated media and overly cool temperatures. Helichrysum italicum may form golden yellow flowers on very mature plants, but its main value is its unique silver-colored foliage. Trimming plants is the best way to control growth.

Dahlia **CUT FLOWER COLLECTION** *Dahlia hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Short Day	70–72 °F (21–22 °C)	66–68 °F (19–20 °C)	200–250 ppm N	1 Pinch	2.5 qt. 1 ppp 9–10 weeks 3 qt. 2 ppp 9–10 weeks 1.5 gal. pot 3 ppp 9–10 weeks

Tech Tips: Long-day lighting (daylength extension or night interruption) is needed during propagation to avoid premature flowering and tuber formation. The ideal photoperiod during finishing to provide the correct balance between vegetative growth and flower formation is between 13-14 hours. Growing under very short natural days (< 12 hours) will result in short plants, fast flowering, and root tubers. Provide warm temperatures early on in finishing to allow plants to establish after transplant. Cut flower dahlias grow best under moderately warm temperatures. Avoid extreme heat stress, especially under relatively high light intensities. Scout and treat for a range of insects and diseases, including spider mites, thrips, and powdery mildew.

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING	MPR
Aphid, thrips, budworm	Botrytis, powdery mildew, viruses (TMV, TSWV)	B-Nine® (2,500-3,500 ppm) or Sumagic® (10-20 ppm) can be applied to the plants as needed. Florel® (350-500 ppm) or Florel® (350-500 ppm) + B-Nine® (2,500 ppm) can also be done early on to control growth and improve branching. Bonzi® drench (2-3 ppm) should be applied to the media about 4 weeks before full finish and sale.	Callie® Apricot 70035958 Callie® Blue 70075991 Callie® Burgundy 70035959 Callie® Coral 70073020 Callie® Dark Red 70068741 Callie® Eclipse Lavender 70075987 Callie® Eclipse Lilac 70074754 Callie® Eclipse Raspberry 70074732 Callie® Eclipse Strawberry 70073034 Callie® Lavender 70087450 Callie® Light Blue 70008012 Callie® Mango 70003301 Callie® Orange 70003288 Callie® Pink Morn 70054735 Callie® Pink with Eye 70073038 Callie® Purple 70080987 Callie® Rose 70007858 Callie® Rose Dark Center 70080981 Callie® Star Orange 70073033 Callie® Strawberry 70073025 Callie® White 70052153 Callie® Yellow 70035954	M M-V M M C-M C-M M-V V M-V M C-M C-M M C-M M C-M M V M-V C-M C-M M V M-V C-M M-V	E-M E-M M M E M M-L M E M M M M E-M M E E-M M M E-M	10.5 hrs. 10.5 hrs. 10.5 hrs. 10.5 hrs. 10.5 hrs. 10.5 hrs. 10.5 hrs. 10.5 hrs. 10.5 hrs. 10.5 hrs. 11 hrs. 11.5 hrs. 11.5 hrs. 10.5 hrs. 11.5 hrs. 12 hrs. M M 11.5 hrs. 9.5 hrs. 12 hrs. 10.5 hrs.

*MPR is Minimum Photoperiod Recommendation.

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
No major pests	Botrytis, fungal root rot	Does not require any chemical growth regulation. If plants get too large for their container, then it's best to trim the plants back to control growth.	Whimsy™ Silver 70060862	C	M

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Fungus gnat, whitefly	Botrytis, fungal root rot	Does not require any chemical growth regulation. If plants get too large for their container, then it's best to trim the plants back to control growth.	Icicles 70003687	M	M

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphid, spider mite, thrips, leaf miner	Botrytis, powdery mildew, basal stem rot	B-Nine® WSG at 2,500 ppm are recommended at 4 weeks and 6 weeks after transplant to help control growth. Sprays of Florel® at 250 ppm at 4 weeks and 5.5-6 weeks after transplant will also help to control growth and can be used instead of the B-Nine® WSG sprays. The Florel® sprays will also help prevent late-season flower peduncle stretch. A Bonzi® drench at 2-4 ppm can be used to hold plants for sale.	Café Au Lait 70089173 Moon Lady 70089172	V V	L L

VEGETATIVE FINISHING

Dahlia **DAHLEGRIA**[®] *Dahlia hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative short day	72–74 °F (22–23 °C)	66–68 °F (19–20 °C)	200–250 ppm N	1 Pinch	1 pt. 1 ppp 7–8 weeks 1 qt. 1 ppp 7–8 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 2 ppp 9–10 weeks 3 qt. 2 ppp 9–10 weeks 1.5 gal. pot 3 ppp 10–11 weeks

Tech Tips: Long-day lighting (daylength extension or night interruption) is needed during propagation to avoid premature flowering and tuber formation. Ideal photoperiod during finishing to provide the correct balance between vegetative growth and flower formation is between 13-14 hours. Growing under very short natural days (< 12 hours) will result in short plants, fast flowering, and root tubers. Provide warm temperatures early on in finishing to allow plants to establish after transplant. Plant the rooted cutting relatively deep to provide good support and balance in the pot for the maturing plants. Scout and treat for a range of insects and diseases, including spider mites, thrips, and powdery mildew.

Dahlia **GOLDALIA**[™] *Dahlia hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Short Day	70–72 °F (21–22 °C)	66–68 °F (19–20 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1–2 ppp 9–10 weeks 3 qt. 3 ppp 9–10 weeks 1.5 gal. HB 4 ppp 10–11 weeks 2 gal. HB 5 ppp 10–11 weeks

Tech Tips: Long-day lighting (day length extension or night interruption) is needed during propagation to avoid premature flowering and tuber formation. Ideal photoperiod during finishing to provide the correct balance between vegetative growth and flower formation is between 13-14 hours. Growing under very short natural days (12 hours) will result in short plants, fast flowering, and root tubers. Provide warm temperatures early on in finishing to allow plants to establish after transplant. Plant the rooting cutting relatively deep to provide good support and balance in the pot for the maturing plants. Scout and treat for a range of insects and diseases, including Spider Mites, Thrips, and Powdery mildew.

Dahlia **GRANDALIA**[™] *Dahlia hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Short Day	70–72 °F (21–22 °C)	66–68 °F (19–20 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 2–3 ppp 9–10 weeks 1.5 gal. HB 3 ppp 10–11 weeks

Tech Tips: Long-day lighting (day length extension or night interruption) is needed during propagation to avoid premature flowering and tuber formation. Ideal photoperiod during finishing to provide the correct balance between vegetative growth and flower formation is between 13-14 hours. Growing under very short natural days (12 hours) will result in short plants, fast flowering, and root tubers. Provide warm temperatures early on in finishing to allow plants to establish after transplant. Plant the rooting cutting relatively deep to provide good support and balance in the pot for the maturing plants. Scout and treat for a range of insects and diseases, including Spider Mites, Thrips, and Powdery mildew.

Dahlia **HAPPY DAYS**[™] *Dahlia hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative short day	70–72 °F (21–22 °C)	66–68 °F (19–20 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 7–8 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 2–3 ppp 9–10 weeks 1.5 gal. pot 10–11 ppp 3 weeks

Tech Tips: Long-day lighting (daylength extension or night interruption) is needed during propagation to avoid premature flowering and tuber formation. Ideal photoperiod during finishing to provide the correct balance between vegetative growth and flower formation is between 13-14 hours. Growing under very short natural days (< 12 hours) will result in short plants, fast flowering, and root tubers. Provide warm temperatures early on in finishing to allow plants to establish after transplant. Plant the rooting cutting relatively deep to provide good support and balance in the pot for the maturing plants. Scout and treat for a range of insects and diseases, including spider mites, thrips, and powdery mildew.

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphid, spider mite, thrips, leaf miner	Botrytis, powdery mildew, basal stem rot	B-Nine® WSG (2,500-3,500 ppm) are usually sufficient to control growth. A Bonzi® drench (3-4 ppm) can also be used to control growth or to hold plants for sale.	Dahlegria® Apricot Tricolor 70082922 Dahlegria® Light Rose 70089164 Dahlegria® Magenta Bicolor 70089162 Dahlegria® Orange 70082927 Dahlegria® Orange Bicolor 70082923 Dahlegria® Pink Flame 70082925 Dahlegria® Red 70089151 Dahlegria® Sunrise 70089160 Dahlegria® Sunset 70089152 Dahlegria® White 70082924	V V V V V V V V V V	E-M M E-M M E-M M E-M E-M M M-L

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphids, Spider mites, Thrips, Leaf miners	Botrytis, Powdery mildew, Basal stem rot	B-Nine® WSG (1,500-2,500 ppm) are usually sufficient to control growth. A Bonzi® drench (2-3 ppm) can also be used to control growth or to hold plants for sale.	Goldalia™ Rose 70035934 Goldalia™ Scarlet 70035935	C-M C-M	E E

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphids, Spider mites, Thrips, Leaf miners	Botrytis, Powdery mildew, Basal stem rot	B-Nine® WSG (2,500-3,500 ppm) are usually sufficient to control growth. A Bonzi® drench (3-4 ppm) can also be applied to control growth or to hold plants for sale.	Grandalia™ Burgundy 70076369 Grandalia™ Dark Red 70052845 Grandalia™ Dark Rose 70076370 Grandalia™ Fire 70069965 Grandalia™ Lavender Ice 70076379 Grandalia™ Magenta 70076371 Grandalia™ Orange 70019193 Grandalia™ Pink Ice 70069967 Grandalia™ Sunrise 70035980 Grandalia™ White 70076384 Grandalia™ Yellow 70019190	M-V C-M M-V M M-V M-V M M-V M M-V M	E-M M M M L M M M E-M M M

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphid, spider mite, thrips, leaf miner	Botrytis, powdery mildew, basal stem rot	B-Nine® WSG (2500-3500 ppm) are usually sufficient to control growth. A Bonzi® drench (2-4 ppm) can also be used to control growth or to hold plants for sale.	Happy Days™ Cherry Red 70053908 Happy Days™ Fuchsia Halo 70089149 Happy Days™ Lemon 70053907 Happy Days™ Neon 70082942 Happy Days™ Orange Red Bicolor 70053909 Happy Days™ Pink 70037236 Happy Days™ Purple 70089150 Happy Days™ Scarlet 70082941 Happy Days™ White 70037235 Happy Days™ Yellow 70082954	M M M M M M M M M M	M E-M L E-M M M E-M E-M E-M M

Dahlia **KARMA** *Dahlia hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Short Day	66–68 °F (19–20 °C)	64–66 °F (18–19 °C)	200–250 ppm N	1 Pinch	2.5 qt. 1 ppp 9–10 weeks 3 qt. 2 ppp 9–10 weeks 1.5 gal. pot 3 ppp 9–10 weeks

Tech Tips: Long-day lighting (daylength extension or night interruption) is needed during propagation to avoid premature flowering and tuber formation. The ideal photoperiod during finishing to provide the correct balance between vegetative growth and flower formation is between 13-14 hours. Growing under very short natural days (< 12 hours) will result in short plants, fast flowering, and root tubers. Provide warm temperatures early on in finishing to allow plants to establish after transplant. Karma grows best under moderately warm temperatures. Avoid extreme heat stress, especially under relatively high light intensities. Scout and treat for a range of insects and diseases, including spider mites, thrips, and powdery mildew.

Dahlia **SINCERITY** *Dahlia hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Short Day	66–68 °F (18–19 °C)	64–66 °F (18–19 °C)	200–250 ppm N	1 Pinch	2.5 qt. 1 ppp 9–10 weeks 3 qt. 2 ppp 9–10 weeks 1.5 gal. pot 3 ppp 9–10 weeks

Tech Tips: Long-day lighting (daylength extension or night interruption) is needed during propagation to avoid premature flowering and tuber formation. The ideal photoperiod during finishing to provide the correct balance between vegetative growth and flower formation is between 13-14 hours. Growing under very short natural days (< 12 hours) will result in short plants, fast flowering, and root tubers. Provide warm temperatures early on in finishing to allow plants to establish after transplant. Sincerity grows best under moderately warm temperatures. Avoid extreme heat stress, especially under relatively high light intensities. Plant the rooting cutting relatively deep to provide good support and balance in the pot for the maturing plants. Scout and treat for a range of insects and diseases, including spider mites, thrips, and powdery mildew.

Diascia **DARLA**® *Diascia barberae*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1 Pinch	1 pt. 1 ppp 6 weeks 1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 2–3 ppp 9–10 weeks 1.5 gal. HB 4 ppp 10–11 weeks

Tech Tips: Avoid dehydration of the cuttings before sticking in propagation. Darla is best when grown cool with high light. No PGR is typically needed when plants are grown cool. One pinch is all that is needed for this crop. Florel® can be used early but will severely delay flowering if sprayed too late in the crop cycle. Watch for Botrytis in the crown of plants when overhead watering.

Dipladenia **MADINIA**® *Mandevilla hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	76–78 °F (24–26 °C)	70–72 °F (21–22 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 8–9 weeks 1.25 qt. 1 ppp 10–11 weeks 2.5 qt. 2 ppp 12–13 weeks 3 qt. 3 ppp 12–13 weeks 1.5 gal. HB 4 ppp 12–13 weeks

Tech Tips: Madinia has a controlled growth habit and bred for improved branching. They make very nice quart products. An early pinch (either in propagation or shortly after transplant) will encourage branching. High light and warm temperatures will improve quality and help reduce crop times. Higher light intensities and longer photoperiods help reduce the natural vining of the plants.

Dipladenia **MADINIA**® **MAXIMO** *Mandevilla hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	76–78 °F (24–26 °C)	70–72 °F (21–22 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 8–9 weeks 1.25 qt. 1 ppp 10–11 weeks 2.5 qt. 2 ppp 12–13 weeks 3 qt. 3 ppp 12–13 weeks

Tech Tips: Madinia Maximo has a controlled growth habit and bred for improved branching. They make very nice quart products. An early pinch (either in propagation or shortly after transplant) will encourage branching. High light and warm temperatures will improve quality and help reduce crop times.

