

## Propagation Cycle

Crop	Rooting Time (wks.)	Bottom Heat Required	Rooting Hormone	Cuttings Per Cell	Misting Guidelines	Pinch or Shear	PGR
	1	2	3	4	5	6	7
AGASTACHE	4	Enhances	Yes	1	Avoid excessive misting	Yes	No
ANGELONIA	4	Enhances	No	1	Avoid excessive misting	Yes	Yes
ANTIRRHINUM	5	Enhances	Yes	1	Avoid excessive misting	Yes	Yes
ARGYRANTHEMUM	3–4	Enhances	Yes	1	Avoid excessive misting	No	No
BACOPA SUTERA	4	Yes	No	2	Average	Yes	No
BIDENS	4–5	Enhances	Yes	1	Avoid excessive misting	No	No
BRACHYSCOME (Outback Jumbo Daisy)	4–5	Enhances	Yes	1	Avoid excessive misting	Yes	No
BRACHYSCOME (Outback Mini Daisy)	4–5	Enhances	Yes	2	Avoid excessive misting	Yes	No
CALIBRACHOA	4–6	Yes	Yes	1	Avoid excessive misting	Yes	If needed after pinch
CHRYSOCEPHALUM	3–4	Enhances	No	1	Low	Week 2	No
COLEUS	3	Enhances	No	1	Average	No	No
CROSSANDRA	5	Enhances	Yes	1	Avoid excessive misting	Optional	Yes
FUCHSIA	5	Enhances	Yes	1	Average	Yes	Yes
GAURA	4–5	Enhances	Yes	1	Avoid excessive misting	Yes	If needed after pinch
GAZANIA	5	Enhances	Yes	1	Avoid excessive misting	No	No
HELICHRYSUM	4–5	Enhances	Yes	1	Average	Yes	No
IPOMEA	3	Enhances	No	1	Avoid excessive misting	No	Yes
LAMIUM	4	Enhances	Yes	1	Avoid excessive misting	Yes	No
LANTANA	5	Enhances	Yes	1	Average	Yes	If needed
LAVENDER	6	Yes	Yes	1	Avoid excessive misting	Yes	No
LOBELIA	3–4	Enhances	Yes	2	Avoid excessive misting	Yes	No
NEMESIA	4	Enhances	Yes	2	Average	Yes	If needed after pinch
NEW GUINEA IMPATIENS	3–4	Yes	Yes	1	Average	No	No
OSTEOSPERMUM (Crescendo™)	4	Yes	Yes	1	Avoid excessive misting	No	If needed weekly after week 2
OSTEOSPERMUM (Cape Daisy™, Side Show™)	4	Yes	Yes	1	Avoid excessive misting	No	If needed weekly after week 2
PETCHOA	4–5	Yes	Yes	1	Avoid excessive misting	Yes	If needed
PETUNIA	3–4	Enhances	Yes	1	Avoid excessive misting	No	If needed
PORTULACA	4	Enhances	No	1	Avoid excessive misting	Week 2	No
SCAEVOLA	4–5	Yes	Yes	1	Avoid excessive misting	Yes	No
SUNPATIENS®	2–3	Enhances	No	1	Avoid excessive misting	No	Yes
TORENIA	3–4	Enhances	Yes	1	Average	No	If needed after week 1 (No Florel®)
VERBENA	4	Enhances	No	1	Average	Yes	If needed weekly after week 1
VINCA	6	Enhances	Yes	1	Avoid excessive misting	No	Yes
VIOLA	4	Enhances	Yes	1	Average	No	Yes

1. **Rooting Time** – Time to root (weeks)

2. **Bottom Heat Required** – In our opinion, bottom heat enhances rooting of cuttings. Where noted, bottom heating is considered a requirement since it drastically affects rooting time and success. Maintain soil temperatures between 70–75°F/21–24°C.

3. **Rooting Hormone** – Many commercial rooting hormones for vegetative herbaceous plants can be used.

4. **Cuttings Per Cell** – 1 or 2 cuttings per cell for best results.

5. **Misting Guidelines** – Not all cuttings can be propagated in one environment. “Average” misting guidelines provide for high

humidity, moist foliage and consistently moist media. Drier media is required for other species and is denoted by the term “Avoid excessive misting.”

6. **Pinch or Shear** – See specific cultural information provided in individual growing guidelines located at [www.ecke.com](http://www.ecke.com).

7. **PGR** – See specific cultural information provided in individual growing guidelines located at [www.ecke.com](http://www.ecke.com). Species and cultivars vary in their response to PGRs and application timing. Remove plants from mist as soon as feasible to help control stretch.

