

**MAXI SERIES***Saintpaulia ionantha*

Native to the coasts of east Africa, *Saintpaulia ionantha* is the most popular houseplant worldwide due to its shade adaptability and universal recognition.

With three highly unique phases of production, African violets boast a 8-10 month production timeline making them one of the most culturally intense crops on the market. The suggestions and tips provided in this guide are meant to be rough blueprints for a successful production run. However, conditions and recommendations will vary based on climate and production tools at the grower's disposal. These differences should be addressed with your Dümme Orange representative to ensure profitability.

PRODUCT #	SERIES	CULTIVAR	FLOWER TIMING
54100	Maxi	Alice Red	Mid
54160	Maxi	Besar Blue White Imp	Mid
54165	Maxi	Britt	Mid-late
54164	Maxi	Carol	Early
54127	Maxi	Besar Pink White	Mid
54126	Maxi	Besar Red White	Mid
54117	Maxi	Bibi	Mid
54146	Maxi	Biru	Mid
54155	Maxi	Blue Eye	Mid
54161	Maxi	Catherina	Early
54111	Maxi	Curly Ocean	Late
54170	Maxi	Chico	Mid-late
54124	Maxi	Elin	Late
54114	Maxi	Floor	Mid
54116	Maxi	Gloria	Mid
54159	Maxi	Jessica	Early
54115	Maxi	Lena	Mid
54118	Maxi	Lia	Mid
54110	Maxi	Lila Lana	Mid
54119	Maxi	Livia	Early
54157	Maxi	Marilyn	Mid
54104	Maxi	Patty	Mid
54168	maxi	Puck	Mid-Late
54163	Maxi	Meike	Mid-Late
54171	Maxi	Lotte	Mid-Late
54105	Maxi	Rana	Mid
54106	Maxi	Rianne	Late
54107	Maxi	Roccoco Pink	late
54153	Maxi	Roccoco White	Late
54166	Maxi	Stellaadd	Early
54172	Maxi	Yasmin	Early

*Compact -C Medium -M Vigorous -V*

AFRICAN VIOLET

UNROOTED PLANTLET

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### STICKING

Product Form	<b>UNROOTED PLANTLET -remove any visible roots prior to sticking to ensure uniform performance.</b>
Tray Sizes	<b>102-105 cell</b>
Media Type	<b>Media should be light, well drained, high in organic matter, and with plenty of moisture retention. Saturate media well before sticking.</b>
Propagation Phase	<b>15 weeks for propagation tray finish (roots will form in the first 14 days)</b>

### FERTILITY

Fertilizer Rate	<b>Begin feeding 2-4 weeks after sticking. 25-75 ppm N using 13-5-27 (or equivalent) constant feed with a full suite of micronutrients including calcium and magnesium</b>
EC Range	<b>0.8 mS via SME (1.1 via pour through)</b>
pH Range	<b>5.5-6.0</b>

### TEMPERATURE

Average Soil Temp	<b>68-72°F (20-22°C)</b>
Average Air Temp	<b>64-68°F (18-20°C) - Maintaining lower night temps will extend propagation time.</b>

### IRRIGATION

Irrigation Instructions	<b>Water only as the media begins to dry out during the rooting phase. If needed, overhead water 1-2x/week during rooting.</b>
Irrigation Frequency	<b>Level 4: Keep media moderately moist at all times</b>
Irrigation Temp	<b>Water temperature should be within <math>\pm 8^{\circ}\text{F}</math> (<math>4.4^{\circ}\text{C}</math>) the leaf temperature. If water is too warm or cold, detracting chlorotic spots will occur on the leaves. Keep a tank in the greenhouse to maintain temperature.</b>
Humidity	<b>50-70%</b>

### LIGHT

Light Levels	<b>930-1150 fc (10000-12000 lux) If growing during warmer summer months, 800 fc (8600 lux) throughout the entire day is preferred to reduce the risk of leaf burn or undesirably high temperatures.</b>
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### PINCHING

