# Floresta™

A New Standard in Foliage Cuttings by Danziger

2027

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IMAGINE MORE

# APHELANDRA

## Propagation Tips

- Media: an aerated media
- Hormones: Dip or spray K-IBA at 100 ppm is beneficial to speed rooting
- Radiation: 1000-2500 fc
- Flowers should be manually removed if occurring in propagation



Width
6-10"
(15-25 cm)



Height
8-12"
(20-30.5 cm)

| Avg. Time | Temperature | Radiation | Humidity Level | Fungicide |
|---|---|---|---|---|
| 4 to 6 weeks | 70°-80°F (21°-26.7°C) | 1500 fc | 50-70% | Spray fungicide to control Botrytis and bacteria day of sticking |
| | Maintain above 60°F (15.5°C) | | | |

Irrigation specification: Remove from mist as soon as possible

Light: Levels above 3000 fc can result in deformed leaves of Dania

| Rooting | pH | EC | Temp | Feed | PGR | Fungicide |
|---|---|---|---|---|---|---|
| Week 1 | 5.5-6.0 | 0.8 | 75°F \| 24 °C | 50 ppm N in mist | | Day of sticking |
| Week 2 | 5.5-6.0 | 0.8-0.9 | 75°F \| 24 °C | 50 ppm N in mist | | Second fungicide app |
| Week 3 | 5.5-6.0 | 0.9-1.0 | 75°F \| 24 °C | 100-150 ppm | | |
| Week 4 | 5.5-6.0 | 1.0-1.2 | 75°F \| 24 °C | 100-150 ppm | A-rest 0.5mg a.i. if stretch occurs | |

## Finishing Tips

- The most important aspects of Aphelandra production are light and moisture control
- Temperature: Temp. below 60°F (15.5°C) result in deformed leaves
- Moisture: If plants dry down, leaf drop is likely to occur

| Avg. Time (from liners) | Temperature | Pinch/ Daylength Modification | Fertility | Plant Growth Regulator |
|---|---|---|---|---|
| 10 to 12 wks 1 plant per 5" pot (12 cm) | Avg. Day 70°-80°F (21°-26.7°C) Avoid temp. below 60°F | Pinch - Can be pinched if plants become stretched night interruption or extended day-Not Needed | Soil EC 1.5-2.0 pH 5.5-6.0 | A-rest at 0.5 mg a.i. |
| 12 to 14 wks 1plant per 6½" pot (15 cm) | | | Leaf drop can occur if EC becomes too high | |

| | | |
|---|---|---|
| Pests | Aphids | Avoid Spirotetramat due to risk of Phytotoxicity |
| | Fungus Gnats | Bacillus thuringienesis or Azadiracthin |
| Diseases | Botrytis | Group 7/11 |
| | Phytophthora | Group 4 |
| | Pythium | Group 4 |

| pH | EC | Temp | Feed | Light | Fungicide |
|---|---|---|---|---|---|
| 5.7-6.0 | 1.0-1.2 | 70°-80°F (21°-26.7°C) | 100-150 ppm | Day Neutral | Spray fungicide after transplant |

# ASARUM

## Propagation Tips

- Stick on priority - Number 3 out of 4 categories

| Avg. Time | Temperature | Hormone | Fertilization | Fungicide |
|---|---|---|---|---|
| 4 weeks | Weeks 1-2<br>70°-72°F (21°-22°C) | Optional | Weeks 1-2<br>50 ppm N | Spray fungicide to control Botrytis and bacteria day of sticking |
| | Weeks 3-4<br>68°-70°F (20°-21°C) | | Weeks 3-5<br>100 to 150 ppm N | Apply broad spectrum<br>Week 2 |

- Misting specification: Remove from the mist as soon as possible
- Spray adjuvant at sticking
- Pinching is not needed

| Rooting | pH | EC | Temp | Feed | Light | PGR | Fungicide |
|---|---|---|---|---|---|---|---|
| Week 1 | 5.8-6.2 | 0.8 | 70°-72°F (21°-22°C) | 50 ppm N in mist | Not required | | Day of sticking |
| Week 2 | 5.8-6.2 | 0.8-0.9 | 70°-72°F (21°-22°C) | 50 ppm N in mist | | | Second fungicide app |
| Week 3 | 5.8-6.2 | 0.9-1.0 | 66°-68°F (19°-20°C) | 100-150 ppm | | | |
| Week 4 | 5.8-6.2 | 0.9-1.0 | 66°-68°F (19°-20°C) | 100-150 ppm | | Not required | |

## Finishing Tips

- Temperature: Needs outdoor cold temp. exposure to flower
- Quality improves when finished in cool temp.
- Will flower second year around week 8

| Avg. Time (from liners) | Temperature | Pinch/ Daylength Modification | Fertility | Plant Growth Regulator |
|---|---|---|---|---|
| 7 to 8 wks<br>1 plant per 5" pot (12 cm) | Avg. Day<br>65°-68°F<br>(18°-20°C) | No pinch necessary<br>No lighting necessary | 100-150 ppm N<br>Soil EC 1.0-1.2<br>pH 5.5 to 6.0 | Not needed |
| 8 to 9 wks<br>1plant per 6½" pot (15 cm) | | | | |
| 8 to 9 wks<br>3 plants per 8" pot (20 cm)<br>3 plants per container | | | | |
| 8 to 9 wks<br>3 plants per 10" pot (25 cm)<br>3 plants per container | | | | |

- Additional Iron (Fe) or Manganese (Mn) may be required depending on water quality and alkalinity
- Scout for Aphids and Thrips on a regular basis

| Finishing | pH | EC | Temp | Feed | Light | PGR | Fungicide |
|---|---|---|---|---|---|---|---|
| Week 6<br>Transplant | 5.6-6.0 | 1.0-1.2 | 65°-68°F<br>(18°-20°C) | 100-150 ppm | Day Neutral | Not needed | Spray fungicide after transplant |
| Week 6-12 | 5.6-6.0 | 1.0-1.2 | 59°-64°F<br>(16°-18°C) | 100-150 ppm | Not Required | | |

| | | |
|---|---|---|
| Pests | Aphids | ACETAMIPRID, FLONICAMID, IMIDACLOPRID,DICHLORVOS |
| | Thrips | METHIOCARB,ACRINATHRIN, ABAMECTIN, DICHLORVOS, SPINOSAD |
| Diseases | Botrytis | CYPRODINIL+FLUDIOXONIL, IPRODIONE, POLYOXIN |
| | Pythium Phytophthora | PROPAMOCARB / MEFENOXAM |
| | Rhizoctonia | AZOXYSTRONBIN / ETRIDIAZOLE / FLUDIOXONIL / PCNB |

# BEGONIA TROPICAL

## Propagation Tips

- Priority: Stick on priority - Number 1 out of 4 categories
- Media: use a well aerated media
- Cuttings: Leaf cuttings need to be stuck so the leaf is in contact with the soil
- Rooting:
  - Leaf cuttings root out of the Axil
  - Tip cuttings root out of the bottom of the stem
- Humidity: Maintain high relative humidity (60–90%) for optimal growth.
  High ambient humidity is key for rooting success - tenting the crop is recommended, with minimal overhead misting
- Temperature - Ideal temp. for growth is between 70°-86°F (21°-30°C)

| Width | Height |
|---|---|
| 10-20" (25-50 cm) | 10-24" (25-61 cm) |

| Avg. Time | Temperature | Radiation | Humidity Level | Fungicide |
|---|---|---|---|---|
| 6 to 8 weeks | Weeks 1-4<br>77°-86°F (25°-30°C) | 60-70% | 70-90% | Spray fungicide to control Botrytis and bacteria day of sticking |
| | Weeks 4-TP<br>70°-76°F (21°-24.4°C) | 60-70% | 60-80% | |

| Rooting | pH | EC | Temp | Feed | PGR | Fungicide |
|---|---|---|---|---|---|---|
| Week 1 | 5.8-6.0 | 0.8 | 72°-80°F (22°-26°C) | 50 ppm N in mist | | Day of sticking |
| Week 2 | 5.8-6.0 | 0.8-0.9 | 72°-80°F (22°-26°C) | 50 ppm N in mist | | Second fungicide app |
| Week 3 | 5.8-6.0 | 0.9-1.0 | 70°-75°F (21°-23°C) | 100-150 ppm | | |
| Week 4 to TP | 5.8-6.0 | 1.0-1.2 | 70°-75°F (21°-23°C) | 100-150 ppm | Daminozide as needed | |

