

MINI 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 Dümmen Orange representative to ensure profitability.



| PRODUCT # | SERIES | CULTIVAR | FLOWER TIMING |
|-----------|--------|-----------------|---------------|
| 54132 | Mini | Jenny Blue | Early |
| 54131 | Mini | Dewi | Mid |
| 54133 | Mini | Jenny Dark Pink | Early |
| 54134 | Mini | Jenny Lilac | Early |
| 54135 | Mini | Jenny Pink | Early |
| 54137 | Mini | Loni | Mid |
| 54138 | Mini | Rosi | Mid |
| 54139 | Mini | Sarah | Mid |

Compact -C Medium -M Vigorous -V

AFRICAN VIOLET

UNROOTED PLANTLET

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STICKING

| | |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Form | URC—remove any visible roots prior to sticking to ensure uniform performance. |
| Tray Sizes | 102-105 cell |
| Media Type | Media should be light, well drained, high in organic matter, and with plenty of moisture retention. Saturate media well before sticking. |
| Propagation Phase | 13 weeks for propagation tray finish (roots will form in the first 14 days) |

FERTILITY

| | |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fertilizer Rate | 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 |
| EC Range | 0.8 mS via SME (1.1 via pour through) |
| pH Range | 5.5-6.0 |

TEMPERATURE

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

IRRIGATION

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|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Irrigation Instructions | Water only as the media begins to dry out during the rooting phase. If needed, overhead water 1-2x/week during rooting. |
| Irrigation Frequency | Level 4: Keep media moderately moist at all times |
| Irrigation Temp | Water temperature should be within $\pm 8^{\circ}\text{F}$ (4.4°C) 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. |
| Humidity | 50-70% |

LIGHT

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|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Light Levels | 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. |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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

MINI SERIES



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TRANSPLANT

| | |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Form | Plantlet |
| Container Size | Direct stick 2-3 inch (5.5-7 cm) container |
| Timing | 10-12 Weeks |
| Spacing | Plants should remain pot tight for 5-6 weeks after transplant. After this period, pots should be staggered at 17 pots per ft² (56 pots per M²). Once flower buds begin to form and leaves of adjacent plants begin to touch, final spacing should be around 7 pots per ft² (23 pots per M²). If pots are given too much space, their foliage will grow downward making them more difficult to ship. |

FERTILITY

| | |
|-----------------|----------------------------------------------------------------------------------------------------------------------|
| Fertilizer Rate | 75-125 ppm N using 15-10-15 constant feed with a full suite of micronutrients including calcium and magnesium |
| EC Range | 2.0-3.0 mS via SME |
| pH Range | 5.5-6.0 |

TEMPERATURE

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|------------|--------------------------|
| Day Temp | 75-80°F (24-27°C) |
| Night Temp | 68-72°F (20-22°C) |

IRRIGATION

| | |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Irrigation Instructions | Once roots have reached the sides and bottom of their growing container, sub-irrigation (ebb & flood, capillary mat, etc) or drip tubing should be used instead of overhead irrigation. |
| Irrigation Frequency | Level 4: Keep media moderately moist at all times |
| Irrigation Temp | 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. |
| Humidity | 50-70% (65% the last three weeks of production) |

LIGHT

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|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Light Levels | The ideal light quantity for flowering is 5-8 mol day⁻¹m⁻². Intensity should remain at 800-1,000 fc (8600-10800 lux) maximum light at noon on a sunny day. |
| Supplemental | When daytime light levels fall below 250 fc (2700 lux) |
| Benefits From Shade? | When light levels surpass 1300 fc (14000 lux) |

POTENTIAL DISEASES

Botrytis, Pythium, Phytophthora, Rhizoctonia

POTENTIAL PESTS

Thrips, Cyclamen Mites, Mealybugs

PGR SUGGESTIONS

- None

TIPS

- Quality plants can be produced using cool-white fluorescent lamps or red/blue LEDs at 4-8 mol day⁻¹m⁻². (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 CO₂ enrichment: 600-700 ppm is ideal. Rates over 800 ppm result in overly-brittle stems and leaves.
- Plantlets should be removed from the mother leaf flats and separated into individual crowns when 3-5 mature leaves are present.
- Upon removal from the mother leaf, a broad spectrum fungicide should be applied to the plantlets.