Dorotheanthus **MEZOO**™ *Dorotheanthus bellidiformis*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	76–78 °F (24–26 °C)	70–72 °F (21–22 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1–2 ppp 9–10 weeks 3 qt. 3 ppp 9–10 weeks 1.5 gal. HB 4 ppp 10–11 weeks 2 gal. HB 5 ppp 10–11 weeks

Tech Tips: Mezoo is a trailing succulent-type vine that makes beautiful baskets and combo plantings. It is a relatively slow starter and is best grown warm to get it established and growing. Under high light, it will develop small colorful red flowers that add character to the plant. This is a very tough plant that grows and performs under a range of environmental conditions.

PESTS	DISEASES	FINISH PGRS
Aphid, spider mite, thrips, leaf miner	Botrytis, powdery mildew, basal stem rot	B-Nine® WSG at 2,500 ppm are recommended at 4 weeks and 6 weeks after transplant to help control growth. Sprays of Florel® at 250 ppm at 4 weeks and 5.5-6 weeks after transplant will also help to control growth and can be used instead of the B-Nine® WSG sprays. The Florel® sprays will also help prevent late-season flower peduncle stretch. A Bonzi® drench at 2-4 ppm can be used to hold plants for sale.

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphids, spider mite, thrips, leaf miner	Botrytis, powdery mildew, basal stem rot	B-Nine® WSG at 2,500 ppm are recommended at 4 weeks and 6 weeks after transplant to help control growth. Sprays of Florel® at 250 ppm at 4 weeks and 5.5-6 weeks after transplant will also help to control growth and can be used instead of the B-Nine® WSG sprays. The Florel® sprays will also help prevent late-season flower peduncle stretch. A Bonzi® drench at 2-4 ppm can be used to hold plants for sale.	Sincerity 70082930	V	L

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphids, Whiteflies	Botrytis, Fungal root rot	B-Nine® WSG (2,500 ppm), Bonzi® (5 ppm), or Sumagic® (3 ppm) can be applied to control growth.	Darla® Deep Salmon 70006747 Darla® Light Pink 70003545 Darla® Orange 70060774 Darla® Red 70066232 Darla® Rose 70003547 Darla® White 70071557	M M M M M M	E E E E E-M E

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphids, Whiteflies, Thrips, Mealybugs, Spider mites	Cercospora and Corynespora fungal leaf spot, Fungal root and Basal stem rot	B-Nine® WSG (3,500-5,000 ppm) can be used. Sprays of Configure® (300 ppm) or Atrimec® (200-400) early on can be used to improve branching. Bonzi® drenches (0.5-2 ppm) can also be done to control growth and reduce leaf size, especially under very hot growing conditions. Madinia White is the most vigorous variety in the series and generally will need some PGR applied to control growth.	Madinia® Coral Pink 70050968 Madinia® Deep Red 70003886 Madinia® Elegant Velvet Red 70051012 Madinia® Pink 70003888 Madinia® White 70003889	C-M C M C-M M	M M E-M M M-L

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphids, Whiteflies, Thrips, Mealybugs, Spider mites	Cercospora and Corynespora fungal leaf spot, Fungal root and Basal stem rot	B-Nine® WSG (3,500-5,000 ppm) can be used. Sprays of Configure® (300 ppm) or Atrimec® (200-400) early on can be used to improve branching. Bonzi® drenches (0.5-2 ppm) can also be done to control growth and reduce leaf size, especially under very hot growing conditions.	Madinia® Maximo Light Pink 70051011 Madinia® Maximo Red 70051010 Madinia® Maximo Scarlet 70054748	V V V	E E-M M

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
No significant issues	Phoma and Phomopsis in propagation	The use of plant growth regulators is generally not needed in propagation. Control growth by pinching if needed.	Mezoo™ Trailing Red 70003864	M-V	L

Euphorbia **EUPHORIC™** *Euphorbia hypericifolia*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	76–78 °F (24–26 °C)	70–72 °F (21–22 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 2–3 ppp 9–10 weeks 1.5 gal. HB 4 ppp 10–11 weeks 2 gal. HB 5 ppp 10–11 weeks

Tech Tips: Stick unrooted cuttings immediately to reduce bottom leaf yellowing and drop that can occur if cuttings are held for too long. Euphorbia is very sensitive to ethylene damage during shipping. Euphoric is a slow starter both in propagation and finish, but grows quickly when established and growing under warm temperatures. High light and warm temperatures will improve plant quality and reduce root diseases. If grown too cold and wet, fungal root can develop. Plants can be trimmed to shape at any point during production. Bonzi® drenches work well to control growth mid to late in the production cycle.

Geranium Interspecific **CALDERA™** *Pelargonium interspecific*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.5–5.9 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	4,000–6,000 foot candles	Day Neutral	72–74 °F (22–23 °C)	68–70 °F (20–21 °C)	200–250 ppm N	Not Recommended	2.5 qt. 1 ppp 10–12 weeks 3 qt. 2–3 ppp 11–13 weeks 1.5 gal. HB 3–4 ppp 12–12 weeks 1.5 gal. pot 2–3 ppp 11–13 weeks 2 gal. HB 4–5 ppp 12–13 weeks

Tech Tips: Caldera is vigorous and requires regular PGR applications, especially under warm growing conditions. Provide relatively high light levels and warm temperatures early on to establish the crop. Early Florel® sprays are key in making well-branched, quality plants. Watch for Botrytis under tight spacing and in combination plantings, especially when overhead irrigating. Monitor the media and try to keep the pH between 5.5–5.9 to avoid iron deficiency (tip chlorosis).

Geranium Interspecific **CALIENTE®** *Pelargonium interspecific*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	4,000–6,000 foot candles	Day Neutral	72–74 °F (22–23 °C)	68–70 °F (20–21 °C)	200–250 ppm N	Not Recommended	1 qt. 1 ppp 7–8 weeks 1.25 qt. 1 ppp 9–10 weeks 2.5 qt. 1 ppp 11–12 weeks 3 qt. 3 ppp 11–12 weeks 1.5 gal. HB 3–4 ppp 11–12 weeks 1.5 gal. pot 2 ppp 11–12 weeks 2 gal. HB 4–5 ppp 11–12 weeks

Tech Tips: Caliente geraniums are moderately vigorous and usually require regular PGR applications, especially under warm growing conditions. Know the varieties since some are more vigorous than others. Provide relatively high light levels and warm temperatures early on to establish the plant and to allow it to respond adequately to PGRs. Early Florel® sprays are key to making well-branched, quality plants. Watch for Botrytis under tight spacing and in combination plantings, especially when overhead irrigating. Monitor the media and try to keep the pH around 6.0. Too high of a pH can lead to iron chlorosis and leaf tip yellowing.

Geranium Interspecific **CALLIOPE® LARGE** *Pelargonium interspecific*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	4,000–6,000 foot candles	Day Neutral	72–74 °F (22–23 °C)	68–70 °F (20–21 °C)	200–250 ppm N	Not Recommended	2.5 qt. 1 ppp 11–12 weeks 3 qt. 2–3 ppp 11–12 weeks 1.5 gal. HB 3 ppp 11–12 weeks

Tech Tips: Calliope Large geraniums are vigorous growers and usually require regular PGR applications, especially under warm growing conditions. Provide relatively high light levels and warm temperatures early on to establish the plant and to allow it to respond adequately to PGRs. Early Florel® sprays are key to making well-branched, quality plants. Watch for Botrytis under tight spacing and in combination plantings, especially when overhead irrigating. Monitor the media and try to keep the pH around 6.0 to avoid iron/manganese toxicity.

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphids, Whiteflies	Botrytis, Fungal root rot	B-Nine® WSG (2,500 ppm) can be used. Drenches of Bonzi® (1-2 ppm) or Sumagic® (0.5-1 ppm) also work well to control growth or to hold plants before sale. Plant size can also be controlled by pinching.	Euphoric™ Double White 70087275 Euphoric™ White 70087276	M M	E E

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphid, thrips, spider mite	Botrytis, Pythium root rot, rust, and Xanthomonas bacterial blight and wilt	Cycocel® at 1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm) or Bonzi® spray (3-5 ppm). Florel® can also be sprayed at 350-400 ppm early in the crop cycle, especially for larger pots and baskets, to improve branching and control growth. A Bonzi drench (0.1-0.25 ppm) can be used at the end of production.	Caldera™ Pink 70065942 Caldera™ Red 70065936 Caldera™ Salmon 70065939	V V V	E-M M M

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphids and Thrips	Botrytis, Pythium root rot, and Xanthomonas bacterial blight and wilt	Cycocel® at 1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm), or Bonzi® spray (3-5 ppm). Florel® can also be sprayed at 350-400 ppm early in the crop cycle, especially for larger pots and baskets, to improve branching and control growth.	Caliente® Coral Salmon 70028724 Caliente® Deep Red 70004105 Caliente® Fire 70070069 Caliente® Hot Coral 70008715 Caliente® Lavender 70051129 Caliente® Magenta 70066644 Caliente® Orange 70008714 Caliente® Pink 70008713 Caliente® Rose 70004106 Caliente® White 70059611	M M M-V M-V M M-V M-V M-V M-V M-V	E E E E-M E-M E E-M E-M E M

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphids and Thrips	Botrytis, Pythium root rot, and Xanthomonas bacterial blight and wilt	Cycocel® at 1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm), or Bonzi® spray (3-5 ppm). Florel® can also be sprayed at 350-400 ppm early in the crop cycle, especially for larger pots and baskets, to improve branching and control growth.	Calliope® Large Burgundy 70020360 Calliope® Large Coral 70054697 Calliope® Large Dark Red 70004166 Calliope® Large Hot Pink 70070046 Calliope® Large Hot Rose 70070047 Calliope® Large Lavender 70069761 Calliope® Large Lavender Mega Splash 70059873 Calliope® Large Magenta 70059912 Calliope® Large Orange Splash 70074574 Calliope® Large Pink 70040840 Calliope® Large Red 70054691 Calliope® Large Rose Mega Splash 70070020 Calliope® Large Salmon 70054695 Calliope® Large Scarlet Fire 70007852 Calliope® Large White 70087138	V V V M-V M-V V V M-V V V V M M-V V M-V V	L M-L M-L M M E-M E M-L E L E-M E M L M

Geranium Interspecific **CALLIOPE® MEDIUM** *Pelargonium interspecific*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	4,000–6,000 foot candles	Day Neutral	72–74 °F (22–23 °C)	68–70 °F (20–21 °C)	200–250 ppm N	Not Recommended	1.25 qt. 1 ppp 9–10 weeks 2.5 qt. 1 ppp 11–12 weeks 3 qt. 3 ppp 11–12 weeks 1.5 gal. HB 3–4 ppp 11–12 weeks 1.5 gal. pot 2 ppp 11–12 weeks 2 gal. HB 4–5 ppp 11–12 weeks

Tech Tips: Calliope Medium geraniums are moderately vigorous and may require regular PGR applications, especially under warm growing conditions. Provide relatively high light levels and warm temperatures early on to establish the plant and to allow it to respond adequately to PGRs. Early Florel® sprays are key to making well-branched, quality plants. Watch for Botrytis under tight spacing and in combination plantings, especially when overhead irrigating. Monitor the media and try to keep the pH around 6.0 to avoid iron/manganese toxicity.

Geranium Interspecific **MOJO™** *Pelargonium interspecific*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	4,000–6,000 foot candles	Day neutral	72–74 °F (22–23 °C)	68–70 °F (20–21 °C)	200–250 ppm N	Not Recommended	1.25 qt. 1 ppp 9–10 weeks 2.5 qt. 1 ppp 11–12 weeks 3 qt. 3 ppp 11–12 weeks 1.5 gal. HB 3–4 ppp 11–12 weeks 1.5 gal. pot 2 ppp 11–12 weeks 2 gal. HB 4–5 ppp 11–12 weeks

Tech Tips: Mojo is moderately vigorous and may require regular PGR applications, especially under warm growing conditions. Provide relatively high light levels and warm temperatures early on to establish the plant and to allow it to respond adequately to PGRs. Early Florel® sprays are key to making well-branched, quality plants. Watch for Botrytis under tight spacing and in combination plantings, especially when overhead irrigating. Monitor the media and try to keep the pH at or above 6.0 to avoid iron/manganese toxicity.

Geranium Interspecific **MOXIE!™** *Pelargonium interspecific*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	4,000–6,000 foot candles	Day Neutral	72–74 °F (22–23 °C)	68–70 °F (20–21 °C)	200–250 ppm N	Not Recommended	Large Packs 1 ppp 5–6 weeks 1 pt. 1 ppp 6–7 weeks 1 qt. 1 ppp 7–8 weeks 1.25 qt. 1 ppp 9–10 weeks 1.5 gal. HB 4 ppp 11–12 weeks

Tech Tips: Moxie! interspecific geraniums are relatively compact and should not require repeated PGR applications. Provide relatively high light levels and warm temperatures early on to establish the plant and to allow it to respond adequately to PGRs. Early Florel® sprays are key to making well-branched, quality plants. Watch for Botrytis under tight spacing and in combination plantings, especially when overhead irrigating. Monitor the media and try to keep the pH at around 6.0 to avoid iron/manganese toxicity.

Geranium Interspecific **PRETTY LITTLE™** *Pelargonium interspecific*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	4,000–6,000 foot candles	Day Neutral	72–74 °F (22–23 °C)	68–70 °F (20–21 °C)	200–250 ppm N	Not Recommended	Large Packs 1 ppp 5–6 weeks 1 pt. 1 ppp 6–7 weeks 1 qt. 1 ppp 7–8 weeks 1.25 qt. 1 ppp 9–10 weeks 1.5 gal. HB 4 ppp 11–12 weeks

Tech Tips: Pretty Little interspecific geranium is very compact and should require minimal, if any, PGR applications. Provide relatively high light levels and warm temperatures early on to establish the plant and to allow it to respond adequately to PGRs. Early Florel® sprays are key to making well-branched, quality plants and delaying very early flowering. Watch for Botrytis under tight spacing and in combination plantings, especially when overhead irrigating. Monitor the media and try to keep the pH at around 6.0 to avoid iron/manganese toxicity.