## Finishing Tips

- Temperature: Optimal temp. of 77°-86°F (25°-30°C)
- Humidity: Relatively high level required: 50-70% for optimal growth
- Light & Radiation: shading net of 500-1500 fc (in summer)
- Light Warning: Too intense light will stunt growth or burn leaves
- Pinching: Maculata and Pink spot can be pinched if stretch occurs

| Avg. Time (from liners) | Temperature | Pinch/ Daylength Modification | Fertility | Plant Growth Regulator |
|---|---|---|---|---|
| 8 to 10 wks<br>1 plant per 5" pot (12 cm) | Avg. Day<br>77°-86°F (25°-30°C)<br>Temperature is the primary factor driving begonia growth | Night interruption or extended day-Not needed | Soil EC 1.0-2.0<br>pH 5.5-6.0 | 2500 B9 to slow growth if needed |
| 10 to 14 wks<br>3 plants per 8" pot (20 cm) | | | Soil EC 1.0-1.2<br>pH 5.8-6.2 | |

| | | |
|---|---|---|
| Pests | Aphids | Grower Choice |
| | Spider Mites | Grower Choice |
| Diseases | Pythium | Group 4 |
| | Phytophthora | Group 4 |
| | Powdery Mildew | Group 3 |

| Finishing | pH | EC | Temp. | Feed | Light | PGR | Fungicide |
|---|---|---|---|---|---|---|---|
| Summer & Winter | 5.8-6.2 | 1.0-2.0 | 77°-86°F (25°-30°C) | 100-150 ppm | Day Neutral | 2500B9 to hold | Spray fungicide after transplant |

# CHLOROPHYTUM

## Propagation Tips

- Stick on priority - Number 3 out of 4 categories

| Avg. Time | Temperature | Hormone | Fertilization | Fungicide |
|---|---|---|---|---|
| 4 weeks | Weeks 1-2<br>70°-72°F (21°-22°C) | Optional | Weeks 1-2<br>50 ppm N | Spray fungicide to control Botrytis and bacteria day of sticking |
| | Weeks 3-4<br>68°-70°F (20°-21°C) | | Weeks 3-5<br>100-150 ppm N | Apply a broad spectrum in Week 2 |

| Rooting | pH | EC | Temp | Feed | Light | PGR | Fungicide |
|---|---|---|---|---|---|---|---|
| Week 1 | 5.8-6.2 | 0.8 | 70°-72°F (21°-22°C) | 50 ppm N in mist | Not Required | Not Required | Day of sticking |
| Week 2 | 5.8-6.2 | 0.8-0.9 | 70°-72°F (21°-22°C) | 50 ppm N in mist | | | Second fungicide app |
| Week 3 | 5.8-6.2 | 0.9-1.0 | 66°-68°F (19°-20°C) | 100-150 ppm | | | |
| Week 4 | 5.8-6.2 | 0.9-1.0 | 66°-68°F (19°-20°C) | 100-150 ppm | | | |

## Finishing tips

- Temperature: Optimal temp. of 70°-80°F (21°-26.7°C)
- Radiation: Plants can handle higher light intensities but must be properly adjusted. If the Avg. intensity increases more than 1000 fc within one-week, red burning can occur
- Burn from light appears as red streaks on white variegation
- Burn from fluoride or chloride appears on the tips of leaves

| Avg. Time (Direct Stick) | Temperature | Pinch/ Daylength Modification | Fertility | Plant Growth Regulator |
|---|---|---|---|---|
| 10 wks<br>1 plant per 5" pot (12 cm) | Avg. Day<br>70°-80°F<br>(21°-26.7°C) | Long days encourage upright growth. Short days result in downward leaves | Soil EC 1.5-2.0<br>pH 5.5-6.0 | Moisture Management is the best PGR for spiders |
| 12 wks<br>5 plants per 8" pot (20 cm) | | | pH can be raised to reduce fluoride toxicity | |

| | | |
|---|---|---|
| Pests | Spider Mites | Low risk of phytotoxicity to various Products |
| | Aphids | Low risk of phytotoxicity to various Products |
| Diseases | Pythium | Spider Plants rarely develop disease |
| | Tip Burn | Fluoride Toxicity |
| | Margin Burn | Light is too intense |

| Finishing | pH | EC | Temp. | Feed | Light | PGR | Comments |
|---|---|---|---|---|---|---|---|
| Direct Stick Week 1 to 4 | 5.7-6.0 | 1.0-1.2 | 70°-75°F (21°-24°C) | 100-150 ppm | | Sprench with KIBA at 100ppm | Mist occasionally to help rooting |
| Week 5 to Finish | 5.7-6.0 | 1.5-2.0 | 75°-80°F (24°-27°C) | 100-150 ppm | Not Required | | |

# DIEFFENBACHIA

## Propagation Tips

| Width | Height |
|---|---|
| 10-24" (25-61 cm) | 20-48" (51-117 cm) |

- Priority: Stick on priority - Number 2 out of 4 categories
- Media: use a well-aerated media
- IBA rate of 500ppm suggested to encourage rooting
- Temperature: Dieffenbachia can root in a wide range, but 75°-80°F (24°-26.7°C) is ideal for propagation
- Humidity: Keep ambient humidity high to maintain leaf turgidity. Avoid excess moisture resting on leaves
- Radiation: shading net of 80% (in summer), 1,500 to 3,000 fc is ideal

| Avg. Time | Temperature | Radiation | Humidity Level | Fungicide |
|---|---|---|---|---|
| 6 weeks | 75°-80°F (24°-26.7°C) | 1500 fc | 50-70% | Copper fungicide for bacteria prevention |
| | Avoid temps below 60°F (15.5°C) | Above 3000 fc can result in burn | | Moisture control is also important |

| Rooting | pH | EC | Temp. | Feed | Light | Fungicide | Comments |
|---|---|---|---|---|---|---|---|
| Week 1 | 5.5-6.0 | 0.8 | 75°F (24°C) | 50 ppm N in mist | 1000 fc | Day of sticking | Chlorothalonil/ Copper |
| Week 2 | 5.5-6.0 | 0.8-0.9 | 75°F (24°C) | 50 ppm N in mist | 1500 fc | Second fungicide app | Group 7/11 |
| Week 3 | 5.5-6.0 | 0.9-1.0 | 75°F (24°C) | 100-150 ppm | 1500 fc | | |
| Week 4 to TP | 5.5-6.0 | 1.0-1.2 | 75°F (24°C) | 100-150 ppm | 2000 fc | | |

## Finishing tips

- Media & Moisture: Plant in aerated media to avoid excess moisture.
  Dieffenbachia prefers to be grown in drier conditions (3 out of 5 on the moisture scale)
- Temperature: Optimal temp. of 75°-80°F (24°-26.7°C)
- Radiation:1500 fc to 3500 fc results in best quality
- Plant Protection: Preventative drench with Cyantraniliprole can help prevent aphids
- Excess salts result in downward curling leaves and leaf drop
- Crop is relatively carefree as long as moisture is properly controlled

| Avg. Time (from liners) | Temperature | Pinch/ Daylength Modification | Fertility |
|---|---|---|---|
| 8 to 10 wks<br>1 plant per 5" pot (12 cm) | Avg. Day<br>75°-80°F (24°-26.7°C) | Pinch - Optional | Soil EC 1.0-1.5<br>pH 5.5-6.0 |
| 8 to 10 wks<br>3 plants per 6½" pot (15 cm) | Can grow in temp. from<br>60°-95°F (15.5°-35°C) | Night interruption or extended day-Optional | Sensitive to high salts |

| | | |
|---|---|---|
| Pests | Aphids | Cyantraniliprole Drench, Many spray options |
| | Mealy Bugs | Flupyradaifurone |
| Diseases | Erwinia | Avoiding too much moisture is best prevention |
| | Xanthomonas | Copper |
| | Fungal Leaf Spots | Group 3 Triazoles |

| Finishing | pH | EC | Temp. | Feed | Light | Fungicide | Comments |
|---|---|---|---|---|---|---|---|
| Summer | 5.5-6.0 | 1.0-1.5 | Avoid above 95°F (35°C) | 100-150 ppm | Shade if above 3500 fc | Copper | Increase humidity if temp. are high |
| Winter | 5.5-6.0 | 1.0-1.2 | Avoid below 60°F (15.5°C) | 100-125 ppm | Supplement if below 1000 fc | Copper | Avoid prolonged periods of media wetness |