## Cultural Guidelines

Crop	Recommended Growing Season			Crop Time (weeks/units per pot) Finishing time determined by your location and growing season			Avg. Temp (°F)	PGR	Florel®
	Early, Cool	Main	Late, Warm	4" 1/pot	6"/Gallon 1-2/pot	10" Hanging Basket/Pot 3-4/pot			
AGASTACHE	✓	✓	✓	6-7	8-9	-	60-65°	Possibly	No
ANGELONIA		✓	✓	5-8	7-9	-	66-70°	Likely	No
ANTIRRHINUM	✓	✓		7-10	9-12	-	55-65°	Possibly	No
ARGYRANTHEMUM	✓	✓	Sunlight	8-10	8-10	12-14	50-60°	Likely	No
BACOPA SUTERA	✓	✓	✓	6-8	8-10	10-12	60-70°	No	Yes
BIDENS	✓	✓	✓	6-7	6-8	-	60-68°	No	Yes
BRACHYSCOME (Outback Jumbo Daisy)	✓	✓	✓	6-8	8-10	10-12	50-55°	Possibly	No
BRACHYSCOME (Outback Mini Daisy)	✓	✓	✓	6-8	8-10	10-12	50-55°	No	No
CALIBRACHOA	✓	✓	✓	7-11	9-13	12-14	55-65°	Possibly	Yes
CHRYSOCEPHALUM		✓	✓	9-11	12-14	12-14	65-70°	No	No
COLEUS		✓	✓	3-5	4-6	6-10	65-70°	Possibly	No
CROSSANDRA		✓	✓	10-11 (south)	14-15 (south) 13-14 (north)	- 17-18 (north)	75°	No	Yes
FUCHSIA	✓	✓		6-8	8-10	10-12	65-75°	Yes	Yes
GAURA	✓	✓	✓	10-13	10-13	10-13	55-70°	No	No
GAZANIA		✓	✓	8-9	9-10 (3/pot)	10-12	62-68°	Yes	No
HELICHRYSUM		✓	✓	10-12	12-14	12-14	55-65°	No	No
IPOMEA	✓	✓	✓	4-5	7-8	9-10	65-75°	Possibly	No
LAMIUM		✓	✓	6-8	8-10	10-12	55-65°	No	No
LANTANA		✓	✓	6-7	7-11	10-12	65-75°	Yes	No
LAVENDER	✓	✓	✓	7-10	9-11	-	60-65°	Possibly	No
LOBELIA	✓	✓	✓	7-9	8-10	-	65-70°	No	No
NEMESIA	✓	✓	✓	7-10	9-12	10-13	50-70°	No	Yes
NEW GUINEA IMPATIENS		✓	✓	8-10	10-12	12-14	68-72°	Possibly	No
OSTEOSPERMUM (Crescendo™) (Warmer temperatures will reduce total crop time)	✓	✓	✓	8-10 6-10	10-12 8-10	12-14 10-12	45-55° 50-60°	Yes	No
OSTEOSPERMUM (Cape Daisy™, Side Show™)	✓	✓	✓	11-14	12-15	12-15	45-55°	Yes	No
PETCHOA	✓	✓	✓	5-9	6-11	6-11	55-60°	No	No
PETUNIA	✓	✓	✓	4-8	6-11	6-11	50-70°	Yes	Yes
PORTULACA		✓	✓	6-7	6-7	8-9	70-75°	Possibly	No
SCAEVOLA		✓	✓	8-10	10-12	12-14	65-70°	No	Yes
SUNPATIENS®	✓	✓	✓	7-9	11	13-14	64-68°	Possibly	No
TORENIA		✓	✓	5-7	6-9	10-14	65-70°	Possibly	No
VERBENA		✓	✓	6-10	9-12	9-12	65-75°	Yes	No
VINCA	✓	✓	✓	4-5	7-8	9-10	65-75°	Possibly	No
VIOLA	✓	✓		6	10	-	60°	Yes	No

**Recommended Growing Season** – Optimum temperatures and light for best growth and sales.

**Crop Time** – Primarily dependent on temperature, light and growing environment. Pinching and use of PGRs delay flowering and influence growth rate.

**Average Temperature** – Suggested night temperature ranges. In general, cooler temperatures produce slower plant growth. See detailed information at [www.ecke.com](http://www.ecke.com) for more information.

**PGR** – Plant Growth Regulators like B-Nine®, Cycocel®, A-Rest®, Bonzi® and Sumagic® should be trialed by the individual grower before making applications to the entire crop.

**Florel®** – Trial Florel® before applying to entire crop. Make application only after roots have reached pot edge and new growth is present. Florel® will delay flowering for at least 6 weeks on most crops.