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphids and Thrips	Botrytis, Pythium root rot, and Xanthomonas bacterial blight and wilt	Cycocel® at 1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm) or Bonzi® spray (3-5 ppm). Florel® can also be sprayed at 350-400 ppm early in the crop cycle, especially for larger pots and baskets, to improve branching and control growth.	Calliope® Medium Bright Scarlet 70074799 Calliope® Medium Burgundy 70066631 Calliope® Medium Cherry 70074773 Calliope® Medium Crimson Flame 70048339 Calliope® Medium Dark Pink 70074774 Calliope® Medium Dark Red 70059883 Calliope® Medium Dark Red DL 70086843 Calliope® Medium Deep Rose 70059896 Calliope® Medium Hot Pink 70020318 Calliope® Medium Hot Rose 70070045 Calliope® Medium Pink Flame 70054721 Calliope® Medium Red 70059612 Calliope® Medium Rose Mega Splash 70059870 Calliope® Medium Scarlet 70051139 Calliope® Medium Violet 70066648 Calliope® Medium White 70059858	C-M M M M-V M M M M M M M C-M M M M-V	E-M M L E M-L M M M E-M L E-M M E-M M M E

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphid and thrips	Botrytis, Pythium root rot, and Xanthomonas bacterial blight and wilt	Cycocel® at 1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm) or Bonzi® spray (3-5 ppm). Florel® can also be sprayed at 350-400 ppm early in the crop cycle, especially for larger pots and baskets, to improve branching and control growth. Bonzi® drench (0.1 ppm) can be used at the end of production to hold and tone plants before sale. Do not spray Florel® on stressed plants. A Bonzi® drench (0.1 ppm) can be used at the end of production to hold and tone plants before sale.	Mojo™ Cranberry Splash 70080207 Mojo™ Dark Pink 70069753 Mojo™ Dark Red 70074802 Mojo™ Hot Cherry 70086830 Mojo™ Orange 70080227 Mojo™ Salmon 70080233 Mojo™ White 70080211	M M M M M M M	E-M M-L L M M M-L M

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphid and Thrips	Botrytis, Pythium root rot, and Xanthomonas bacterial blight and wilt	Cycocel® at 750-1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm), or Bonzi® spray (2-3 ppm). Florel® can also be sprayed at 350-400 ppm early in the crop cycle, especially for larger pots and baskets, to improve branching and control growth. Do not spray Florel® on stressed plants. A very low rate of Bonzi drench (0.05 ppm) can be used at the end of production to hold and tone plants before sale.	Moxie!™ Dark Red 70069760 Moxie!™ Deep Rose Mega Splash 70020544 Moxie!™ Hot Pink 70074767 Moxie!™ Orange 70080228 Moxie!™ Pink 70065930 Moxie!™ Pink Splash 70087139 Moxie!™ Scarlet 70054702 Moxie!™ Violet 70080213 Moxie!™ White 70080236	C C-M C-M C-M C-M C-M C C-M C	M-L E-M L E-M M-L M-L M M E-M

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphid and Thrips	Botrytis, Pythium root rot, and Xanthomonas bacterial blight and wilt	Cycocel® at 750-1,000 ppm. Florel® can also be sprayed at 350-400 ppm early in the crop cycle, especially for larger pots and baskets, to improve branching and control growth. Do not spray Florel® on stressed plants. A very low rate of Bonzi® drench (0.05 ppm) can be used at the end of production to hold and tone plants before sale.	Pretty Little™ Pink Splash 70070033	C	E-M

Geranium Ivy **BLIZZARD™** *Pelargonium peltatum*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.5–5.9 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	4,000–6,000 foot candles	Day Neutral	72–74 °F (22–23 °C)	68–70 °F (20–21 °C)	200–250 ppm N	Not Recommended	1 qt. 1 ppp 8–9 weeks 1.25 qt. 1 ppp 10–11 weeks 2.5 qt. 1–2 ppp 12–13 weeks 3 qt. 3 ppp 12–13 weeks 1.5 gal. HB 3–4 ppp 12–13 weeks

Tech Tips: Blizzard Ivy Geranium is relatively vigorous and will require regular PGR applications, especially under warm growing conditions. Provide relatively high light levels and warm temperatures early on to establish the plant and to allow it to respond adequately to PGRs. Early Florel® sprays are key to making well-branched, quality plants. Watch for Botrytis under tight spacing and in combination plantings, especially when overhead irrigating. Monitor the media and try to keep the pH between 5.5-5.9 to avoid iron deficiency (tip chlorosis).

Geranium Ivy **CASCADE** *Pelargonium peltatum*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.5–5.9 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	4,000–6,000 foot candles	Day Neutral	72–74 °F (22–23 °C)	68–70 °F (20–21 °C)	200–250 ppm N	Not Recommended	1 qt. 1 ppp 8–9 weeks 1.25 qt. 1 ppp 10–11 weeks 2.5 qt. 1–2 ppp 12–13 weeks 3 qt. 3 ppp 12–13 weeks 1.5 gal. HB 3–4 ppp 12–13 weeks

Tech Tips: Cascade is relatively vigorous and will require regular PGR applications, especially under warm growing conditions. Provide relatively high light levels and warm temperatures early on to establish the plant and to allow it to respond adequately to PGRs. Early Florel® sprays are vital to making well-branched, quality plants. Watch for Botrytis under tight spacing and in combination plantings, especially when overhead irrigating. Monitor the media and try to keep the pH between 5.5-5.9 to avoid iron deficiency (tip chlorosis).

Geranium Ivy **IVY LEAGUE™** *Pelargonium peltatum*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.5–5.9 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	4,000–6,000 foot candles	Day neutral	72–74 °F (22–23 °C)	68–70 °F (20–21 °C)	200–250 ppm N	Not Recommended	1 qt. 1 ppp 8–9 weeks 1.25 qt. 1 ppp 10–11 weeks 2.5 qt. 1–2 ppp 12–13 weeks 3 qt. 3 ppp 12–13 weeks 1.5 gal. HB 3–4 ppp 12–13 weeks

Tech Tips: Ivy League is relatively vigorous and will require regular PGR applications, especially under warm growing conditions. Provide relatively high light levels and warm temperatures early on to establish the plant and to allow it to respond adequately to PGRs. Early Florel® sprays are key to making well-branched, quality plants. Watch for Botrytis under tight spacing and in combination plantings, especially when overhead irrigating. Monitor the media and try to keep the pH between 5.5-5.9 to avoid iron deficiency (tip chlorosis).

Geranium Zonal **AMERICANA®** *Pelargonium zonale*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	4,000–6,000 foot candles	Day Neutral	72–74 °F (22–23 °C)	68–70 °F (20–21 °C)	200–250 ppm N	Not Recommended	1.25 qt. 1 ppp 9–10 weeks 2.5 qt. 1 ppp 11–12 weeks 3 qt. 3 ppp 11–12 weeks 1.5 gal. HB 3–4 ppp 11–12 weeks 1.5 gal. pot 2 ppp 11–12 weeks 2 gal. HB 4–5 ppp 11–12 weeks

Tech Tips: Americana Geraniums are moderately vigorous and usually require regular plant growth regulator (PGR) applications, especially under warm growing conditions. Provide relatively high light levels and warm temperatures early on to establish the plant and to allow it to respond adequately to PGRs. Early Florel® sprays are crucial to making well-branched, quality plants. Watch for Botrytis under tight spacing and in combination plantings, especially when overhead irrigating.

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphid, thrips, spider mite	Botrytis, Pythium root rot, rust, and Xanthomonas bacterial blight and wilt	Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm) or Bonzi spray (3-5 ppm). Florel™ can also be sprayed at 350-400 ppm early in the crop cycle, especially for larger pots and baskets, to improve branching and control growth.	Blizzard™ Blue 70004099 Blizzard™ Pink 70020624 Blizzard™ Red 70008013 Blizzard™ White 70004103	M M M M	M E E M

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphid, Thrips, Spider mites	Botrytis, Pythium root rot, Rust, and Xanthomonas bacterial blight and wilt	Cycocel® at 1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm) or Bonzi® spray (3-5 ppm). Florel® can also be sprayed at 350-400 ppm early in the crop cycle, especially for larger pots and baskets, to improve branching and control growth.	Cascade Acapulco Compact 70004124 Cascade Appleblossom 70074831 Cascade Bright 70004171 Cascade Dark Red 70059624 Cascade Lila Compact 70004173 Cascade Sofie 70004176 Cascade White 70004202	V V V V V V V	E-M M M M E-M M E-M

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphid, thrips, spider mite	Botrytis, Pythium root rot, rust, and Xanthomonas bacterial blight and wilt	Cycocel® at 1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm) or Bonzi® spray (3-5 ppm). Florel® can also be sprayed at 350-400 ppm early in the crop cycle, especially for larger pots and baskets, to improve branching and control growth. Bonzi® drench (0.1-0.25 ppm) can be used at the end of production to hold and tone plants before sale.	Ivy League™ Amethyst 70074834 Ivy League™ Arctic Red 70004182 Ivy League™ Burgundy 70069770 Ivy League™ Burgundy Bicolor 70004181 Ivy League™ Cherry Blossom 70074821 Ivy League™ Deep Pink 70074807 Ivy League™ Hot Coral 70053309 Ivy League™ Light Lavender 70074808 Ivy League™ Orchid 70074805 Ivy League™ Red 70074811 Ivy League™ Salmon 70028703 Ivy League™ White 70069781	M V M-V C-M M M-V M M-V M-V M-V C-M M V	M E-M M-L M M E E-M M-L M M-L M M M

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphids and Thrips	Botrytis, Pythium root rot, and Xanthomonas bacterial blight and wilt	Cycocel® at 1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm) or Bonzi® spray (3-5 ppm). Florel® can also be sprayed at 350-400 ppm early in the crop cycle, especially for larger pots and baskets, to improve branching and control growth.	Americana® Bright Red 70020478 Americana® Cherry Rose 70020479 Americana® Coral 70020480 Americana® Dark Red 70020527 Americana® Dark Salmon 70004135 Americana® Light Pink Splash 70004127 Americana® Orchid 70020482 Americana® Pink 70004093 Americana® Red 70007854 Americana® Rose Ice 70064619 Americana® Salmon 70020528 Americana® Scarlet Fire 70074607 Americana® Violet Ice 70070037 Americana® White 70020529 Americana® White Splash 70020558	M-V M-V M-V V M-V M M-V M-V M-V M M-V M-V V V M	M M M M M-L E-M M-L M-L M M-L M-L E-M E-M E-M

VEGETATIVE FINISHING

Geranium Zonal **NOVELTY COLLECTION** *Pelargonium zonale*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	4,000–6,000 foot candles	Day neutral	72–74 °F (22–23 °C)	68–70 °F (20–21 °C)	200–250 ppm N	Not Recommended	1 qt. I 1 ppp 7–8 weeks 1.25 qt. I 1 ppp 9–12 weeks 2.5 qt. I 1 ppp 9–12 weeks 1.5 gal. HB I 3 ppp 11–12 weeks

Tech Tips: These varieties have medium vigor and usually require regular plant growth regulator (PGR) applications, especially under warm growing conditions. Provide relatively high light levels and warm temperatures early on to establish the plant and to allow it to respond adequately to PGRs. Early Florel® sprays are crucial to making well-branched, quality plants. Watch for Botrytis under tight spacing and in combination plantings, especially when overhead irrigating. Monitor the media and try to keep the pH at or above 6.0 to avoid iron/manganese toxicity.

Geranium Zonal **ROCKY MOUNTAIN™** *Pelargonium zonale*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	4,000–6,000 foot candles	Day Neutral	72–74 °F (22–23 °C)	68–70 °F (20–21 °C)	200–250 ppm N	Not Recommended	2.5 qt. I 1 ppp 11–12 weeks 3 qt. I 3 ppp 11–12 weeks 1.5 gal. HB I 3–4 ppp 11–12 weeks

Tech Tips: Rocky Mountain geraniums are vigorous and usually require regular PGR applications, especially under warm growing conditions. Provide relatively high light levels and warm temperatures early on to establish the plant and to allow it to respond adequately to PGRs. Early Florel® sprays are key to making well-branched, quality plants. Watch for Botrytis under tight spacing and in combination plantings, especially when overhead irrigating.

Geranium Zonal **TANGO™** *Pelargonium zonale*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	4,000–6,000 foot candles	Day Neutral	72–74 °F (22–23 °C)	68–70 °F (20–21 °C)	200–250 ppm N	Not Recommended	Large Packs I 1 ppp 5–6 weeks 1 pt. I 1 ppp 6–7 weeks 1 qt. I 1 ppp 7–8 weeks 1.25 qt. I 1 ppp 9–10 weeks 1.5 gal. HB I 4 ppp 11–12 weeks

Tech Tips: Tango is relatively compact and should not require repeated PGR applications. Provide relatively high light levels and warm temperatures early on to establish the plant and to allow it to respond adequately to PGRs. Early Florel® sprays are key to making well-branched, quality plants. Watch for Botrytis under tight spacing and in combination plantings, especially when overhead irrigating.

Heliotrope **SCENTROPIA™** *Heliotropium arborescens*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	70–72 °F (21–22 °C)	66–68 °F (19–20 °C)	200–250 ppm N	1 Pinch	1 qt. I 1 ppp 6–7 weeks 1.25 qt. I 1 ppp 8–9 weeks 2.5 qt. I 1 ppp 9–10 weeks 3 qt. I 2–3 ppp 9–10 weeks 1.5 gal. HB I 4 ppp 10–11 weeks

Tech Tips: Scentropia has a medium-vigorous habit and typically requires some PGRs to keep plants compact, especially under tight spacing. Late B-Nine® WSG sprays can delay flowering. Avoid severe drying out of the media. The beautiful purple-blue flowers have a sweet scent.