# EPISCIA

## Propagation Tips

- Priority: Stick on priority - Number 2 out of 4 categories
- Handling: Open the box immediately, as Episcia are sensitive to ethylene
- Unique foliage that produces petite pink flowers
- Growing & Uses: Easy to grow, requiring no PGRs.
  Ideal shade plant for both small pots and hanging baskets



Semi-trailing



3-6"
(7.5-15 cm)



6-12"
(15-30 cm)

| Avg. Time | Temperature | Hormone | Fertilization | Fungicide |
|---|---|---|---|---|
| 5 weeks | Weeks 1-2<br>72°-74°F (22°-23°C) | Not required | Weeks 1-2<br>50 ppm N | Spray fungicide to control Botrytis and bacteria day of sticking |
| | Weeks 3-5<br>70°-72°F (21°-22°C) | | Weeks 3-5<br>100-150 ppm N | Day of sticking & Week 2 |



- Irrigation specification**:** Remove from mist as soon as possible. Limit misting in propagation.
- Sensitive to cold water. Overhead watering with water under 50°F (10°C) can result in leaf damage



- Episcia have a fine root system, so the use of an Elle plug will reduce the risk of damage during transplanting
- Pinch is not needed. Plants are naturally branching
- Radiation levels between 1000-2000 fc are best

| Rooting | pH | EC | Temp. | Feed | Fungicide | Comments |
|---|---|---|---|---|---|---|
| Week 1 | 5.5-5.8 | 0.8 | 72°-74°F<br>(22°-23°C) | 50 ppm N in mist | Day of sticking | Feeding through Mist |
| Week 2 | 5.5-5.8 | 0.8-0.9 | 72°-74°F<br>(22°-23°C) | 50 ppm N in mist | Second fungicide app | |
| Week 3 | 5.5-5.8 | 0.9-1.0 | 72°-74°F<br>(22°-23°C) | 100 ppm | | If callused remove from Mist |
| Week 4 | 5.5-5.8 | 1.0-1.2 | 70°-72°F<br>(21°-22°C) | 100 ppm | | |
| Week 5 | 5.5-5.8 | 1.0-1.2 | 70°-72°F<br>(21°-22°C) | 100 ppm | | |

## Finishing Tips

- Growth is mostly dependent on warm temp. and keeping plants well irrigated
- Episcia are sensitive to high radiation, and light levels above 2000 fc can slow growth

| Avg. Time (from liners) | Temperature | Pinch/ Daylength Modification | Fertilization | Plant Growth Regulator |
|---|---|---|---|---|
| 7 to 9 wks<br>3 plants per 5" container (12 cm) | Avg. Day<br>70°-72°<br>(21°-22°C) | Pinch week 4 or at transplant<br><br>No lighting necessary | 100-150 ppm N | Daminozide spray when plants have reached 85% finish size |
| 8 to 10 wks<br>4 plants per 6½" container (15 cm) | | | Soil EC 1.0-1.2<br>pH 5.5 to 5.8 | |
| 10 to 14 wks<br>6 plants per 8" container (20 cm) | | | | |

- Avoid overhead watering with water temp. below 50°F (10°C)
- Flowering is not daylength-related and more likely to occur under warm temp.
- Botrytis and Rhizoctonia - fungicide drench after transplant to control root and stem diseases

| Finishing | pH | EC | Temp. | Feed | Light | PGR | Fungicide |
|---|---|---|---|---|---|---|---|
| Week 1 to 6 | 5.5-5.8 | 1.0-1.2 | 70°-72°F<br>(21°-22°C) | 100-150 ppm | Prefers long days | Daminozide as needed | Drench Fungicide after transplant |
| Week 6 to finish | 5.6-6.0 | 1.0-1.2 | Keep above 60°F (15.5°C) | 100-150 ppm | | | |

| | | |
|---|---|---|
| Pests | Aphids | ACETAMIPRID, FLONICAMID, IMIDACLOPRID,DICHLORVOS |
| | Thrips | METHIOCARB,ACRINATHRIN, ABAMECTIN, DICHLORVOS, SPINOSAD |
| | Whiteflies | PYMETROZINE, PYRIPROXYFEN, PYRIFLUQUINAZON |
| Diseases | Botrytis | CYPRODINIL+FLUDIOXONIL, IPRODIONE, POLYOXIN |
| | Pythium | PROPAMOCARB |
| | Phytophthora | PROPAMOCARB |

# FITTONIA

## Propagation Tips

- Priority: Stick on priority - Number 1 out of 4 categories
- Hormones: Low rates of IBA (100 ppm) can be beneficial to speed rooting
- Temperature is key to the growth of plants - maintain warm conditions
- Humidity: A relatively high level of humidity is preferred (60-80%) for optimal growth
- Light: Too much light will stunt the plant and increase rooting time

| Width | Height |
|---|---|
| 6-12" (15-30 cm) | 3-8" (7.5-8 cm) |

| Avg. Time | Temperature | Radiation | Humidity Level | Fungicide |
|---|---|---|---|---|
| 4 to 6 weeks | Weeks 1-2<br>77°-86°F (25°-30°C) | 60-70% | 60-80% | Spray fungicide to control Botrytis and bacteria day of sticking |
| | | | | Xanthomonas can occur if leaves are kept consistently wet |

Irrigation specification - Fittonia prefers to be kept moist

Fittonia are sensitive to ethylene and should be stuck as soon as possible

| Rooting | pH | EC | Temp | Feed | Light | Fungicide |
|---|---|---|---|---|---|---|
| Week 1 | 5.8-6.0 | 0.8 | 77°F (25°C) | 50 ppm N in mist | 500-1500 fc | Day of sticking |
| Week 2 | 5.8-6.0 | 0.8-0.9 | 77°F (25°C) | 50 ppm N in mist | 500-1500 fc | Second fungicide app |
| Week 3 | 5.8-6.0 | 0.9-1.0 | 77°F (25°C) | 100-125 ppm | 500-2000 fc | |
| Week 4 to TP | 5.8-6.0 | 1.0-1.2 | 77°F (25°C) | 100-125 ppm | 500-2500 fc | |

## Finishing Tips

- Temperatures:
  - Optimal temp. of 70°-86°F (25°-30°C)
  - Temp. below 70°F (25°C) greatly increase crop time
  - High temp. above 90°F (32°C) will reduce color
- Humidity: High relative humidity (50-70%) is required for optimal growth
- Radiation: Avoid overly intense light, as it will stunt growth or burn leaves

| Avg. Time (from liners) | Temperature | Pinch/ Daylength Modification | Fertility | Plant Growth Regulator |
|---|---|---|---|---|
| 8 wks<br>5 plants per 4" (10 cm) pot | Avg. Day 70°-75°F (21.1°-24°C) | Pinch- Not needed<br>Night interruption or extended day- Optional | Soil EC 1.0-1.5<br>pH 5.5-6.0 | 10ppm Fascination spray can be used if plants are stunted from too much light. Rates should be trialed |
| 10 wks<br>5 plants per 5" (12cm) pot | Avoid below 60°F (15.5°C) | | Soil EC 1.0-1.5<br>pH 5.5-6.0 | |

| | | |
|---|---|---|
| Pests | Aphids | Growers Choice |
| | Fungus Gnats | Bti or Azadirachtin |
| Diseases | Rhizoctonia | Group 12 |
| | Xanthomonas | Copper |

| Finishing | pH | EC | Temperature | Feed | Light | PGR | Comments |
|---|---|---|---|---|---|---|---|
| 4" Pot (10 cm) | 5.5-6.0 | 1.0-1.5 | 70°-75°F (21.1°-24°C) | 100-150 ppm | 1500 fc | Fascination if stunting occurs | Keep moist to speed growth |