**Pinch** – Soft pinch generally recommended. Pinching usually delays flowering. See individual growing guidelines on [www.ecke.com](http://www.ecke.com) for more complete information.

Crop	Pinch Interval After Transplant	General Fertility Guide	Growth Habit	Soil Moisture Guide	Day Length Sensitivity
AGASTACHE	Yes, once established	M, acid	U	Dry, but no wilting	No
ANGELONIA	Yes, 1 week	M, acid	U	Dry, but no wilting	No
ANTIRRHINUM	Yes, 2 weeks	M	M	Evenly moist	No
ARGYRANTHEMUM	Yes, 1–2 weeks	M	U, M	Dry, but no wilting	No
BACOPA SUTERA	Yes, 1 week	M, acid	T	Evenly moist	No
BIDENS	Yes, 2–3 weeks	M	M, T	Dry, but no wilting	No
BRACHYSCOME (Outback Jumbo Daisy)	Yes, 2–3 weeks	M, acid	M	Evenly moist	No
BRACHYSCOME (Outback Mini Daisy)	Yes, 2–3 weeks	M, acid	M	Evenly moist	No
CALIBRACHOA	Yes, 1–2 weeks	H, acid	T	Evenly moist	Yes
CHRYSOCEPHALUM	Yes, 2 weeks	M	M	Dry, but no wilting	No
COLEUS	Yes, 2 weeks	M	U, some T	Dry, but no wilting	No
CROSSANDRA	Yes, 1–2 weeks	M	U	Dry, but no wilting	No, but high light
FUCHSIA	Yes, 2–3 weeks	M	U	Evenly moist	best for No watering
GAURA	Yes, 2–3 weeks	M	U	Dry, but no wilting	No
GAZANIA	No	M	M	Dry, but not wilting	No
HELICHRYSUM	Yes, 2–3 weeks	M	M	Dry, but no wilting	No
IPOMEA	No	M	T	Dry, but no wilting	No
LAMIUM	As needed to shape	M	M	Dry, but no wilting	No
LANTANA	Yes, 1–2 weeks	M	M, T	Dry, but no wilting	No
LAVENDER	Yes, 1 week	Low	U	Dry, but no wilting	No
LOBELIA	Yes, 1–2 weeks	M, acid	M	Evenly Moist	No
NEMESIA	Yes, 2 weeks	M, acid	U	Evenly moist	No
NEW GUINEA IMPATIENS	No	L	M	Evenly moist	No
OSTEOSPERMUM (Crescendo™) (Warmer temperatures will reduce total crop time)	Yes, 1–2 weeks	M	M	Evenly moist	No
OSTEOSPERMUM (Cape Daisy™, Side Show™)	Yes, 1–2 weeks	M	M	Evenly moist	No
PETCHOA	Yes, 2 weeks	H, acid	M	Dry, but no wilting	No
PETUNIA	Yes, 1 week	H, acid	T	Evenly moist	Yes
PORTULACA	Yes, 2 weeks	M	M	Dry, but no wilting	No, but high light
SCAEVOLA	Yes, 2 weeks	M	T	Evenly moist	No
SUNPATIENS®	No	M	M	Dry, but no wilting	best for No watering
TORENIA	Yes, 1–2 weeks	M	T	Evenly moist	No
VERBENA	2 weeks and 4 weeks	M	T	Evenly moist	No
VINCA	No	M	T	Dry, but no wilting	No
VIOLA	Yes, 2 weeks	M	U, M	Dry, but no wilting	No

**General Fertility Guide** – Match fertilizer to water quality. Use low phosphorus inputs. Adjust nitrogen sources to provide less ammonium nitrogen during cold production. Most species benefit from additional iron application.

L – *Low fertilizer rate*. Constant feed of 100–150 ppm N with occasional clear water application to reduce soluble salts.

M – *Medium fertilizer rate*. Constant feed of 200–250 ppm N with complete micronutrients.

H – *High fertilizer rate* of 300–350 ppm N.

**Growth Habit** – U–upright. M–mounding. T–trailing.

**Soil Moisture Guide** – There are two basic categories which rely on the art of the waterer. Do not keep plants saturated all the time. “Evenly moist” media is not allowed to dry thoroughly, but is well-drained enough to provide constant moisture and aeration. “Dry, but no wilting,” refers to letting the media dry to the touch but not allowing the plant to wilt; a distinct difference from even moisture that discourages root rot.

**Day Length Sensitivity** – “Yes” indicates that specific cultivars within these species are daylength responsive. Supplemental lighting required for early spring production.