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphids, Thrips	Botrytis, Pythium Root Rot, Xanthomonas Bacterial Blight and Wilt	Cycocel® at 1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm) or Bonzi® spray (3-5 ppm). Florel® can also be sprayed at 350-400 ppm early in the crop cycle, especially for larger pots and baskets, to improve branching and control growth.	Exotica™ Coral Sunrise 70020584 Rosalie™ Antique Salmon 70080206 Starry Pure White 70074780	M M M	M M M

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphids and Thrips	Botrytis, Pythium root rot, and Xanthomonas bacterial blight and wilt	Cycocel® at 1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm) or Bonzi® spray (3-5 ppm). Florel® can also be sprayed at 350-400 ppm early in the crop cycle, especially for larger pots and baskets, to improve branching and control growth.	Rocky Mountain™ Dark Red 70006932 Rocky Mountain™ Deep Rose 70020534 Rocky Mountain™ Lavender 70020490 Rocky Mountain™ Light Pink 70020491 Rocky Mountain™ Magenta 70020492 Rocky Mountain™ Orange 70004111 Rocky Mountain™ Pink 70006941 Rocky Mountain™ Red 70004112 Rocky Mountain™ Salmon 70004113 Rocky Mountain™ Violet 70006935	V V V V M-V V V V V V	E-M M-L M M-L M-L M-L E-M M M M

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphid and Thrips	Botrytis, Pythium root rot, and Xanthomonas bacterial blight and wilt	Cycocel® at 750-1,000 ppm and under hot conditions with a tank mix spray of Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm) or Bonzi® spray (2-3 ppm). Florel® can also be sprayed at 350-400 ppm early in the crop cycle, especially for larger pots and baskets, to improve branching and control growth. Do not spray Florel® on stressed plants. A very low rate Bonzi drench (0.05 ppm) can be used at the end of production to hold and tone plants before sale.	Tango™ Bicolor Cherry 70065956 Tango™ Dark Red 70004116 Tango™ Deep Pink 70020483 Tango™ Deep Red 70004107 Tango™ Deep Rose with Eye 70020578 Tango™ Hot Pink 70004117 Tango™ Lavender 70004118 Tango™ Light Pink 70004149 Tango™ Neon Purple 70004119 Tango™ Orange 70004120 Tango™ Orange Ice 70074794 Tango™ Pink Ice 70065955 Tango™ Rose Splash 70004108 Tango™ Salmon 70004150 Tango™ Strawberry Ice 70074797 Tango™ Tango 70006942 Tango™ Velvet Red 70007861 Tango™ Violet 70020484 Tango™ White 70008003 Tango™ White Splash 70069791	M C C C C C M C C C M M C-M C C C-M C-M C-M M C-M M C	E-M M E E E M M M L M M M-L M-L M M-L L M M-L E-M M

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphids, Spider mites, Whiteflies	Botrytis, Fungal root rot	B-Nine® WSG (1,500-2,500 ppm) or Bonzi® (10 ppm) can be used. A Bonzi drench (1 ppm) also work well during mid to late in the crop cycle. Scentropia is moderately vigorous and should only require slight to moderate chemical growth control.	Scentropia™ Dark Blue 70003693	M	M

Impatiens **SILHOUETTE®** *Impatiens walleriana*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	72–74 °F (22–23 °C)	68–70 °F (20–21 °C)	200–250 ppm N	Not Recommended	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 2–3 ppp 9–10 weeks 1.5 gal. HB 4 ppp 10–11 weeks

Tech Tips: Silhouette Impatiens generally do not need any pinching if cuttings are compact and well-branched. Florel® can be used early but is usually not needed. Keys to success are to avoid water and heat stress when the plants mature. A Bonzi® drench during mid-late season to keep growth under control. Scout for thrips regularly and thrips-vectored tospoviruses. Check media EC periodically to avoid high salt

Impatiens Interspecific New Guinea **SPECTRA™** *Impatiens interspecific*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day neutral	72–74 °F (22–23 °C)	68–70 °F (20–21 °C)	125–175 ppm N	Not Recommended	Large Packs 1 ppp 4–5 weeks 1 pt. 1 ppp 5–6 weeks 1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 7–9 weeks 2.5 qt. 1 ppp 7–9 weeks 3 qt. 2–3 ppp 8–9 weeks 1.5 gal. HB 3 ppp 9–10 weeks 1.5 gal. pot 2–3 ppp 8–9 weeks 2 gal. HB 4 ppp 9–10 weeks

Tech Tips: The keys to success are to avoid water and heat stress when the plants mature. Scout for thrips regularly and thrips-vectored Tospoviruses. Check media EC periodically to avoid high salt levels. Moderate light levels and warm temperatures provide the largest flower.

Impatiens New Guinea **SONIC®** *Impatiens hawkeri*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	72–74 °F (22–23 °C)	68–70 °F (20–21 °C)	125–175 ppm N	Not Recommended	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1–2 ppp 9–10 weeks 3 qt. 3 ppp 9–10 weeks 1.5 gal. HB 4 ppp 10–11 weeks

Tech Tips: Sonics generally do not need any pinching. The keys to success are to avoid water and heat stress when the plants mature. Scout for thrips regularly and thrips-vectored tospoviruses. Check media EC periodically to avoid high salt levels. Moderate light levels and warm temperatures provide the largest flower.

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
	Aphids, Thrips, Leafminers	Botrytis, Basal stem fungal rot, Impatiens necrotic spot virus (INSV)	Growth can be controlled using sprays of Bonzi® (5-10 ppm). A Bonzi drench (0.5-1 ppm) can be also be used to control growth mid to late in the crop cycle or to hold plants before sale.	Silhouette® Appleblossom 70003776 Silhouette® Cherry 70003801 Silhouette® Purple 70003779 Silhouette® Red 70003778 Silhouette® Red Star 70003780 Silhouette® Rose 70003766 Silhouette® Rose Star 70003777 Silhouette® Salmon 70003802 Silhouette® White 70003803	C-M M M M M M M M C-M	E-M E-M M E-M E-M E-M E-M E-M E-M

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
	Aphids, Thrips, Spider mites, Broad mites	Botrytis, Myrothecium Fungal Leaf Spot (propagation), Impatiens Necrotic Spot Virus (INSV)	Bonzi® (1-2 ppm). Avoid late Bonzi sprays to prevent flower size reduction. Florel® (300 ppm) can be used early on after transplant to delay flowering, but this should only be done for large baskets or pots where flower delay is desired.	Spectra™ Bright Red 70071359 Spectra™ Magenta 70086574 Spectra™ Orange 70076131 Spectra™ Pink 70086573 Spectra™ White 70086583	C-M M-V M-V C-M C-M	M-L M M M E

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
	Aphids, Thrips, Spider mites, Broad mites	Botrytis, Myrothecium fungal leaf spot (propagation), Impatiens necrotic spot virus (INSV)	Bonzi® (1-2 ppm). Avoid late Bonzi sprays to prevent flower size reduction. Florel® (300 ppm) can be used early on after transplant to delay flowering, but this should only be done for large baskets or pots where flower delay is desired.	Sonic® Amethyst 70003738 Sonic® Bright Pink 70019677 Sonic® Deep Purple 70066412 Sonic® Deep Red 70003800 Sonic® Deep Salmon 70066413 Sonic® Light Lavender 70003739 Sonic® Light Pink 70003740 Sonic® Lilac 70003741 Sonic® Magic Pink 70003785 Sonic® Orange 70003742 Sonic® Pink 70003743 Sonic® Red 70008405 Sonic® Salmon 70003744 Sonic® Sweet Orange 70003805 Sonic® Sweet Purple 70003806 Sonic® Sweet Red 70061277 Sonic® White 70066410	C-M C-M M C-M C-M C-M C-M C-M C C-M C-M C-M C-M C-M C-M C C-M M	M M M E-M M-L E-M M M E L M E-M M M-L M M-L M E-M

Impatiens New Guinea **SUPER SONIC®** *Impatiens hawkeri*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	72–74 °F (22–23 °C)	68–70 °F (20–21 °C)	125–175 ppm N	Not Recommended	1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 2–3 ppp 9–10 weeks 1.5 gal. HB 3–4 ppp 10–11 weeks 1.5 gal. pot 2–3 ppp 9–10 weeks 2 gal. HB 4–5 ppp 10–11 weeks

Tech Tips: Super Sonics generally do not need any pinching. Keys to success are to avoid water and heat stress when the plants mature. Scout for thrips regularly and thrips-vectored tospoviruses. Check media EC periodically to avoid high salt levels. Moderate light levels and warm temperatures provide the most significant flower.

Ipomoea **SIDEKICK™** *Ipomoea batatas*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	72–74 °F (22–23 °C)	68–70 °F (20–21 °C)	200–250 ppm N	Not Recommended	1 pt. 1 ppp 4–5 weeks 1 qt. 1 ppp 5–6 weeks 1.25 qt. 1 ppp 7–8 weeks 2.5 qt. 1 ppp 8–9 weeks 3 qt. 2–3 ppp 8–9 weeks 1.5 gal. HB 3 ppp 9–10 weeks 1.5 gal. pot 3–5 ppp 10–12 weeks 2 gal. HB 4 ppp 9–10 weeks

Tech Tips: Sidekick is a moderately vigorous ipomoea that works in a range of pot sizes, including quarts and baskets. They are excellent in combo plantings. Watch for aphids during finished production. Bonzi® drenches work well anytime during production to control growth.

Lantana **BANDANA®** *Lantana camara*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	76–78 °F (24–26 °C)	70–72 °F (21–22 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 7–8 weeks 1.25 qt. 1 ppp 9–10 weeks 2.5 qt. 1 ppp 10–11 weeks 3 qt. 3 ppp 10–11 weeks 1.5 gal. HB 4 ppp 11–12 weeks 1.5 gal. pot 4 ppp 11–12 weeks 2 gal. HB 5 ppp 11–12 weeks

Tech Tips: Bandana is bred for excellent branching and a compact-medium, mounding habit. One early pinch is all that is needed. Bandana should only require a low to moderate amount of plant growth regulator (PGR) applications to control growth. Florel® sprays will delay flowering slightly. Mid-crop Bonzi® drenches work well to control height. Relatively high light levels and warm temperatures are needed to produce high-quality plants. To reduce flower cycling, keep plants well-fertilized and avoid severe drought stress.

Lantana **BANDITO™** *Lantana camara*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	76–78 °F (24–26 °C)	70–72 °F (21–22 °C)	200–250 ppm N	1 Pinch	Packs 1 ppp 5–6 weeks Large Packs 1 ppp 6–7 weeks 1 pt. 1 ppp 6–7 weeks 1 qt. 1 ppp 7–8 weeks 1.25 qt. 1 ppp 9–10 weeks 2.5 qt. 1–2 ppp 10–11 weeks 3 qt. 3 ppp 10–11 weeks 1.5 gal. HB 4 ppp 11–12 weeks

Tech Tips: Bandito is bred for excellent branching and a compact, mounding habit. One early pinch is all that is needed. Bandito should only require a low to moderate amount of PGR applications to control growth. Florel® sprays will delay flowering slightly. Mid-crop Bonzi drenches work well to control height. Relatively high light levels and warm temperatures are needed to produce high-quality plants. To reduce flower cycling, keep plants well-fertilized and avoid severe drought stress. Bandito is a good choice for growers in the far south or where plants are grown under very tight spacing.

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphids, Thrips, Spider mites, Broad mites	Botrytis, Myrothecium fungal leaf spot (propagation), impatiens necrotic spot virus (INSV)	Super Sonic growth can be controlled using sprays of Bonzi® (1-3 ppm). Avoid late Bonzi sprays to prevent flower size reduction. Florel® (300 ppm) can be used early on after transplant to delay flowering, but this should only be done for large baskets or pots where flower delay is desired.	Super Sonic® Dark Red 70066415 Super Sonic® Dark Salmon 70003793 Super Sonic® Flame 70003747 Super Sonic® Hot Pink 70003748 Super Sonic® Lavender 70003749 Super Sonic® Lilac 70003750 Super Sonic® Magenta 70019687 Super Sonic® Orange Ice 70019711 Super Sonic® Pastel Pink 70003751 Super Sonic® Pink 70019680 Super Sonic® Purple 70008383 Super Sonic® Red 70003752 Super Sonic® Sweet Cherry 70003753 Super Sonic® White 70003754	V V V V V V V M-V V V V V V M-V V	M E M-L M-L M E-M M L M M M E-M E-M M

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphids, Whiteflies, Thrips	Edema (physiological condition)	Control growth using drenches of Bonzi® (1-2 ppm). Using higher than recommended Bonzi drench rates can cause lime-colored varieties to have an undesirable dark tint to the foliage.	Sidekick™ Black 70069218 Sidekick™ Heart Black 70069219 Sidekick™ Heart Bronze 70038353 Sidekick™ Heart Lime 70051340 Sidekick™ Lacey Lime 70051339 Sidekick™ Lime 70028150	M M M M M M	N/A N/A N/A N/A N/A N/A

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphids, whitefly, leafminer	No significant disease issues	B-Nine® WSG (2,500 ppm) + Cycocel® (1,000 ppm), Sumagic® (10-20 ppm), or Bonzi® (15-30 ppm) can be used. Sprays of Florel® (350-500 ppm) or a tank-mix spray of Florel® (350-500 ppm) + B-Nine® WSG (2,500 ppm) can also be used early on to control growth and improve branching.	Bandana® Cherry 70019858 Bandana® Cherry Sunrise 70003837 Bandana® Gold 70087245 Bandana® Lemon Zest 70007850 Bandana® Mango 70071396 Bandana® Orange 70051046 Bandana® Peach 70019840 Bandana® Pink 70066193 Bandana® Red 70054196 Bandana® Rose 70019838 Bandana® White 70007849 Bandana® Yellow 70070695	C-M M M C-M M C-M C-M M-V M-V C-M C-M C-M	M M-L E M M E-M M E-M M M M M

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphid, whitefly, leafminer	No significant disease issues	B-Nine® WSG (2,500 ppm) + Cycocel® (1,000 ppm), Sumagic® (10-20 ppm), or Bonzi® (15-30 ppm) can be used. Sprays of Florel® (350-500 ppm) or a tank-mix spray of Florel® (350-500 ppm) + B-Nine® WSG (2,500 ppm) can also be used early on to control growth and improve branching.	Bandito™ Lemon Zest 70076115 Bandito™ Orange Sunrise 70003838 Bandito™ Red 70019835 Bandito™ Rose 70019834 Bandito™ White 70090244 Bandito™ Yellow Imp. 70090280	C C C-M C C C	M E-M M E M E

Lantana **BANDOLERO™** *Lantana camara*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day neutral	76–78 °F (24–26 °C)	70–72 °F (21–22 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 7–8 weeks 1.25 qt. 1 ppp 9–10 weeks 2.5 qt. 1 ppp 10–11 weeks 3 qt. 2–3 ppp 10–11 weeks 1.5 gal. HB 4 ppp 11–12 weeks 1.5 gal. pot 4 ppp 11–12 weeks 2 gal. HB 5 ppp 11–12 weeks

Tech Tips: Bandolero is bred for excellent branching and a relatively vigorous, mounding habit. One early pinch is all that is needed. Bandolero has about 20-30% more vigor than typical Bandana® types and generally needs PGR applications to control growth. Florel® sprays will delay flowering slightly. Mid-crop Bonzi® drenches work well to control height. Relatively high light levels and warm temperatures are needed to produce high quality plants. To reduce flower cycling, keep plants well-fertilized and avoid severe drought stress.