# IVY (HEDERA)

## Propagation Tips

Width: Spreading

Height: Vining

- Priority: Stick-on priority – Number 4 out of 4 categories
- Media: Use a well-aerated medium
- Pinch: Cuttings can be double- or triple-stuck into 50 or 72 cells to increase the fullness of the finished pot
- Hormones: Sprench of 100 ppm K-IBA speeds rooting
- Plant Protection: Cuttings can be dipped in Quaternary ammonium (26 oz/100 gal) to reduce the risk of bacterial leaf spots during rooting
- Temperature: high temp. of 77°-86°F (25°-30°c) speeds rooting
- Radiation: 1,500 to 2,500 fc in propagation

| Avg. Time | Temperature | Radiation | Humidity Level | Fungicide |
|---|---|---|---|---|
| 5 weeks | 77°-86°F (25°-30°C) | 60-70% | 50-70% | Spray fungicide to control Botrytis and bacteria day of sticking |

Irrigation- Remove from mist as soon as possible to reduce the specification chance of bacterial leaf spot

| Rooting | pH | EC | Temp | Feed | Fungicide |
|---|---|---|---|---|---|
| Week 1 | 5.8-6.0 | 0.8 | 77°F (25°C) | 50 ppm N in mist | Day of sticking |
| Week 2 | 5.8-6.0 | 0.8-0.9 | 77°F (25°C) | 50 ppm N in mist | Second fungicide app |
| Week 3 | 5.8-6.0 | 0.9-1.0 | 77°F (25°C) | 100-150 ppm | |
| Week 4 | 5.8-6.0 | 1.0-1.2 | 77°F (25°C) | 100-150 ppm | |

## Finishing Tips

- Pinch: Pinching is optional - increases branching
- Temperature: Optimal range is 77°-86°F (25°-30°C)
- Radiation: 1,500 to 3,000 fc (use shading net as needed). Light levels below 1,000 fc can result in loss of variegation
- Plant Protection:
  - The primary pest issues in Hedera production are spider mites and broad mites
  - Excess moisture and high humidity lead to bacterial leaf spots (BLS). Avoid splashing water if BLS is present

| Avg. Time (from liners) | Temperature | Pinch/ Daylength Modification | Fertility | Plant Growth Regulator |
|---|---|---|---|---|
| 7 to 8 wks<br>3 plants per 5" pot (12 cm) | Avg. Day<br>77°-86°F (25°-30°C) | Pinch - Optional to increase branching | Soil EC 1.0-1.2<br>pH 5.5-6.0 | 2500 Daminozide+500 Ethephon to increase branching and reduce internode length |
| 12 to 14 wks<br>5 plants per 8" container (20 cm) | Temp. can be reduced to 60°F (15.5°C) to slow growth | | Soil EC 1.0-2.0<br>pH 5.5-6.0 | |

| | | |
|---|---|---|
| Pests | Spider Mites | Begin rotation early in Production to reduce pressure |
| | Broad Mites | |
| Diseases | Bacterial Leaf Spot | Reduce moisture on leaves. Copper Sprays |
| | Rhizoctonia | |
| | Botrytis | Group 7/11 |

# MARANTA

## Propagation Tips

- Priority: Stick on priority - Number 3 out of 4 categories
- Media: use a well-aerated media
- Temperature: Ideal range is 70°-80°F (21°-26.7°C)
- Humidity: High relative humidity (60-80%) is required for optimal growth
- Radiation: 500 to 1500 fc
- Plant Protection: Sensitive to Fluoride and Chloride tip burn

| Width | Height |
|---|---|
| 14"-30" (36-76 cm ) | 8"-20" (20-51 cm) |

| Avg. Time | Temperature | Radiation | Humidity Level | Fungicide |
|---|---|---|---|---|
| 6 weeks | 70°-80°F (21°-26.7°C) | 1000 fc | 60-80% | Spray fungicide to control Botrytis and bacteria day of sticking |

**Irrigation specification-** Avoid excess moisture going into night to avoid leaf spotting

| Rooting | pH | EC | Temp | Feed | Light | Fungicide | Comments |
|---|---|---|---|---|---|---|---|
| Week 1 | 5.5-6.5 | 0.8 | 75°F (24°C) | 50 ppm N in mist | 500 fc | Day of sticking | Bacteria |
| Week 2 | 5.5-6.5 | 0.8-0.9 | 72°-74°F (22°-23°C) | 50 ppm N in mist | 500 fc | Second fungicide app | Leaf Spot |
| Week 3 | 5.5-6.5 | 0.9-1.0 | 72°-74°F (22°-23°C) | 50 ppm N in mist | 750 fc | | |
| Week 4 to TP | 5.5-6.5 | 1.0-1.2 | | 100-150 ppm | 1000 fc | | |

## Finishing Tips

- Moisture: Maintain moisture at a 3 or 4 out of 5 scale; dry down will result in leaf burn
- Temperature: Optimal range is 77°-86°F (25°-30°C)
- Humidity: High relative humidity (50–70%) is required for optimal growth
- Radiation: 1000-1500 fc. Growing in lower conditions reduces the chance of stress and results in better crops for consumers
- Maranta is sensitive to Fluoride tip burn. Avoid using water containing fluoride and maintain a higher pH to reduce uptake
- Avoid fertilizer resting on leaves, as this can lead to spotting

| Avg. Time (from liners) | Temperature | Pinch/ Daylength Modification | Fertility | Plant Growth Regulator |
|---|---|---|---|---|
| 12 wks 1 plant per 5" pot (12 cm) | Avg. Day 77°-86°F (25°-30°C) | Not Needed | Soil EC 1.0-1.5 pH 5.5-6.0 | Not needed |
| 16 to 20 wks 3 plants per 8" pot (20 cm) | Avg. Night Avoid below 50°F (10°C) | | pH can be raised to reduce risk of Fluoride toxicity | |

| | | |
|---|---|---|
| Pests | Spider Mites | Avoid Chlorfenapyr due to risk of phytotoxicity |
| | Mealy Bugs | Avoid Spirotetramat due to risk of Phytotoxicity |
| Diseases | Botrytis | Chlorothalonil |
| | Pythium | Mefenoxam |

| Finishing | pH | EC | Temp. | Feed | Light | PGR |
|---|---|---|---|---|---|---|
| Week 1 to 10 | 5.7-6.0 | 1.0-1.2 | 65°-68°F \| (18°-20°C) | 100 ppm | Day Neutral | Not Required |
| Week 10 to finish | 5.7-6.5 | 1.0-1.2 | | 100-125 ppm | Not Required | Not Required |

# MONSTERA

## Propagation Tips

- Priority: Stick on priority - Number 1 out of 4 categories.
- If unable to stick immediately, open the box to prevent Ethylene damage

| Avg. Time | Temperature | Hormone | Fertilization | Fungicide |
|---|---|---|---|---|
| 8 weeks | Weeks 1-2<br>77°-86°F (25°-30°C) | 1000 ppm<br>KIBA | Weeks 1-2<br>50 ppm N | Spray fungicide to control Botrytis and bacteria day of sticking |
| | Weeks 3-5<br>72°-74°F (22°-23°C) | | Weeks 3-5<br>100 to 150 ppm N | Fungicide Day of sticking & Week 3 or 4 |

- **Irrigation specification** - Maintain high humidity to ensure leaves remain turgid and do not fall
- Sensitive to cold water. Overhead watering with water under 50°F (10°C) can result in leaf damage

- Application of K-IBA will hasten rooting. Maintain warm temperatures in propagation
- When rooting cuttings in media, place them close enough to stay upright, but far enough apart to avoid overlapping
- For rooting in both media and water, make sure that the root node is covered
- Keep light levels above 1000 fc and below 3000 fc during propagation

| Rooting | pH | EC | Temp | Feed | Fungicide | Comments |
|---|---|---|---|---|---|---|
| Week 1 | 5.5-5.8 | 0.8 | 77°-86°F<br>(25°-30°C) | 50 ppm N<br>in mist | Day of sticking | Feeding through Mist |
| Week 2 | 5.5-5.8 | 0.8-0.9 | 77°-86°F<br>(25°-30°C) | 50 ppm N<br>in mist | | |
| Week 3 | 5.5-5.8 | 0.9-1.0 | 77°-86°F<br>(25°-30°C) | 100 ppm | Second fungicide app | |
| Week 4 | 5.5-5.8 | 1.0-1.2 | 77°-86°F<br>(25°-30°C) | 100 ppm | | If callused remove from mist |
| Week 4 through 8 | 5.5-5.8 | 1.0-1.2 | 77°-86°F<br>(25°-30°C) | 100 ppm | | |