Do not pinch

### POTENTIAL DISEASES

*Botrytis, Pythium, Phytophthora, Rhizoctonia*

### POTENTIAL PESTS

Thrips, Cyclamen Mites, Mealybugs

### PGR SUGGESTIONS

- None

### TIPS

- Fun Fact—mist causes spots on leaves because the leaves are wet for a prolonged period of time. With overhead watering the water dries fast and their won't be spots (assuming your water is air temperature).
- A less scientific method of gauging light intensity is holding your hand above the crop and ensuring it barely casts a shadow over the plants at high noon. Too high of light will bleach foliage, damage flowers as they form, and negatively affect the plant habit.
- If growing in the summer, additional efforts, such as wetting the greenhouse floors and walls, must be taken to maintain high humidity. If producing in the winter, steps should be taken to reduce humidity since 90-100% relative humidity outside of callus formation will drastically increase the risk of fungal diseases.

AFRICAN VIOLET

TRANSPLANT → FINISH

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*Saintpaulia ionantha*



## TRANSPLANT

Container Size	<b>4-4.5 –6 inch (10-11.5 cm)</b>
Timing	<b>10-12 Weeks</b>
Spacing	<b>Plants should remain pot tight for 5-6 weeks after transplant. After this period, pots should be staggered at 10 pots per ft<sup>2</sup> (33 pots per M<sup>2</sup>). Once flower buds begin to form and leaves of adjacent plants begin to touch, final spacing should be around 4 pots per ft<sup>2</sup> (13 pots per M<sup>2</sup>). If pots are given too much space, their foliage will grow downward making them more difficult to ship.</b>

## FERTILITY

Fertilizer Rate	<b>75-125 ppm N using 15-10-15 constant feed with a full suite of micronutrients including calcium and magnesium</b>
EC Range	<b>1.0-1.5 mS via SME</b>
pH Range	<b>5.5-6.0</b>

## TEMPERATURE

Day Temp	<b>68F (20C)</b>
Night Temp	<b>64F (18C)</b>

## IRRIGATION

Irrigation Instructions	<b>Once roots have reached the sides and bottom of their growing container, sub-irrigation (ebb &amp; flood, capillary mat, etc) or drip tubing should be used instead of overhead irrigation.</b>
Irrigation Frequency	<b>Level 4: Keep media moderately moist at all times</b>
Irrigation Temp	<b>Water temperature should be within ±8°F (4.4°C) the leaf temperature. If water is too warm or cold, detracting chlorotic spots will occur on the leaves.</b>
Humidity	<b>50-70% (65% the last three weeks of production)</b>

## LIGHT

Light Levels	<b>The ideal light quantity for flowering is 230-276 umol/s/m<sup>2</sup>-should remain at 929-1,100 fc (10,000-12,000 lux) maximum light at noon on a sunny day.</b>
Supplemental	<b>When daytime light levels fall below 250 fc (2700 lux)</b>
Benefits From Shade?	<b>When light levels surpass 1300 fc (14000 lux)</b>

## POTENTIAL DISEASES

*Botrytis, Pythium, Phytophthora, Rhizoctonia*

## POTENTIAL PESTS

Thrips, Cyclamen Mites, Mealybugs

## PGR SUGGESTIONS

- None

## TIPS

- When transplanting plugs into their finished container, make sure the soil level of the plug is only slightly below the soil level of the new container.
- Quality plants can be produced using cool-white fluorescent lamps or red/blue LEDs at 4-8 mol day<sup>-1</sup>m<sup>-2</sup>. (600 fc [6500 lux] for 18 hours per day or 400 fc [4300 lux] for 24 hours per day).
- African violet roots grow more outwards than downwards. Keep this in mind when selecting container depth.
- Temperatures above 85°F (29°C) will result in premature flowering and reduced plant quality.
- Temperatures can be reduced slightly two weeks before ship to enhance flower size and color.
- Nitrate-based nitrogen is preferred over ammonium-based nitrogen.
- African violets benefit significantly from CO<sub>2</sub> enrichment: 600-700 ppm is ideal. Rates over 800 ppm result in overly-brittle stems and leaves.