Lantana **HOT BLOODED®** *Lantana camara*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day neutral	76–78 °F (24–26 °C)	70–72 °F (21–22 °C)	200–250 ppm N	1 Pinch	1 pt. 1 ppp 7–8 weeks 1 qt. 1 ppp 9–10 weeks 2.5 qt. 2–3 ppp 10–11 weeks 3 qt. 2–3 ppp 10–11 weeks 1.5 gal. pot 4 ppp 11–12 weeks

Tech Tips: Hot Blooded is bred for excellent branching and a relatively vigorous, mounding habit. One early pinch is all that is needed. Hot Blooded has about 20-30% more vigor than typical Bandana® types and generally needs PGR applications to control growth. Florel® sprays will delay flowering slightly. Mid-crop Bonzi® drenches work well to control height. Relatively high light levels and warm temperatures are needed to produce high quality plants. To reduce flower cycling, keep plants well-fertilized and avoid severe drought stress.

Lantana **LANDSCAPE BANDANA®** *Lantana camara*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	76–78 °F (24–26 °C)	70–72 °F (21–22 °C)	200–250 ppm N	1 Pinch	1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 2–3 ppp 9–10 weeks 1.5 gal. HB 3 ppp 10–11 weeks 1.5 gal. pot 4 ppp 10–11 weeks 2 gal. HB 4 ppp 10–11 weeks

Tech Tips: Landscape Bandana is bred for excellent branching and a relatively vigorous, spreading growth habit. One early pinch is all that is needed. Landscape Bandana has about 20-30% more vigor than typical Bandana types, and generally needs PGR applications to control growth. Florel® sprays will delay flowering slightly. Mid-crop Bonzi® drenches work well to control height. Relatively high light levels and warm temperatures are needed to produce high-quality plants. To reduce flower cycling, keep plants well-fertilized and avoid severe drought stress.

Licorice Plant **HELICHRYSUM PETIOLARE** *Helichrysum petiolare*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day neutral	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	125–175 ppm N	1 Pinch	1 qt. 1 ppp 5–6 weeks 1.25 qt. 1–2 ppp 7–9 weeks 2.5 qt. 1–2 ppp 7–9 weeks

Tech Tips: Helichrysum petiolare (Licorice Plant) is a semi-trailing plant that has low water and fertilizer requirements. Use plastic tenting or ReeMay® fabric during propagation if needed to keep high humidity and to minimize excess water on the foliage. Provide moderate to warm temperatures early on after transplant to get the plants established. Avoid over-saturated media and overly cool temperatures. Helichrysum petiolare may form golden yellow flowers on very mature plants, but its main value is its unique silver-colored foliage. Trimming plants is the best way to control growth. Syngenta Flowers sells three different Helichrysum petiolare varieties (Limelight, Microphyllum Mini Silver, Silver) and all can be propagated and grown very similarly.

Lobelia **TECHNO®** *Lobelia erinus*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1 Pinch	1 pt. 1 ppp 6 weeks 1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1–2 ppp 9–10 weeks 3 qt. 3 ppp 9–10 weeks 1.5 gal. HB 4 ppp 10–11 weeks

Tech Tips: Techno lobelias are relatively fast growers that have a semi-trailing habit and excellent heat tolerance. They fill containers quickly. Pinch the plant as needed for 6-inch and larger containers. Use proper disinfectant should be used on all trimming tools to prevent possible virus spread. Avoid overwatering on young plants. Long days will hasten and improve flowering, especially when produced in early spring. Techno is best when grown cool with high light. Watch for thrips and thrips-vectored tospoviruses (tomato spotted wilt and impatiens necrotic spot).

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphid, whitefly, leafminer	No significant disease issues	B-Nine® WSG (2500-3500 ppm) + Cycocel® (1000 ppm), Sumagic® (15-20 ppm), or Bonzi® (20-30 ppm) can be used. Florel® (350-500 ppm) or a tank-mix spray of Florel® (350-500 ppm) + B-Nine® WSG (2500-3500 ppm) can also be used early on to control growth and improve branching. Florel® applications will delay flowering slightly. Bonzi® drenches (2-4 ppm) also work well. Bandoleros are relatively vigorous and may need regular chemical growth control.	Bandolero™ Cherry Sunrise 70071399 Bandolero™ Guava 70071403 Bandolero™ Pineapple 70071402 Bandolero™ Pink 70019831 Bandolero™ Red 70070698 Bandolero™ White 70076114	V V V M-V V V	M M M E-M M M

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphid, whitefly, leafminer	No significant disease issues	B-Nine® WSG (2500-3500 ppm) + Cycocel® (1000 ppm), Sumagic® (15-20 ppm), or Bonzi® (20-30 ppm) can be used. Sprays of Florel® (350-500 ppm) or a tank-mix spray of Florel® (350-500 ppm) + B-Nine® WSG (2500-3500 ppm) can also be used early on to control growth and improve branching. Florel® applications will delay flowering slightly. Bonzi® drenches (2-4 ppm) also work well. Hot Blooded is relatively vigorous and may need regular chemical growth control.	Hot Blooded® Red 70077412	M	E

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphids, Whiteflies, Leafminers	No significant disease issues	B-Nine® WSG (2,500-3,500 ppm) + Cycocel® (1,000 ppm), Sumagic® (15-20 ppm), or Bonzi® (20-30 ppm) can be applied. Sprays of Florel® (350-500 ppm) or a tank-mix spray of Florel® (350-500 ppm) + B-Nine® WSG (2,500-3,500 ppm) can also be used early on to control growth and improve branching.	Landscape Bandana® Clementine 70076122 Landscape Bandana® Gold Imp. 70070696 Landscape Bandana® Lemon Zest 70071406 Landscape Bandana® Pink 70051062 Landscape Bandana® Red 70054204 Landscape Bandana® Yellow 70036136	V V V V V V	M M M M-L M E

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Fungus gnats, Whiteflies	Botrytis, Fungal root rot	Does not require any chemical growth regulation. If plants get too large for their container, then it's best to trim the plants back to control growth. Pinching is the best method to control growth on Helichrysum petiolare.	Limelight 70003670 Microphyllum Mini Silver 70003686 Silver 70003669	M M M	M M M

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Thrips	Botrytis, Fungal root rot, Impatiens necrotic spot virus (INSV), Tomato spotted wilt virus (TSWV)	Techno lobellias have moderate vigor and might need chemical growth regulation, especially if grown under warmer temperatures. Sprays of B-Nine® WSG (2,500 ppm) and Sumagic® (2-4 ppm) can be applied to control growth. Drenches of Bonzi® (1-2 ppm) work well mid to late in the production cycle.	Techno® Blue 70003825 Techno® Cobalt Blue 70069939 Techno® Dark Blue 70003826 Techno® Electric Blue 70003827 Techno® Large Blue Violet 70065214 Techno® Light Blue 70053408 Techno® Lilac 70069942 Techno® Violet 70052763 Techno® White 70019818	M C-M M M M-V M M M C-M	E E E E E E E E E

Lobelia **TECHNO® UPRIGHT** *Lobelia erinus*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1 Pinch	1 pt. 1 ppp 6 weeks 1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1–2 ppp 9–10 weeks 3 qt. 3 ppp 9–10 weeks 1.5 gal. HB 4 ppp 10–11 weeks 2 gal. HB 5 ppp 10–11 weeks

Tech Tips: Techno lobelias are relatively fast growers that have a semi-trailing habit and excellent heat tolerance. They fill containers quickly. Pinch the plant as needed for 6-inch and larger containers. Use proper disinfectant should be used on all trimming tools to prevent possible virus spread. Avoid overwatering on young plants. Long days will hasten and improve flowering, especially when produced in early spring. Techno is best when grown cool with high light. Watch for thrips and thrips-vectored tospoviruses (tomato spotted wilt and impatiens necrotic spot).

Lysimachia **GOLDII** *Lysimachia nummularia*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day neutral	70–72 °F (21–22 °C)	64–66 °F (18–19 °C)	125–175 ppm N	1 Pinch	1 pt. 1 ppp 5–6 weeks 1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1–2 ppp 9–10 weeks 3 qt. 3 ppp 9–10 weeks 1.5 gal. HB 4 ppp 10–11 weeks

Tech Tips: Lysimachia Goldii is a trailing plant that has a medium growth habit and is grown for its attractive gold-colored foliage. Provide moderate to warm temperatures early on after transplant to get the plants established. Avoid over-saturated media and overly cool temperatures. Trimming plants is the best way to control growth.

Osteospermum **TRADEWINDS®** *Osteospermum ecklonis*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 2–3 ppp 9–10 weeks 1.5 gal. HB 4 ppp 10–11 weeks 1.5 gal. pot 4 ppp 10–11 weeks 2 gal. HB 5 ppp 10–11 weeks

Tech Tips: Although Tradewinds are bred to flower at higher temperatures, cool temperatures and high light will help make the highest quality plants. If grown cool, no PGRs are typically needed. One pinch is recommended to make fully branched plants. The trailing types work especially well in baskets.

Penstemon **PHOENIX™** *Penstemon hartwegii*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	72–74 °F (22–23 °C)	68–70 °F (20–21 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 3 ppp 9–10 weeks 1.5 gal. pot 4 ppp 10–11 weeks

Tech Tips: Use PGRs as necessary to keep plants under control. Avoid using Florel® since this will severely delay flowering. Plants need one early pinch, but can also be pinched again later if needed for larger containers. Keep the plants well fed to maintain dark healthy leaves.

Pentas **FALLING STAR™** *Pentas lanceolata*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	76–78 °F (24–26 °C)	70–72 °F (21–22 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 8–9 weeks 1.25 qt. 1 ppp 10–11 weeks 2.5 qt. 1–2 ppp 12–13 weeks 3 qt. 3 ppp 12–13 weeks 1.5 gal. HB 3–4 ppp 12–13 weeks 2 gal. HB 4–5 ppp 12–13 weeks

Tech Tips: They start slow after transplant and need warm temperatures and high light intensities to establish and grow. Cold temperatures will lead to long crop times and poor overall quality. Plants will flower faster under relatively long days. Plants will benefit from one to two pinches to improve branching and fill on large pots and patio containers. Bonzi® drenches work well to control growth.

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
	Thrips	Botrytis, Fungal root rot, Impatiens necrotic spot virus (INSV), Tomato spotted wilt virus (TSWV)	Techno lobellias have moderate vigor and might need chemical growth regulation, especially if grown under warmer temperatures. Sprays of B-Nine® WSG (2,500 ppm) and Sumagic® (2-4 ppm) can be used to control growth. Drenches of Bonzi® (1-2 ppm) work well mid to late in the production cycle.	Techno® Upright Blue 70059431 Techno® Upright Cobalt Blue 70065203 Techno® Upright Dark Blue 70076404 Techno® Upright Light Blue 70052754 Techno® Upright Purple 70051508 Techno® Upright White 70052752	M C C C M M	E E E E E E

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
	Aphids, Whiteflies	Fungal root rot, Botrytis	Lysimachia Goldii is a trailing plant that has a medium growth habit. Its growth is typically controlled by pinching or shearing.	Goldii 70003845	M-V	M

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
	Aphids, Whiteflies, Thrips	Fungal root rot	B-Nine® WSG (2,500 ppm), B-Nine® WSG (2,500 ppm) + Cycocel® (1,000 ppm), or Sumagic® (5 ppm) can be applied to the plants as needed. A drench of Bonzi® (2 ppm) or Cycocel® (750-1,000 ppm) can be used mid to late in the crop cycle to control growth or hold plants before sale.	Tradewinds® Bronze 70055274 Tradewinds® Deep Purple 70003906 Tradewinds® Lemon Zest 70071158 Tradewinds® Light Purple 70071153 Tradewinds® Sunset 70083260 Tradewinds® Terracotta 70055272 Tradewinds® Trailing Deep Purple 70003909 Tradewinds® Trailing White 70019994 Tradewinds® White 70020017 Tradewinds® Yellow 70061545	M M C-M M M M M M M M	E E-M E-M E E E-M E-M E-M E-M E-M

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
	Aphids, Thrips	Basal fungal stem rot	B-Nine® WSG (2,500 ppm), Cycocel® (1,000 ppm) + B-Nine® WSG (2,500 ppm), or Sumagic® (5-10 ppm) are normally sufficient. Drenches of Bonzi® (2-3 ppm) also work well to control growth or to hold plants before sale.	Phoenix™ Magenta 70020658 Phoenix™ Pink 70004267 Phoenix™ Red 70020655 Phoenix™ Violet 70004268	M-V M-V M-V M-V	M M M M

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
	Thrips	Fungal stem rot	B-Nine® WSG (2,500-3,500 ppm) can be used. Drenches of Bonzi® (3-4 ppm) also work well to control growth and are the preferred method of growth control for Falling Star.	Falling Star™ Hot Pink 70054740 Falling Star™ Pink Bicolor 70051358 Falling Star™ Red 70064381 Falling Star™ Rose 70051360 Falling Star™ White 70074641	M M-V M M-V C-M	M-L M M E-M M

Pentas **STARCLUSTER™** *Pentas lanceolata*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	76–78 °F (24–26 °C)	70–72 °F (21–22 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 8–9 weeks 1.25 qt. 1 ppp 10–11 weeks 2.5 qt. 1–2 ppp 12–13 weeks 3 qt. 3 ppp 12–13 weeks 1.5 gal. HB 3–4 ppp 12–13 weeks 2 gal. HB 4–5 ppp 12–13 weeks

Tech Tips: They start slow after transplant and need warm temperatures and high light intensities to establish and grow. Cold temperatures will lead to long crop times and poor overall quality. Plants will flower faster under relatively long days. Plants will benefit from one to two pinches to improve branching and fill on large pots and patio containers. Bonzi® drenches work well to control growth.