## Finishing Tips

- Humidity: Relative humidity of 50–70% is preferred for optimal growth
- Radiation: Optimal light intensity is 1,500 to 3,500 fc. Too intense light will cause browning on leaves
- Nutrition: Avoid excess nitrogen, as too much nitrogen can result in oversized and thin leaves

| Avg. Time (from liners) | Temperature | Pinch/ Daylength Modification | Fertilization | Plant Growth Regulator |
|---|---|---|---|---|
| 14 wks<br>1 plant per 6" pot (15 cm) | Avg. Day<br>70°-86°F (21°-30°C)<br>The rate of growth is primarily determined by temperature | Day Neutral | 100-150 ppm N | Not recommended |
| 14 to 18 wks<br>1 plant per 8" pot (20 cm) | | | Soil EC 1.0-1.2<br>pH 5.5 to 5.8 | |
| 18 to 24 wks<br>1 plant per 12" pot (30 cm) | | | | |

- Timing can vary greatly based on temperature, humidity, and light
- Finishing time is based on a finished plant with four fully fenestrated leaves
- Calcium sprays are helpful in maintaining leaf strength

| Finishing | pH | EC | Temp | Feed | Light | PGR | Fungicide |
|---|---|---|---|---|---|---|---|
| Week<br>1 to 8 | 5.5-5.8 | 1.0-1.2 | 70°-86°F<br>(21°-30°C) | 100-150 ppm | Day Neutral | Not recommended | Drench fungicide after transplant |
| Week<br>8 to finish | 5.6-6.0 | 1.0-1.2 | Minimum<br>65°F (18°C) | 100-150 ppm | | | |

| | | |
|---|---|---|
| Pests | Aphids | ACETAMIPRID, FLONICAMID, IMIDACLOPRID,DICHLORVOS |
| | Thrips | METHIOCARB,ACRINATHRIN, ABAMECTIN, DICHLORVOS, SPINOSAD |
| | Whiteflies | PYMETROZINE, PYRIPROXYFEN, PYRIFLUQUINAZON |
| Diseases | Botrytis | CYPRODINIL+FLUDIOXONIL, IPRODIONE, POLYOXIN |
| | Pythium | PROPAMOCARB |
| | Phytophthora | PROPAMOCARB |

# NEMATANTHUS

## Propagation Tips

- Stick on priority - Number 3 out of 4 categories

| Avg. Time | Temperature | Hormone | Fertilization | Fungicide |
|---|---|---|---|---|
| 5 weeks | Weeks 1-3<br>72°-74°F (22°-23°C) | Suggested | Weeks 1-2<br>50 ppm N | Spray fungicide to control Botrytis and bacteria day of sticking |
| | Weeks 4-5<br>70°-72°F (21°-22°C) | | Weeks 3-5<br>100 to 150 ppm N | Day of sticking & Week 2 |

- Irrigation specification: Remove from mist as soon as possible. Limit misting in propagation
- Sensitive to cold water. Overhead watering with water under 50°F (10 °C) can result in leaf damage

- Application of K-IBA can hasten rooting. Maintain warm temp. in propagation.
- Avoid overhead watering with water temp. below 50°F (10°C)
- Pinching before transplant results in a better finished product.

| Rooting | pH | EC | Temp | Feed | Fungicide | Comments |
|---|---|---|---|---|---|---|
| Week 1 | 5.5-5.8 | 0.8 | 72°-74°F (22°-23°C) | 50 ppm N in mist | Day of sticking | Feeding through Mist |
| Week 2 | 5.5-5.8 | 0.8-0.9 | 72°-74°F (22°-23°C) | 50 ppm N in mist | Second fungicide app | |
| Week 3 | 5.5-5.8 | 0.9-1.0 | 72°-74°F (22°-23°C) | 100 ppm | | If callused remove from Mist |
| Week 4 | 5.5-5.8 | 1.0-1.2 | 70°-72°F (21°-22°C) | 100 ppm | | |
| Week 5 | 5.5-5.8 | 1.0-1.2 | 70°-72°F (21°-22°C) | 100 ppm | | Pinch |

## Finishing Tips

- Pinch is beneficial to increase rooting
- Nematanthus prefers long days and warm temp. to flower

| Avg. Time (from liners) | Temperature | Pinch/ Daylength Modification | Fertility | Plant Growth Regulator |
|---|---|---|---|---|
| 7 to 9 wks<br>3 plants per 5" container (12 cm) | Avg. Day<br>65°-68°F<br>(18°-20°C) | Pinch week 4 or at transplant<br>No lighting necessary | 100-150 ppm N | Daminozide spray when plants have reached 85% finish size |
| 8 to 10 wks<br>4 plants per 6½" container (15 cm) | | | Soil EC 1.0-1.2<br>pH 5.5-5.8 | |
| 10 to 14 wks<br>6 plants per 8" container (20 cm) | | | | |

- Avoid overhead watering with cold water
- Avoid overhead watering with water temp. below 50°F (10°C)
- In addition to Thrips and Aphids, scout for Mealybugs, Spider Mites, and Whiteflies
- Botrytis and Rhizoctonia-fungicide drench after transplant to control root and stem diseases

| Finishing | pH | EC | Temp | Feed | Light | PGR | Fungicide |
|---|---|---|---|---|---|---|---|
| Week 6 Transplant | 5.5-5.8 | 1.0-1.2 | 70°-72°F (21°-22°C) | 100-150 ppm | Prefers long days | Daminozide as needed | Drench fungicide after transplant |
| Week 6 to 14 | 5.6-6.0 | 1.0-1.2 | 68°-72° (20°-22°C) | 100-150 ppm | | | |

| | | |
|---|---|---|
| Pests | Aphids | ACETAMIPRID, FLONICAMID, IMIDACLOPRID,DICHLORVOS |
| | Thrips | METHIOCARB,ACRINATHRIN, ABAMECTIN, DICHLORVOS, SPINOSAD |
| | Whiteflies | PYMETROZINE, PYRIPROXYFEN, PYRIFLUQUINAZON |
| Diseases | Botrytis | CYPRODINIL+FLUDIOXONIL, IPRODIONE, POLYOXIN |
| | Pythium | PROPAMOCARB |
| | Phytophthora | PROPAMOCARB |

# PEPEROMIA CAPERTA & ARGYREIA

## Propagation Tips

- Priority: Stick on priority - Number 3 out of 4 categories
- Media: Use a well - aerated media
- Sticking: 1 cutting per 50-cell or 72-cell tray
- Moisture: Can be rooted with minimal mist, but do not allow cuttings to dry out completely
- Temperature: 65°-85°F (18°-29°C). Cold Damage under 50°F (10°C)
- Radiation: 1,000 to 2,000 fc

| Width | Height |
|---|---|
| 4-10" (10-25 cm) | 6-12" (15-30 cm) |

| Avg. Time | Temperature | Radiation | Humidity Level | Fungicide |
|---|---|---|---|---|
| 4-6 weeks for tip cuttings | 65°-85°F (18°-29°C) | 1000-2,000 fc | 50-70% | Spray fungicide to control fungal and bacterial leaf spots |
| 6-8 weeks for leaf cuttings | | | | |

Irrigation specification: Remove from mist as soon as possible. Do not allow the medium to dry out fully

Too much overhead mist can result in leaf spot. Preventative sprays of fungicide in propagation are suggested

| Rooting | pH | EC | Temp. | Feed | Fungicide |
|---|---|---|---|---|---|
| Week 1 | 5.6-6.5 | 0.8 | 72°-74°F (22°-23°C) | 50 ppm N in mist | Day of sticking |
| Week 2 | 5.6-6.5 | 0.8-0.9 | 72°-74°F (22°-23°C) | 50 ppm N in mist | Second fungicide app |
| Week 3 | 5.6-6.5 | 0.8-1.0 | 70°-74°F (21°-23°C) | 100-125 ppm | |
| Week 4 | 5.6-6.5 | 0.8-1.2 | 70°-74°F (21°-23°C) | 100-125 ppm | |

## Finishing Tips

- Moisture: Grow on the dry side while avoiding a complete drying of the media. Maintain moisture for 2 to 3 so stem and root rot does not occur.
- Temperature: Optimal range is 77°-86°F (25°-30°C)
- Radiation: shading net of 60-70% (in summer)
- Crop Maintenance: If flowering occurs, it is suggested to manually remove. Florel has not been shown to be effective

| Avg. Time (from liners) | Temperature | Pinch/ Daylength Modification | Fertility | Plant Growth Regulator |
|---|---|---|---|---|
| 8 to 12 wks 1 plant per 4" pot (12 cm) | Avg. Day 70°-76°F (21°-24°C) | Day Neutral | Soil EC 0.8-1.2 pH 5.5-6.2 | Florel rates up to 1000ppm have been trialed and had no effect |

- Sensitive to high salts
- Peperomia caperta are received as leaf cuttings, and new growth emerges from the base of the leaf
- Maintain good airflow and allow plants to dry before nightfall to avoid Edema
- Avoid temp. below 50°F (10°C)

| | | |
|---|---|---|
| Pests | Broad Mites, Cyclamen Mites | Growers Choice |
| | Thrips | Growers Choice |
| Diseases | Leaf Spots | Phyllostica, Cercospora, Rhizoctonia |
| | Root Rots | Pythium and Phytophthora |

| pH | EC | Temp. | Feed | Light | Fungicide | Comments |
|---|---|---|---|---|---|---|
| 5.5-6.2 | 0.8-1.2 | 65°-85°F (18.3°-29°C) | 100-120 ppm | Day Neutral | Spray or Drench fungicide after transplant | Root and Stem rot can Occur if kept too wet after transplant |

# PEPEROMIA OBTUSIFOLIA & POLYBOTRYA

## Propagation Tips

- Media: use a well-aerated soil
- Sticking: 1 cutting per 50-cell or 72-cell tray
- Moisture: Can be rooted with minimal mist, but don't allow cuttings to dry completely
- Radiation: 1,000 to 2,000 fc
- Temperature: 65°-85°F (18°-29°C). Cold Damage occurs below 50°F (10°C)

| Width | Height |
|---|---|
| 4-8" (10-20 cm) | 8-14" (20-25 cm) |

| Avg. Time | Temperature | Radiation | Humidity Level | Fungicide |
|---|---|---|---|---|
| 4-6 weeks for tip cuttings | 65°-85°F (18°-29°C) | 1000-2,000 fc | 50-70% | Spray fungicide to control fungal and bacterial leaf spots |

Irrigation specification: Remove from mist as soon as possible. Do not allow the medium to fully dry out

Too much overhead mist can result in leaf spots. Preventative sprays of a group 7/11 fungicide in propagation are suggested. Follow up with group 3

| Rooting | pH | EC | Temp. | Feed | Fungicide | Comments |
|---|---|---|---|---|---|---|
| Week 1 | 5.6-6.5 | 0.8 | 72°-74°F (22°-23°) | 50 ppm N in mist | Day of sticking | Daconil or group 7/11 |
| Week 2 | 5.6-6.5 | 0.8-0.9 | 72°-74°F (22°-23°) | 50 ppm N in mist | Second fungicide app | Group 3 |
| Week 3 | 5.6-6.5 | 0.8-1.0 | 70°-74°F (21°-23°) | 100-125 ppm | | |
| Week 4 - TP | 5.6-6.5 | 0.8-1.2 | 70°-74°F (21°-23°) | 100-125 ppm | | |

## Finishing Tips

- Peperomia polybotrya Raindrop is quick growing variety
- Moisture: Grow on the dry side while avoiding full dry down. Maintain moisture at level 2 to 3. Root and Stem rot can occur if kept too wet after transplant.
- Temperature: Optimal range is of 72°-80°F (22°-27°C)
- Radiation: shading net of 60-70% (in summer)
- If flowering occurs, it is suggested to manually remove. Florel has not been shown to be effective

| Avg. Time (from liners) | Temperature | Pinch/ Daylength Modification | Fertility | Plant Growth Regulator |
|---|---|---|---|---|
| 8-12 wks Direct stick 3 plants per 4" pot (12 cm) | Avg. Day 70°-76°F (21°-24°C) | Day Neutral | Soil EC 0.8-1.2 pH 5.5-6.2 | Florel rates up to 1000ppm have been trialed and had no effect on flower removal |
| 8-12 wks 3 plants per 8" pot (20 cm) | | | | |

- Sensitive to high salts
- Peperomia obtusifolia can be pinched if excessive stretch occurs
- Maintain good airflow and allow plants to dry before nightfall to avoid Edema
- Avoid temp. below 50°F (10°C)

| | | |
|---|---|---|
| Pests | Broad Mites, Cyclamen Mites | Growers Choice |
| | Thrips | Growers Choice |
| Diseases | Leaf Spots | Phyllostica, Cercospora, Rhizoctonia Group 3 or 7/11 FRAC |
| | Root Rots | Pythium and Phytophhtora. Group 4 FRAC |

| pH | EC | Temp. | Feed | Light | Fungicide | Comments |
|---|---|---|---|---|---|---|
| 5.5-6.2 | 0.8-1.2 | 77°-86°F (25°-30°C) | 100-120 ppm | Day Neutral | Spray or Drench fungicide after transplant | Root and Stem rot can occur if kept too wet after transplant |

# PHILODENDRON HEDERACEUM

## Propagation Tips



Width

Spreading



Height

Vining

- Priority: Stick on priority - Number 2 out of 4 categories
- Sticking:
  - Number of cuttings per cell: 1-2 cuttings
  - Can be directly stuck into finished pots if the humidity is high
- Temperature: High temp. of 77°-86°F (25°-30°C) encourages faster rooting
- Humidity: High relative humidity (60-80%) is required for optimal growth
- Radiation: Shading net of 70-80% (in summer)

| Avg. Time | Temperature | Radiation | Humidity Level | Fungicide |
|---|---|---|---|---|
| 4 to 6 weeks | 70°-90°F (21°-32°C) | 70-80% 1000-3000 fc | 60-80% | Spray fungicide to control Rhizoctonia and bacteria day of sticking. Do not apply Mefenoxan |
| | Minimum Temp. of 60°F (15.5°C) | | | |



- Irrigation specification: Philodendron prefers slightly higher humidity than Pothos.



- The primary driver of the growth of Philodendron is temperature. Temperatures up to 86°F (30°C) will hasten Production time.
- Philodendron is sensitive to ethylene. Boxes should immediately be opened upon arrival, and cuttings should be stuck as soon as possible.

| Rooting | pH | EC | Temp | Feed | PGR | Fungicide | Comments |
|---|---|---|---|---|---|---|---|
| Week 1 | 5.8-6.2 | 0.8-1.5 | 77°F (25°C) | 50 ppm N in mist | | Day of sticking | Avoid Mefonoxan and Iprodine |
| Week 2 | 5.8-6.2 | 0.8-1.5 | 77°F (25°C) | 50 ppm N in mist | | Second fungicide app | |
| Week 3 | 5.8-6.2 | 0.8-1.5 | 77°F (25°C) | 100-150 ppm | | | |
| Week 4-6 | 5.8-6.2 | 1.0-1.5 | 77°F (25°C) | 100-150 ppm | 2500 Daminozide as needed to reduce leaf size | | |

## Finishing Tips

- Philodendron cordadum will finish 1 to 2 weeks faster than Brazil
- Moisture: Water early in the day to avoid moisture staying in the leaf sheath overnight, which can cause damaged leaves as they unfurl
- Temperature: Optimal range is 70°-90°F (21°-32°C). Temp. is the most important driver of growth
- Radiation: of 1000 to 3,500 fc is ideal. Leaves will brown on variegated areas of Brazil if the light intensity is too high
- Nutrition: Sensitive to low pH, which results in manganese toxicity (Identified by spotting on leaves)
- PGR: Spray Daminozide at 2,500 to 5,000 ppm to reduce leaf size and shorten vines
- If using Subdue Maxx ,be sure to read the label and use the suggested rate

| Avg. Time (from liners) | Temperature | Pinch/ Daylength Modification | Fertility | Plant Growth Regulator |
|---|---|---|---|---|
| 10 to 14 wks direct stuck 6 plants per 5" pot (12 cm) | Avg. Day 70°-90°F (21°-32°C) | Not required | Soil EC 1.5-2.0 pH 5.5-6.0 | 2500 to 5000 ppm Daminozide reduces area of leaves |
| 12 to 16 wks 10 plants per 8" pot (20 cm) | Minimum temp. of 55°F (12.8C) | | | |

| | | |
|---|---|---|
| Pests | Mealy Bugs | Growers Choice |
| | Spider Mites | Growers Choice |
| Diseases | Rhizoctonia | Group 7/11 |
| | Pythium | If using Subdue Maxx read label for special Philodendron rate |
| | Erwinia | Moisture management is best prevention |