Petunia **DEKKO™** *Petunia hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.5–5.9 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1-2 Pinches	Large Packs 1 ppp 4–5 weeks 1 qt. 1 ppp 5–6 weeks 1.25 qt. 1 ppp 7–8 weeks 2.5 qt. 1 ppp 8–9 weeks 3 qt. 2–3 ppp 8–9 weeks 1.5 gal. HB 3 ppp 9–10 weeks 1.5 gal. pot 3–5 ppp 10–12 weeks 2 gal. HB 4 ppp 9–10 weeks

Tech Tips: Keep media pH down in the mid 5.0's to avoid iron deficiency and tip chlorosis. Temperatures can be lowered three weeks after planting and especially towards the end of production to tone or hold the plant. High DLIs and cool finishing temperatures produce high-quality petunias. Dekko was bred and selected to flower under day lengths of 10.5 hours; however, flower number increases under longer day lengths. Use proper sanitation when pinching or shearing petunia. Petunia and other solanaceous crops are highly susceptible to Tobacco Mosaic Virus (TMV), which can be easily transmitted by mechanical means.

Petunia **FUN HOUSE™** *Petunia hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.5–5.9 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	4,000–6,000 foot candles	Facultative long day	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1-2 Pinches	1 qt. 1 ppp 5–6 weeks 1.25 qt. 1 ppp 7–9 weeks 2.5 qt. 1 ppp 7–9 weeks 3 qt. 2–3 ppp 8–9 weeks 1.5 gal. HB 3 ppp 9–10 weeks

Tech Tips: Keep media pH in the mid 5's to avoid iron deficiency and tip chlorosis. Temperatures can be lowered three weeks after planting and especially towards the end of production to tone or hold the plant. High DLIs and cool finishing temperatures produce high-quality petunias. Use proper sanitation when pinching or shearing petunia. Petunia and other solanaceous crops are highly susceptible to the Tobacco Mosaic Virus (TMV), which can be easily transmitted by mechanical means.

Petunia **ITSY™** *Petunia hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.5–5.9 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1-2 Pinches	Large Packs 1 ppp 5 weeks 1 qt. 1 ppp 5–6 weeks 1 pt. 1 ppp 5 weeks 1.25 qt. 1 ppp 7–9 weeks 2.5 qt. 1 ppp 7–9 weeks 3 qt. 2–3 ppp 8–9 weeks 1.5 gal. HB 3 ppp 9–10 weeks 1.5 gal. pot 2–3 ppp 8–9 weeks 2 gal. HB 4 ppp 8–10 weeks

Tech Tips: Keep media pH down in the mid 5's to avoid iron deficiency and tip chlorosis. Temperatures can be lowered three weeks after planting and especially towards the end of production to tone or hold the plant. High DLIs and cool finishing temperatures produce high-quality petunias. Use proper sanitation when pinching or shearing petunia. Petunia and other solanaceous crops are highly susceptible to tobacco mosaic virus (TMV), which can be easily transmitted by mechanical means.

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
	Thrips	Fungal stem rot	f B-Nine® WSG (2,500-3,500 ppm) can be used. Drenches of Bonzi® (3-4 ppm) also work well to control growth and are the preferred method of growth control for Starcluster.	Starcluster™ Appleblossom 70020709 Starcluster™ Lavender 70020684 Starcluster™ Light Pink 70089406 Starcluster™ Pink 70051347 Starcluster™ Red Imp. 70075000 Starcluster™ Rose 70075003 Starcluster™ Violet 70020716 Starcluster™ White Imp. 70074646	M M-V C-M M M M C-M M	M M M E-M M M M E-M

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING	MPR
	Aphids, thrips, budworm, leaf miners, whiteflies	Botrytis, powdery mildew, viruses (TMV, TSWV)	B-Nine® (2500-5000 ppm) or Sumagic® (20-30 ppm) can be used to control growth. A tank-mix spray of Florel® (350-500 ppm) + B-Nine® (2500 ppm) can also be used to control growth and improve branching early in production. A Bonzi® drench (2-3 ppm) can be given 3-4 weeks before finishing.	Dekko™ Banana 70083317 Dekko™ Blue 70076419 Dekko™ Deep Lavender Vein 70076420 Dekko™ Lavender Eye 70008029 Dekko™ Purple 70061519 Dekko™ Red 70008026 Dekko™ Salmon 70061518 Dekko™ Sky Blue 70071607 Dekko™ Sorbet 70087760 Dekko™ Star Coral 70066651 Dekko™ Star Rose 70020321 Dekko™ White 70071612	C-M C-M M M-V M M M-V C-M M-V M M M	M-L M M M-L M M M M M-L M-L L	11.5 hrs. 10.5 hrs. 10.5 hrs. 11 hrs. 11.5 hrs. 10.5 hrs. 10.5 hrs. 10.5 hrs. M 10.5 hrs. 11.5 hrs. 13.5 hrs.

*MPR is Minimum Photoperiod Recommendation.

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
	Aphids, Thrips, Budworms, Leafminers, Whiteflies	Botrytis, Powdery Mildew, Viruses (TMV, TSWV)	B-Nine® (2500-5000 ppm) or Sumagic® (20-30 ppm) can be used to control growth. A tank-mix spray of Florel® (350-500 ppm) + B-Nine® (2500 ppm) can also be used to control growth and improve branching early in production. A Bonzi® drench (2-4 ppm) can be given 3-4 weeks before finishing.	Fun House™ Potpourri 70087729	M	M

	PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING	MPR
	Aphids, thrips, budworm, leaf miner, whitefly	Botrytis, powdery mildew, viruses (TMV, TSWV)	B-Nine® WSG(2,500-5,000 ppm) or Sumagic® (20-30 ppm) can be used to control growth. A tank-mix spray of Florel® (350-500 ppm) + B-Nine® WSG (2,500 ppm) can also be used to control growth and improve branching early in production. A Bonzi® drench (2-3 ppm) can be given 3-4 weeks before finishing.	Itsy™ Magenta 70076437 Itsy™ White 70087763	C-M C-M	E-M E-M	10.5 hrs.

*MPR is Minimum Photoperiod Recommendation.

Petunia **SANGUNA®** *Petunia hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.5–5.9 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	64–66 °F (18–19 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1-2 Pinches	1 qt. 1 ppp 5–6 weeks 1.25 qt. 1 ppp 7–8 weeks 2.5 qt. 1 ppp 8–9 weeks 3 qt. 2–3 ppp 8–9 weeks 1.5 gal. HB 3 ppp 9–10 weeks 1.5 gal. pot 3–5 ppp 10–12 weeks 2 gal. HB 4 ppp 9–10 weeks

Tech Tips: Keep media pH down in the mid 5's to avoid iron deficiency and tip chlorosis. Temperatures can be lowered three weeks after planting and especially towards the end of production to tone or hold the plant. High DLIs and cool finishing temperatures produce high-quality petunias. Use proper sanitation when pinching or shearing petunia. Petunia and other solanaceous crops are highly susceptible to Tobacco Mosaic Virus (TMV), which can be easily transmitted by mechanical means.

Petunia **SANGUNA® PATIO** *Petunia hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.5–5.9 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1-2 Pinches	1 qt. 1 ppp 5–6 weeks 1.25 qt. 1 ppp 7–8 weeks 2.5 qt. 1 ppp 8–9 weeks 3 qt. 2–3 ppp 8–9 weeks 1.5 gal. HB 3 ppp 9–10 weeks 1.5 gal. pot 3–5 ppp 10–12 weeks 2 gal. HB 4 ppp 9–10 weeks

Tech Tips: Keep media pH down in the mid 5's to avoid iron deficiency and tip chlorosis. Temperatures can be lowered three weeks after planting and especially towards the end of production to tone or hold the plant. High DLIs and cool finishing temperatures produce high-quality petunias. Use proper sanitation when pinching or shearing petunia. Petunia and other solanaceous crops are highly susceptible to Tobacco Mosaic Virus (TMV), which can be easily transmitted by mechanical means.

Petunia **SHORTCAKE™** *Petunia hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.5–5.9 SME 2.3–2.8 mS/cm, Pourthru EC: 3.5–4.2 mS/cm	4,000–6,000 foot candles	Facultative long day	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1-2 Pinches	Packs 1 ppp 4-5 weeks Large Packs 1 ppp 4–5 weeks 1 qt. 1 ppp 5–6 weeks 1.25 qt. 1 ppp 7–8 weeks 2.5 qt. 1 ppp 8–9 weeks 3 qt. 2–3 ppp 8–9 weeks 1.5 gal. HB 3 ppp 9–10 weeks 1.5 gal. pot 3–5 ppp 10–12 weeks 2 gal. HB 4 ppp 9–10 weeks

Tech Tips: Keep media pH down in the mid 5's to avoid iron deficiency and tip chlorosis. Temperatures can be lowered three weeks after planting and especially towards the end of production to tone or hold the plant. High light and cool finishing temperatures produce high quality petunias.

Salvia **VELOCITY™** *Salvia farinacea*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	72–74 °F (22–23 °C)	68–70 °F (20–21 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 3 ppp 9–10 weeks 1.5 gal. pot 4 ppp 10–11 weeks

Tech Tips: Velocity is a fast flowering Salvia farinacea type with beautiful dark blue flowers. One pinch in either propagation or shortly after transplant is all that is needed. Plants fill in quickly once they become established. High light intensity is vital for optimum flowering. Make sure to let media dry down to level 2 between irrigation cycles. Overly wet conditions can lead to fungal root rot.

Scaevola **BOMBAY**[®] *Scaevola aemula*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	76–78 °F (24–26 °C)	70–72 °F (21–22 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 2–3 ppp 9–10 weeks 1.5 gal. HB 4 ppp 10–11 weeks 1.5 gal. pot 3–4 ppp 10–11 weeks 2 gal. HB 5 ppp 10–11 weeks

Tech Tips: Bombay Scaevolias likes high light and warm temperatures during finishing. Low temperatures, especially early on, can lead to root rot and dark purple foliage. Plants can be pinched twice for baskets and larger containers. Florel[®] in finished production can significantly delay flowering and is not recommended. Late B-Nine[®] WSG sprays can significantly reduce flower size.

Variegated Swedish Ivy **PLECTRANTHUS COLEOIDES** *Plectranthus coleoides*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative short day	70–72 °F (21–22 °C)	64–66 °F (18–19 °C)	125–175 ppm N	1 Pinch	1 qt. 1 ppp 4–6 weeks 1 qt. 1 ppp 4–6 weeks 1.25 qt. 2–3 ppp 6–8 weeks 2.5 qt. 2–3 ppp 6–8 weeks

Tech Tips: To produce a more mounded-shaped plant, a second pinch during production (2 weeks after transplant) can help. To avoid root rots, Botrytis stem blight and edema allow the media to dry to level 2 as the plant matures. This plant serves as more of an accent to other annuals in larger combinations. Time and cooler temperatures will be required to either shape the plant for more of a mounded profile, or warmer temperatures and less pinching and PGRs will create a more trailing habit.

Verbena **LANAI**[®] *Verbena hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1-2 Pinches	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 2–3 ppp 9–10 weeks 1.5 gal. HB 3–4 ppp 10–11 weeks 2 gal. HB 4-5 ppp 10–11 weeks

Tech Tips: Transplant liners on time since they can get quickly overgrown and root into other cells when left in plug trays for too long. A Bonzi[®] drench applied about 4 weeks before finishing is key to producing compact, mounded baskets and containers. Scout regularly for insects, especially Thrips (which can transmit Tomato Spotted Wilt Virus - TSWV). Don't let verbenas get extremely dry since this can cause leaf chlorosis, leaf necrosis, and loss (shattering) of flowers. Verbenas can be grown on the cool side to help control growth.

Verbena **LANAI® COMPACT** *Verbena hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1-2 Pinches	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1–2 ppp 9–10 weeks 3 qt. 3 ppp 9–10 weeks 1.5 gal. HB 4 ppp 10–11 weeks 2 gal. HB 5 ppp 10–11 weeks

Tech Tips: Transplant liners on time since they can get quickly overgrown and root into other cells when left in plug trays for too long. A Bonzi drench applied about 4 weeks before finishing is key to producing compact, mounded baskets and containers. Scout regularly for insects, especially Thrips (which can transmit Tomato Spotted Wilt Virus - TSWV). Don't let verbenas get extremely dry since this can cause leaf chlorosis, leaf necrosis, and loss (shattering) of flowers. Verbenas can be grown on the cool side to help control growth.