# POTHOS EPIPREMNUM

## Propagation Tips

- Priority: Stick on priority - Number 3 out of 4 categories
- Sticking
  - Number of cuttings per cell: 1-2 cuttings
  - Can be stuck directly into finished pots if high humidity is maintained
- Temperature: High temp. of 77°-86°F (25°-30°C) encourages faster rooting
- Humidity: High relative humidity (50-70%) is required for optimal growth
- Radiation: shading net of 70-80% (in summer)



Width

Spreading



Height

Vining

| Avg. Time | Temperature | Radiation | Humidity Level | Fungicide |
|---|---|---|---|---|
| 4 to 6 weeks | 70°-90°F (21°-32°C) | 70-80% 1500-3000 fc | 50-70% | Spray fungicide to control Rhizoctonia and bacteria day of sticking. Do not apply Mefenoxan or Iprodine |
| | Minimum temp. of 60°F (15.5°C) | Neon is especially sensitive to high light | | |

- The primary driver of the growth of Pothos is temperature. Temp. up to 86°F (30°C) will hasten Production time. Pothos Neon is most susceptible to burn from too much light.

- Pothos are sensitive to ethylene. Upon arrival, boxes should be immediately opened, and cuttings should be stuck as soon as possible.

| Rooting | pH | EC | Temp | Feed | PGR | Fungicide | Comments |
|---|---|---|---|---|---|---|---|
| Week 1 | 5.8-6.2 | 0.8-1.5 | 77°F (25°C) | 50 ppm N in mist | | Day of sticking | Avoid Mefonoxan and Iprodine |
| Week 2 | 5.8-6.2 | 0.8-1.5 | 77°F (25°C) | 50 ppm N in mist | | Second fungicide app | |
| Week 3 | 5.8-6.2 | 0.8-1.5 | 77°F (25°C) | 100-150ppm | | | |
| Week 4-6 | 5.8-6.2 | 1.0-1.5 | 77°F (25°C) | 100-150ppm | 2500 ppm Daminozide as needed to reduce leaf size | | |

## Finishing Tips

- Varieties:
  - The fastest varieties of Pothos are 'Jade', 'Golden', and 'Hawaiian'
  - Add 1-2 weeks to the production schedule for 'Marble Queen', and add 3 weeks for 'Neon'
- Temperature: Optimal range is 70°-90°F (21° -32°C). Temp. is the most important driver for growth
- Radiation:
  - 1,500 to 3,500 fc is ideal
  - Brown burns will appear on variegated areas of Pothos if the light intensity is too high
  - Neon Pothos is especially sensitive to high light. Provide as much shade as possible during production, especially in propagation
- Nutrition:
  - Sensitive to low pH, which can result in manganese toxicity (appearing as spotting on leaves)
  - Calcium sprays are beneficial in encouraging stronger leaves
- PGR: Spray Daminozide at 2500 to 5000 ppm to reduce leaf size and shorten vines
- Plant Protection: If using Subdue Maxx, be sure to read the label and use the suggested rate (0.3-0.38 fl oz per 100 gallons)

| Avg. Time (from liners) | Temperature | Pinch/ Daylength Modification | Fertility | Plant Growth Regulator |
|---|---|---|---|---|
| 8 to12 wks<br>direct stuck<br>6 plants per 5" pot (12 cm) | Avg. Day<br>70°-90°F<br>(21°-32°C) | Not required | Soil EC 1.5-1.8<br>pH 5.5-6.0 | 2500 to 5000ppm Daminozide reduces area of leaves |
| 10 to14 wks<br>10 plants per 8" pot (20 cm) | Minimum temp.<br>of 55°F (12.8°C) | | | |

| | | |
|---|---|---|
| Pests | Mealy Bugs | Growers Choice |
| | Spider Mites | Growers Choice |
| Diseases | Rhizoctonia | Do not use OHP Chipco 26019 as a soil drench on Pothos (From Label) |
| | Pythium | If using Subdue Maxx read label for special Pothos rate |
| | Pseudomonas | Copper |

# RHOEO

## Propagation Tips

| Width | Height |
|---|---|
| 12-24" (30-61cm) | 12-24" (30-61cm) |

- Priority: Stick on priority - Number 3 out of 4 categories
- Media: use well-aerated media
- Sticking:
  - Can be stuck directly into finished containers.
  - If propagating in trays, 50 or 72-cell tray is suggested due to stem thickness
- Moisture: Lightly mist for the first few days to speed up rooting
- Temperature: High temp. of 77°-86°F (25°-30°C)
- Radiation: 2000 fc is ideal for propagation, but can be grown in conditions ranging from 500 to 5000 fc.
- When grown properly, Rhoeo has thick brown roots

| Avg. Time | Temperature | Radiation | Humidity Level | Fungicide |
|---|---|---|---|---|
| 4 weeks | 77°-86°F (25°-30°C) | 1500-2500 fc | 50-70% | Disease pressure is rare |
| In Liner | Avoid temp. below 60°F (15.5°C) | | Mist first few days | Pythium can occur if excessively wet |

| Rooting | pH | EC | Temp | Feed |
|---|---|---|---|---|
| Week 1 | 5.8-6.0 | 0.8 | 77°F (25°C) | 50 ppm N in mist |
| Week 2 | 5.8-6.0 | 0.8-0.9 | 77°F (25°C) | 50 ppm N in mist |
| Week 3 | 5.8-6.0 | 0.9-1.0 | 77°F (25°C) | 100 -150 ppm |
| Week 4 | 5.8-6.0 | 1.0-1.2 | 77°F (25°C) | 100 -150 ppm |

## Finishing Tips

- The Rhoeo Bicolor vareity may finish about one week earlier than Rhoeo Tricolor Compacta
- Moisture: Keep evenly moist. Moisture extremes can result in brown spots on leaves
- Temperature: Optimal range is 77°-86°F (25°-30°C)
- Radiation: Will grow in light ranging from 500 fc to 5000 fc.
- Plant Protection: Rhoeo can be susceptible to Alternanthera Mosaic Virus (Symptoms appear similar to streaking from thrips)

| Avg. Time (from liners) | Temperature | Pinch | Fertility | Plant Growth Regulator |
|---|---|---|---|---|
| 7 to 8 wks<br>1 plant per 5" pot (12 cm) | Avg. Day<br>77°-86°F<br>(25°-30°C) | Pinch is not needed | Soil EC 1.0-1.5<br>pH 5.5-6.2 | 2500 Daminozide+ 500 ethephon spray or 0.1-0.3 ppm Paclobutrazol drench (rate varies by condition) |
| 8 to 10 wks<br>3 plants per 8" pot (20 cm) | Avoid temp. below 50°F (10°C) | | Soil EC 1.0-1.5<br>pH 5.5-6.2 | |

| | | |
|---|---|---|
| Pests | Mealybug | Many options available and low chance of phytotoxicity |
| | Aphids | Many options available and low chance of phytotoxicity |
| Diseases | Pythium | Mefenoxam, but Pythium is rare. |
| | AltMv | Dispose of diseased plants. Stock plants are tested to ensure clean material |
| | Brown Spots | Occurs from extreme dryness and wetness. |

| Finishing | pH | EC | Temp | Feed | Light | PGR | Fungicide | Comments |
|---|---|---|---|---|---|---|---|---|
| Weeks 1 to 6 | 5.5-6.2 | 1.0-1.5 | 65°-68°F (18°-20°C) | 100-150 ppm | Day Neutral | 2500 Daminozide | Mefenoxam | Mefonxam only needed if pythium is found |
| Weeks 6 to finish | 5.7-6.0 | 1.0-1.2 | 65°-68°F (18°-20°C) | 100-150 ppm | | Paclobutrazol drench | | Drench at 0.2ppm will stall growth making better Product for consumer |

# SCINDAPSUS

## Propagation Tips

- Priority: Stick on priority - Number 2 out of 4 categories
- Sticking:
  - Number of cuttings per cell: 1-2 cuttings
  - Can be directly stuck into finished pots if humidity is high
- Temperature: High temp. of 77°-86°F (25°-30°C) encourages faster rooting
- Humidity: High relative humidity (50-70%) is required for optimal growth
- Radiation: shading net of 70-80% (in summer)

| Width | Height |
|---|---|
| 12-24" (30-61 cm) | 12-24" (30-61 cm) |

| Avg. Time | Temperature | Radiation | Humidity Level | Fungicide |
|---|---|---|---|---|
| 5 to 7 weeks | Weeks 1-2<br>70°-90°F (21°-32°C) | 70-80%<br>1500-3000 fc | 50-70% | Spray fungicide to control Rhizoctonia and bacteria day of sticking. Do not apply Mefenoxan or Iprodine |
| | Minimum temp. of 60°F (15.5°C) | Neon is especially sensitive to high light | | |

- Irrigation specification: Scindapsus should be kept slightly moist, avoiding over-watering. Maintain higher humidity only during the first 1-2 weeks of rooting, and gradually reduce mist once roots develop

- The primary driver of the growth is temperature. Temperatures up to 86°F (30°C) will hasten Production time
- Scindapsus are sensitive to ethylene. Boxes should immediately be opened upon arrival, and cuttings should be stuck as soon as possible

| Rooting | pH | EC | Temp. | Feed | PGR | Fungicide | Comments |
|---|---|---|---|---|---|---|---|
| Week 1 | 5.8-6.2 | 0.8-1.5 | 77°F (25°C) | 50 ppm N in mist | | Day of sticking | Avoid Mefonoxan and Iprodine |
| Week 2 | 5.8-6.2 | 0.8-1.5 | 77°F (25°C) | 50 ppm N in mist | | Second fungicide app | |
| Week 3 | 5.8-6.2 | 0.8-1.5 | 77°F (25°C) | 100-150 ppm | | | |
| Week 4-6 | 5.8-6.2 | 1-1.5 | 77°F (25°C) | 100-150 ppm | Should not be needed | | |

## Finishing Tips

- Temperature: Optimal range is 70°-90°F (21°-32°C). Temp. is the most important driver for growth.
- Radiation: 1,500 to 3,500 fc is ideal
- Nutrition: Sensitive to low pH, which results in manganese toxicity (Identified by spotting on leaves)

| Avg. Time (from liners) | Temperature | Pinch/ Daylength Modification | Fertility | Plant Growth Regulator |
|---|---|---|---|---|
| 9 to 13 wks<br>direct stuck<br>6 plants per 5" pot (12 cm) | Avg. Day<br>70°-90°F<br>(21°-32°C) | Not required | Soil EC 1.5-1.8<br>pH 5.5 to 6.0 | Naturally more compact than Epipremnum. 2500 ppm B9 if stretch occurs |
| 12 to 16 wks<br>10 plants per 8" pot (20 cm) | Minimum temp. of 55°F (12.8°C) | | | |

| | | |
|---|---|---|
| Pests | Mealy Bugs | Growers Choice |
| | Spider Mites | Growers Choice |
| Diseases | Rhizoctonia | Do not use OHP Chipco 26019 as a soil drench on Pothos (From Label) |
| | Pythium | If using Subdue Maxx read label for special Pothos rate |
| | Pseudomonas | |

- Radiation: Brown burns will appear on variegated areas of Pothos if the light intensity is too high
- Radiation:
  - Low pH can result in manganese toxicity, appearing as spotting on leaves
  - Calcium sprays are beneficial to encourage stronger leaves
- PGR: Spray Daminozide at 2500 to 5000 ppm to reduce leaf size and shorten vines
- Plant Protection: If using Subdue Maxx, be sure to read the label and use the suggested rate (0.3-0.38 fl oz per 100 gallons)

| pH | EC | Temp | Feed | Light | Fungicide |
|---|---|---|---|---|---|
| 5.8-6.2 | 1.0-1.5 | 70°-90°F (21°-32°C) | 100-150 ppm | Day Neutral | Spray fungicide after transplant |

# TRADESCANTIA

## Propagation Tips

- Priority: Stick on priority - Number 3 out of 4 categories
- Media: an aerated media
- Sticking: Can be stuck directly into finished containers
- Moisture: Lightly mist for the first few days to speed up rooting
- Temperature: High temp. of 77°-86°F (25°-30°C)
- Radiation: 2000 fc is ideal for propagation, but can be grown in conditions ranging from 500 to 5000 fc



Width
Spreading



Height
Trailing

| Avg. Time | Temperature | Radiation | Humidity Level | Fungicide |
|---|---|---|---|---|
| 4 weeks | 77°-86°F (25°-30°C) | 1500-2500 fc | 50-70% | Disease pressure is rare |
| In Liner | Avoid Temps. Below 60°F (15.5°C) | | Mist first few days | Pythium can occur if excessively wet |

| Rooting | pH | EC | Temp. | Feed | PGR | Comments |
|---|---|---|---|---|---|---|
| Week 1 | 5.8-6.0 | 0.8 | 72°-74°F (22°-23°C) | 50 ppm N in mist | | |
| Week 2 | 5.8-6.0 | 0.8-0.9 | 72°-74°F (22°-23°C) | 50 ppm N in mist | | |
| Week 3 | 5.8-6.0 | 0.9-1.0 | Cool to 70°-68°F (21°-20°C) | 100-150 ppm | | |
| Week 4 | 5.8-6.0 | 1.0-1.2 | 65°-68°F (18°-20°C) | 100-150 ppm | 2500 Daminozide as needed | Pinch or mow |

## Finishing Tips

- Moisture: Keep evenly moist. Moisture extremes can result in brown spots on leaves
- Temperature: Optimal range is 77°-86°F (25°-30°C)
- Radiation:
  - Will grow in light ranging from 500-5000 fc
  - 'Tricolor' is more sensitive to light and should be kept below 3500 fc
- Crop Maintenance: Pinching is suggested, or an Ethephon application will also help remove flowers and encourage branching

| Avg. Time (from liners) | Temperature | Pinch | Fertility | Plant Growth Regulator |
|---|---|---|---|---|
| 7 to 8 wks<br>3 plants per 5" pot (12 cm) | Avg. Day<br>77°-86°F \| (25°-30°C) | Pinch - Suggested to encourage branching.<br>Can be mowed | Soil EC 1.0-1.5<br>pH 5.5-6.2 | 2500 Daminozide+ 500 ethephon spray Or<br>0.1 to 0.3ppm Paclobutrazol drench<br>(rate varies by condition) |
| 8 to 10 wks<br>5 plants per 8" pot (20 cm) | Avoid temp.<br>below 50°F (10°C) | | Soil EC 1.0-1.5<br>pH 5.5-6.2 | |

| | | |
|---|---|---|
| Pests | Mealybug | Many options available and low chance of phytotoxicity |
| | Aphids | Many options available and low chance of phytotoxicity |
| Diseases | Pythium | Mefenoxam, but Pythium is rare. |
| | Potyvirus | Dispose of diseased plants. Stock plants are tested to ensure clean material |
| | Brown Spots | Occurs from extreme dryness and wetness. |

| Finishing | pH | EC | Temp | Feed | Light | PGR | Fungicide | Comments |
|---|---|---|---|---|---|---|---|---|
| Weeks 1 to 6 | 5.5-6.2 | 1.0-1.5 | 65°-68°F (18°-20°C) | 100-150 ppm | Day Neutral | 2500 Daminozide | Mefenoxam | Mefonxam only needed if pythium is found |
| Weeks 6 to finish | 5.7-6.0 | 1.0-1.2 | 65°-68 °F (18°-20°C) | 100-150 ppm | | Paclobutrazol drench | | Drench at 0.2ppm will stall growth making better Product for consumer |

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