Verbena **LANAI® UPRIGHT** *Verbena hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1-2 Pinches	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1 ppp 9–10 weeks 3 qt. 2–3 ppp 9–10 weeks 1.5 gal. HB 3–4 ppp 10–11 weeks 2 gal. HB 4-5 ppp 10–11 weeks

Tech Tips: Transplant liners on time since they can get quickly overgrown and root into other cells when left in plug trays for too long. A Bonzi drench applied about 4 weeks before finishing is key to producing compact, mounded baskets and containers. Scout regularly for insects, especially thrips (which can transmit Tomato Spotted Wilt Virus - TSWV). Don't let verbenas get extremely dry since this can cause leaf chlorosis, leaf necrosis, and loss (shattering) of flowers. Verbenas can be grown on the cool side to help control growth.

Verbena **MAGELANA®** *Verbena hybrida*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Facultative Long Day	70–72 °F (21–22 °C)	62–64 °F (17–18 °C)	200–250 ppm N	1-2 Pinches	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1–2 ppp 9–10 weeks 3 qt. 3 ppp 9–10 weeks 1.5 gal. HB 4 ppp 10–11 weeks

Tech Tips: Transplant liners on time since they can get quickly overgrown and root into other cells when left in plug trays for too long. A Bonzi® drench applied about 4 weeks before finishing is key to producing compact, mounded baskets and containers. Scout regularly for insects, especially thrips (which can transmit Tomato Spotted Wilt Virus-TSWV). Don't let verbenas get extremely dry since this can cause leaf chlorosis, leaf necrosis, and loss (shattering) of flowers. Verbenas can be grown on the cool side to help control growth.

Vinca **NIRVANA® CASCADE** *Catharanthus roseus*

MEDIA pH/EC	LIGHT LEVEL	DAY LENGTH	DAY TEMP	NIGHT TEMP	FERTILIZER	PINCHES	FINISHING PROGRAM
pH: 5.8–6.2 SME 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm	4,000–6,000 foot candles	Day Neutral	76–78 °F (24–26 °C)	70–72 °F (21–22 °C)	200–250 ppm N	1 Pinch	1 qt. 1 ppp 6–7 weeks 1.25 qt. 1 ppp 8–9 weeks 2.5 qt. 1–2 ppp 9–10 weeks 3 qt. 2–3 ppp 9–10 weeks 1.5 gal. HB 4 ppp 10–11 weeks 1.5 gal. pot 4 ppp 10–11 weeks 2 gal. HB 5 ppp 10–11 weeks

Tech Tips: Nirvana Cascade vinca requires high light and warm temperatures for high-quality plants. Avoid over-watering and cool temperatures during production. With adequate heat and light, one early pinch is all that is needed to produce well-branched plants. Nirvana Cascades work well in baskets. Heritage® or Mural® sprenches or drenches help prevent fungal basal stem rot after transplant.

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphid, Thrips, Leaf Miners, Whiteflies	Botrytis, viruses (TSWV), Cercospora and Corynespora leaf spot (primarily in propagation), powdery mildew (although Lanai Compact has been bred for powdery mildew tolerance)	B-Nine® (1500 ppm) or Sumagic® (5 ppm) can be used to control growth. A tank-mix spray of Florel® (350-500 ppm) + B-Nine® (1500 ppm) can also be used to control growth and improve branching early in production. A Bonzi® drench (1-2 ppm) can be given 3–4 weeks before finishing.	Lanai® Compact Candy Pink 70083028 Lanai® Compact Lime Green 70021307 Lanai® Compact Red 70051383 Lanai® Compact Red Star 70060847 Lanai® Compact Twister™ Purple 70060849 Lanai® Compact Violet with Eye 70089870 Lanai® Compact White 70065900	C-M C-M C-M C-M C-M C-M C-M	E E E E E-M E

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphids, Thrips, Leaf Miners, Whiteflies	Botrytis, viruses (TSWV), Cercospora and Corynespora leaf spot (primarily in propagation), powdery mildew (although Lanai Compact has been bred for powdery mildew tolerance)	B-Nine® (1500-2500 ppm) or Sumagic® (5-10 ppm) can be used to control growth. A tank-mix spray of Florel® (350-500 ppm) + B-Nine® (1500-2500 ppm) can also be used to control growth and improve branching early in production. A Bonzi® drench (2-3 ppm) can be given 3–4 weeks before finishing.	Lanai® Upright Blue with Eye 70021299 Lanai® Upright Merlot with Eye 70083025 Lanai® Upright Peach 70083046 Lanai® Upright Pink with Eye 70051301 Lanai® Upright Purple 70075902 Lanai® Upright Purple Velvet 70075898 Lanai® Upright Purple with Eye 70083031 Lanai® Upright Red with Eye 70054681 Lanai® Upright Rose with Eye 70021298 Lanai® Upright Scarlet 70075889 Lanai® Upright Sky Blue 70083038 Lanai® Upright True Blue 70065887 Lanai® Upright Twister™ Purple 70065893 Lanai® Upright Twister™ Rose 70071244 Lanai® Upright Twister™ Watercolor 70065890 Lanai® Upright White 70054676	M C-M C M M M M M M M M C-M C-M C-M C-M M	M M M-L M-L M M M M M M M M E E E E M

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Aphids, Thrips, Leaf miners, Whiteflies	Botrytis, viruses (TSWV), Cercospora and Corynespora leaf spot (primarily in propagation), powdery mildew (although Magelana has been bred for powdery mildew tolerance)	B-Nine® (1500 ppm) or Sumagic® (5 ppm) can be used to control growth. A tank-mix spray of Florel® (350-500 ppm) + B-Nine® (1500 ppm) can also be used to control growth and improve branching early in production. A Bonzi® drench (1-2 ppm) can be given 3–4 weeks before finishing.	Magelana® Hot Rose 70004403 Magelana® Violet 70004394	C-M C-M	E-M M

PESTS	DISEASES	FINISH PGRS	VARIETY	VIGOR	TIMING
Thrips, Whiteflies	Fungal root, Basal stem rot	Cycocel® (750 ppm), B-Nine® WSG (2,500 ppm), or Cycocel® (750 ppm) + B-Nine® WSG (1,500-2,500 ppm) can be used depending on the growth rate and vigor of the plant. The Cycocel® + B-Nine® WSG combo spray will have a more growth regulating effect than either the Cycocel® or B-Nine® WSG spray alone. Sprays of A-Rest® (2 ppm) or Sumagic® (0.5 ppm) can also be applied if more growth control is needed.	Nirvana® Cascade Pink Splash 70018378	M	E



Vegetative Spring Annuals Unrooted Cuttings (URCs)

KEY	STICKING PRIORITY
1	Highest Priority
5	Lowest Priority
Crops	No storage below 50 °F

CROPS	PRIORITY
Begonia	1
Grace™	1
Geranium Zonal	1
Americana®	1
Rocky Mountain™	1
Novelty Collection	1
Tango™	1
Geranium Interspecific	1
Caldera™	1
Calliope®	1
Caliente®	1
Mojo™	1
Moxie!™	1
Pretty Little™	1
Geranium Ivy	1
Euphorbia	1

CROPS	PRIORITY
Heliotrope	1
Ipomoea	1
Lantana	1
Begonia	2
Florecio™	2
Calocephalus	2
Dahlia	2
Diascia	2
Helichrysum	2
Impatiens–Double	2
Lobelia	2
Osteospermum	2
Pentas	2
Vinca	2
Bacopa	3
Calendula	3

CROPS	PRIORITY
Calibrachoa	3
Coleus	3
Dipladenia	3
New Guinea Impatiens	3
Petunia	3
Penstemon	3
Plectranthus	3
Salvia	3
Verbena	3
Angelonia	4
Argyranthemum	4
Bidens	4
Scaevola	4
Dorotheanthus	5
Lysimachia	5

Tips to Manage Vegetative URC Deliveries

- Open the boxes immediately upon arrival. Select an area that is protected from direct sun to unpack and inspect the cuttings.
- It is important to stick the most sensitive products first to avoid added propagation stress. Crops such as vegetative geranium, euphorbia, lantana, and heliotrope should be stuck as soon as possible to reduce leaf yellowing, leaf drop, and tip burn.
- If cuttings must be held, store them in a cool environment with high (70%+) relative humidity.
 - In general, most vegetative annuals can be stored at 50 °F.
 - More specific storage temperatures by genera are required for long-term storage. For example, geranium cuttings can be stored at 36–50 °F, while impatiens require a 50 °F storage temperature.
 - Storage temperatures above 65–70 °F can result in increased respiration and cutting dehydration.
- It is recommended that you do not store any cuttings for more than three days.



How to Read a Syngenta Tag

Variety code	Variety name	Product form	Quantity	Ship week	Delivery group number	Box number
DA363	Café Au Lait · URC 100					
	Dahlia × Hybrida — Species					
Greenhouse location	Country of origin	Barcode		Greenhouse and bay number	Bag number	
14/1	GT	04013632003 182900191		10970348 wk: 6 US3MF2 14 11 100	41 00191	

Chrysal Alesco®

More Blooms, More Sales

Crop quality protection from grower to retailer.

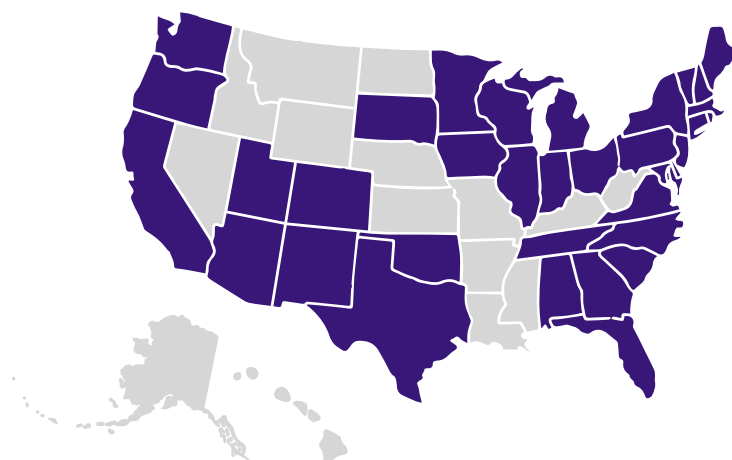
Chrysal Alesco® protects ethylene sensitive crops during shipping and at retail. The product is applied as a foliar spray 1–2 days before shipping to protect plants from postharvest damage caused by external sources of ethylene, temperature fluctuations, dark storage, and transport stress. Alesco® improves plant quality resulting in greater sell through and less shrinkage at retail.

Cost

- One 200 ml bottle of Alesco treats approximately 1 acre, costing less than 1 cent per pot!

Benefits

- Reduces petal shatter, bud abortion, leaf yellowing, and extends flower longevity.
- Increases retail shelf life up to 3 weeks depending on variety and environmental conditions.
- Can be used to hold flowers on crops when shipping is delayed.



Where to Buy

Alesco® can be purchased through Griffin, BFG, Winfield, and Southern Ag.

U.S. Registrations

- | | |
|-------------------|--------------------|
| 1. Alabama | 19. New Mexico |
| 2. Arizona | 20. New York |
| 3. California | 21. North Carolina |
| 4. Colorado | 22. Ohio |
| 5. Connecticut | 23. Oklahoma |
| 6. Delaware | 24. Oregon |
| 7. Florida | 25. Pennsylvania |
| 8. Georgia | 26. Rhode Island |
| 9. Illinois | 27. South Carolina |
| 10. Indiana | 28. South Dakota |
| 11. Iowa | 29. Tennessee |
| 12. Maine | 30. Texas |
| 13. Maryland | 31. Utah |
| 14. Massachusetts | 32. Vermont |
| 15. Michigan | 33. Virginia |
| 16. Minnesota | 34. Washington |
| 17. New Hampshire | 35. Wisconsin |
| 18. New Jersey | |

EPA registration #: 72992-1. Additional state registrations can be added depending on demand. Registration takes 4–8 weeks. Please contact Chrysal USA for more information.

Color on retail bench and high quality plants drive consumer purchases and sales. Commercial growers produce high-quality plants, but quality can quickly decline during post harvest. Shipping and retail conditions can be harsh on plants leading to significant plant losses. Provide top quality plants throughout the chain.

Research shows that consumer purchases are 40% higher when a potted plant display is looking colorful, healthy and fresh. Not surprisingly, customers are far more likely to recommend retail stores with high-quality attractive plants than those without. Now with Chrysal Alesco there is an easy solution to improve shelf life in your store, reducing shrinkage and increasing sell through.

How to Apply

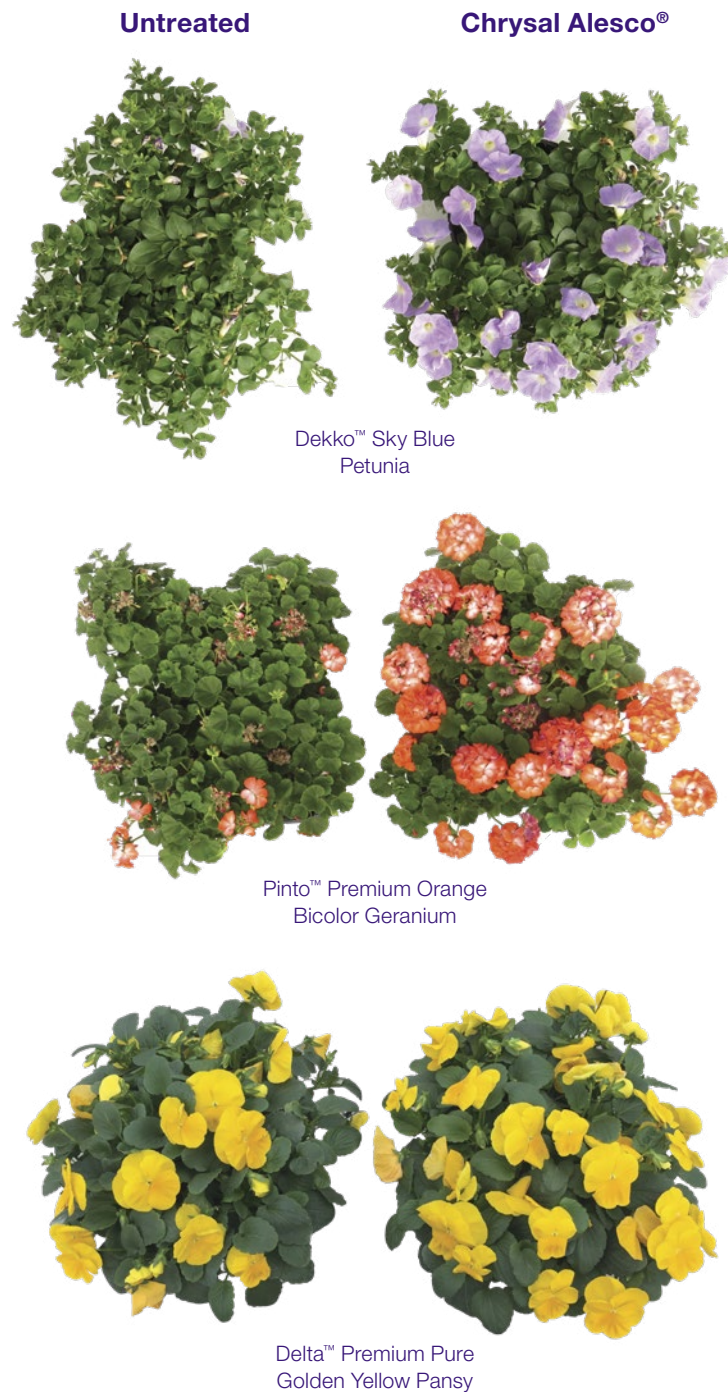
Chrysal Alesco can be easily mixed with water. The dosage is 1 ml per liter. One 200 ml bottle is premeasured for a 50-gallon tank mix (200 liters) which treats roughly 1 acre. Spray just prior to shipment (1 to 2 days). For optimal results, Alesco can also be sprayed 8 to 14 days prior to shipment. It is advised to perform the treatment at the end of the day while avoiding direct sunlight. Spray solution can be used up to 3 days after mixing. Do not mix residual solutions with freshly made ones. Alesco has a 4-hour Restricted Entry Interval. Always read and follow label instructions.

Use Alesco® on ethylene sensitive crops.

- Seed Geraniums—BullsEye™, Maverick™, Pinto™ Premium, Ringo 2000™
- Vegetative Geraniums—Calliope®, Moxie!™, Americana®, Tango™, Mojo™
- Lobelia—Techno®, Techno® Upright
- Seed and Vegetative Petunias—Dekko™, Picobella™, Sanguna®
- Dahlia—Grandalia™
- Marigold—Antigua™, Inca II™
- Pansy—Delta™, Delta™ Premium, Colossus™
- Snapdragon—Snaptini™, Snaptastic™
- New Guinea Impatiens—Sonic®, Super Sonic®, Spectra™

Results You Can See

Chrysal Alesco® sprayed 2 days before shipping protected plants during 3 days of simulated shipping from the negative effects of ethylene.



CHRYSA



LAY THE FRAMEWORK WITH AN **AGRONOMIC PROGRAM**

Prevent the most common insects and diseases that affect spring bedding plants with a comprehensive rotation strategy.

Download a free program at
www.GreenCastOnline.com/Solutions



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®

2021

January 2021

	S	M	T	W	TH	F	S
53						1	2
1	3	4	5	6	7	8	9
2	10	11	12	13	14	15	16
3	17	18	19	20	21	22	23
4/5	24/31	25	26	27	28	29	30

February 2021

	S	M	T	W	TH	F	S
5		1	2	3	4	5	6
6	7	8	9	10	11	12	13
7	14	15	16	17	18	19	20
8	21	22	23	24	25	26	27
9	28						

March 2021

	S	M	T	W	TH	F	S
9		1	2	3	4	5	6
10	7	8	9	10	11	12	13
11	14	15	16	17	18	19	20
12	21	22	23	24	25	26	27
13	28	29	30	31			

April 2021

	S	M	T	W	TH	F	S
13					1	2	3
14	4	5	6	7	8	9	10
15	11	12	13	14	15	16	17
16	18	19	20	21	22	23	24
17	25	26	27	28	29	30	

May 2021

	S	M	T	W	TH	F	S
17							1
18	2	3	4	5	6	7	8
19	9	10	11	12	13	14	15
20	16	17	18	19	20	21	22
21/22	23/30	24/31	25	26	27	28	29

June 2021

	S	M	T	W	TH	F	S
22			1	2	3	4	5
23	6	7	8	9	10	11	12
24	13	14	15	16	17	18	19
25	20	21	22	23	24	25	26
26	27	28	29	30			

Special Dates	2021
New Year's Day	Jan. 1
Martin Luther King Jr. Day	Jan. 18
Lunar New Year	Feb. 12
Valentine's Day	Feb. 14
Presidents Day	Feb. 15
St. Patrick's Day	Mar. 17
Palm Sunday	Mar. 28
Easter	Apr. 4
Admin. Professionals Day	Apr. 21
Earth Day	Apr. 22

Special Dates	2021
Cinco de Mayo	May 5
Mother's Day	May 9
Armed Forces Day	May 15
Victoria Day (Canada)	May 24
Memorial Day	May 31
Father's Day	June 20
Canada Day	July 1
Independence Day	July 4
Independence Day (Observed)	July 5
Civic Holiday (Canada)	Aug. 2

Special Dates	2021
Labor Day	Sept. 6
Patriot Day	Sept. 11
Grandparents Day	Sept. 12
Thanksgiving (Canada)	Oct. 11
Sweetest Day	Oct. 16
Boss's Day	Oct. 16
Halloween	Oct. 31
Veteran's Day	Nov. 11
Thanksgiving Day	Nov. 25
Christmas Day	Dec. 25

2022

January 2022

	S	M	T	W	TH	F	S
52							1
1	2	3	4	5	6	7	8
2	9	10	11	12	13	14	15
3	16	17	18	19	20	21	22
4/5	23/30	24/31	25	26	27	28	29

February 2022

	S	M	T	W	TH	F	S
5			1	2	3	4	5
6	6	7	8	9	10	11	12
7	13	14	15	16	17	18	19
8	20	21	22	23	24	25	26
9	27	28					

March 2022

	S	M	T	W	TH	F	S
9			1	2	3	4	5
10	6	7	8	9	10	11	12
11	13	14	15	16	17	18	19
12	20	21	22	23	24	25	26
13	27	28	29	30	31		

April 2022

	S	M	T	W	TH	F	S
13						1	2
14	3	4	5	6	7	8	9
15	10	11	12	13	14	15	16
16	17	18	19	20	21	22	23
17	24	25	26	27	28	29	30

May 2022

	S	M	T	W	TH	F	S
18	1	2	3	4	5	6	7
19	8	9	10	11	12	13	14
20	15	16	17	18	19	20	21
21	22	23	24	25	26	27	28
22	29	30	31				

June 2022

	S	M	T	W	TH	F	S
22			1	2	3	4	
23	5	6	7	8	9	10	11
24	12	13	14	15	16	17	18
25	19	20	21	22	23	24	25
26	26	27	28	29	30		

Special Dates	2022	Special Dates	2022
New Year's Day	Jan. 1	Administrative Professionals Day	Apr. 27
Martin Luther King Jr. Day	Jan. 17	Cinco de Mayo	May 5
Lunar New Year	Feb. 1	Mother's Day	May 8
Valentine's Day	Feb. 14	Armed Forces Day	May 21
Presidents Day	Feb. 21	Victoria Day (Canada)	May 23
St. Patrick's Day	Mar. 17	Memorial Day	May 30
Palm Sunday	Apr. 10	Father's Day	June 19
Easter	Apr. 17		
Earth Day	Apr. 22		

2023



July 2022

	S	M	T	W	TH	F	S
26						1	2
27	3	4	5	6	7	8	9
28	10	11	12	13	14	15	16
29	17	18	19	20	21	22	23
21/22	24/31	25	26	27	28	29	30

August 2022

	S	M	T	W	TH	F	S
31		1	2	3	4	5	6
32	7	8	9	10	11	12	13
33	14	15	16	17	18	19	20
34	21	22	23	24	25	26	27
35	28	29	30	31			

September 2022

	S	M	T	W	TH	F	S
35					1	2	3
36	4	5	6	7	8	9	10
37	11	12	13	14	15	16	17
38	18	19	20	21	22	23	24
39	25	26	27	28	29	30	

October 2022

	S	M	T	W	TH	F	S
39							1
40	2	3	4	5	6	7	8
41	9	10	11	12	13	14	15
42	16	17	18	19	20	21	22
43/44	23/30	24/31	25	26	27	28	29

November 2022

	S	M	T	W	TH	F	S
44			1	2	3	4	5
45	6	7	8	9	10	11	12
46	13	14	15	16	17	18	19
47	20	21	22	23	24	25	26
48	27	28	29	30			

December 2022

	S	M	T	W	TH	F	S
48					1	2	3
49	4	5	6	7	8	9	10
50	11	12	13	14	15	16	17
51	18	19	20	21	22	23	24
52	25	26	27	28	29	30	31

Special Dates

2022

Canada Day	July 1
Independence Day	July 4
Civic Holiday (Canada)	Aug. 1
Labor Day	Sept. 5
Patriot Day	Sept. 11
Grandparents Day	Sept. 11

Special Dates

2022

Thanksgiving (Canada)	Oct. 10
Sweetest Day	Oct. 15
Boss's Day	Oct. 16
Halloween	Oct. 31
Veteran's Day	Nov. 11
Thanksgiving Day	Nov. 24
Christmas Day	Dec. 25

January 2023

	S	M	T	W	TH	F	S
1	1	2	3	4	5	6	7
2	8	9	10	11	12	13	14
3	15	16	17	18	19	20	21
4	22	23	24	25	26	27	28
5	29	30	31				

February 2023

	S	M	T	W	TH	F	S
5				1	2	3	4
6	5	6	7	8	9	10	11
7	12	13	14	15	16	17	18
8	19	20	21	22	23	24	25
9	26	27	28				

March 2023

	S	M	T	W	TH	F	S
9				1	2	3	4
10	5	6	7	8	9	10	11
11	12	13	14	15	16	17	18
12	19	20	21	22	23	24	25
13	26	27	28	29	30	31	

April 2023

	S	M	T	W	TH	F	S
13							1
14	2	3	4	5	6	7	8
15	9	10	11	12	13	14	15
16	16	17	18	19	20	21	22
17/18	23/30	24	25	26	27	28	29

May 2023

	S	M	T	W	TH	F	S
18			1	2	3	4	5
19	6	7	8	9	10	11	12
20	13	14	15	16	17	18	19
21	20	21	22	23	24	25	26
22	27	28	29	30	31		

June 2023

	S	M	T	W	TH	F	S
22					1	2	3
23	4	5	6	7	8	9	10
24	11	12	13	14	15	16	17
25	18	19	20	21	22	23	24
26	25	26	27	28	29	30	

Special Dates

2023

New Year's Day	Jan. 1
Martin Luther King Jr. Day	Jan. 16
Lunar New Year	Jan. 22
Valentine's Day	Feb. 14
Presidents Day	Feb. 20
St. Patrick's Day	Mar. 17
Palm Sunday	Apr. 22
Easter	Apr. 9
Administrative Professionals Day	Apr. 26

Special Dates

2023

Earth Day	Apr. 22
Cinco de Mayo	May 5
Mother's Day	May 14
Armed Forces Day	May 20
Victoria Day (Canada)	May 22
Memorial Day	May 29
Father's Day	June 18
Canada Day	July 1
Independence Day	July 4
Civic Holiday (Canada)	Aug. 7

July 2023

	S	M	T	W	TH	F	S
26							1
27	2	3	4	5	6	7	8
28	9	10	11	12	13	14	15
29	16	17	18	19	20	21	22
30/31	23/30	24/31	25	26	27	28	29

August 2023

	S	M	T	W	TH	F	S
31							1
32	2	3	4	5	6	7	8
33	9	10	11	12	13	14	15
34	16	17	18	19	20	21	22
35	23	24	25	26	27	28	29

September 2023

	S	M	T	W	TH	F	S
35							1
36	2	3	4	5	6	7	8
37	9	10	11	12	13	14	15
38	16	17	18	19	20	21	22
39	23	24	25	26	27	28	29

October 2023

	S	M	T	W	TH	F	S
40							1
41	2	3	4	5	6	7	8
42	9	10	11	12	13	14	15
43	16	17	18	19	20	21	22
44	23	24	25	26	27	28	29

November 2023

	S	M	T	W	TH	F	S
44							1
45	2	3	4	5	6	7	8
46	9	10	11	12	13	14	15
47	16	17	18	19	20	21	22
48	23	24	25	26	27	28	29

December 2023

	S	M	T	W	TH	F	S
48							1
49	2	3	4	5	6	7	8
50	9	10	11	12	13	14	15
51	16	17	18	19	20	21	22
52/1	23/30	24/31	25	26	27	28	29

Special Dates

2023

Labor Day	Sept. 4
Grandparents Day	Sept. 10
Patriot Day	Sept. 11
Thanksgiving (Canada)	Oct. 9
Boss's Day	Oct. 16
Sweetest Day	Oct. 21
Halloween	Oct. 31
Veteran's Day	Nov. 11
Thanksgiving Day	Nov. 23
Christmas Day	Dec. 25



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Gilroy, California 95020 USA

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FRONT PHOTO:
Sunfinity® Yellow Dark Center

BACK PHOTO:
Spectra™ Bright Red

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