

# Orchid Production Program

## Media

Orchids require coarse, high porosity media, such as bark, to allow air movement through the media. It is recommended that this be used in combination with a water absorptive material, such as sphagnum peat moss, perlite or coconut husk chips, to ensure a well-balanced medium for growth. One of the best absorptive materials for growth in warm climates is sphagnum moss due to its low pH and high holding capacity of nutrients and minerals.

## Fertilization

To prevent accumulation of salts, plants should be watered until 20% of applied water begins to leach out of the bottom of the pots. The recommended EC level of this water being added to plants is 0.5 mmhos, while the EC level of leachate should be between 1-1.5 mmhos. If the leachate is higher than 2 mmhos, plants should be flushed with clear water.

The appropriate fertilizer should be applied every watering at 200 ppm N, and with adequate levels of calcium and magnesium. It is recommended that fertilization continues as spikes emerge. Eliminating fertilizer at this stage will result in reduced flower count. Alternating between **Plant-Prod® 12-2-14 Optimum** and **Plant-Prod 24-8-16 Foliage** will ensure high flower count and maximum flower size.

### Plant-Prod® 12-2-14 Optimum

Contains 6% calcium and 3% magnesium and is an all-in-one formula. Over 97% of N is in nitrate form. Contains a full micronutrient package.

### Plant-Prod® 24-8-16 Foliage

Contains forms of nitrogen most readily absorbed and used by plants for vegetative growth. Contains a full micronutrient package.

## Vegetative Cultivation and Growth

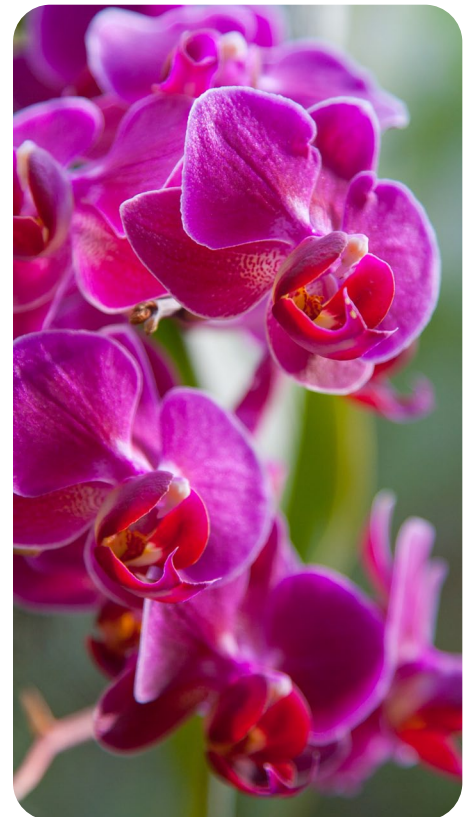
This stage lasts for 20-25 weeks. During this time, maintain plants at high temperatures between 27-32° C.

## Cooling and Spike Induction

This stage occurs when plants have 5-7 leaves and lasts for 4-6 weeks. During this time, reduce temperature to 17-25° C.

## Finishing and Post-Harvest

Finishing occurs once spikes emerge and lasts for 20-25 weeks. During this time, maintain plants at 17-25° C.



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### Water alkalinity greater than 250 ppm CaCO<sub>3</sub>:

**Option 1** - If acid injection is not being used and the Ca/Mg levels are low, use Plant-Prod Solutions 18-9-18 pH Reducer at 200-250 ppm N constant feed. Every third time, fertilize with Plant-Prod 12-2-14. If Ca/Mg levels are adequate, use Plant-Prod Solutions 18-9-18 at 200-250 ppm N on a constant basis. If EC levels drop below 2.5 mS, increase the feed to 300 ppm N. Monitor EC and pH.

**Option 2** - If acid injection is being used and the Ca/Mg levels are low, use Plant-Prod Solutions 19-8-13 at 200-250 ppm N constant feed. Every third time, fertilize with Plant-Prod 12-2-14. If Ca/Mg levels are adequate, use Plant-Prod 20-8-20 at 200-250 ppm N constant feed. If EC levels drop below 2.5 mS, increase the feed to 300 ppm N. Monitor EC and pH.

## Finishing

In order to maintain plant quality during shipping and sale, fertilizer rates may be reduced 3 weeks prior to shipping, or when the buds are pea sized. Plant-Prod Solutions 15-0-20 No-Stretch® should be used at 150-200 ppm N in order to strengthen the stems and to provide supplemental micronutrients to keep the finished plants greener.

### Plant-Prod Solutions® 17-5-17 Complete

Contains 3% calcium and 1% magnesium and is an all-in-one formula. Over 70% of N is in nitrate form. Contains a full micronutrient package.

### Plant-Prod® 12-2-14 Optimum

Contains 6% calcium and 3% magnesium, as well as a complete micronutrient package.

### Plant-Prod Solutions® 19-8-13 Total Plus

Contains 2.5% calcium and 1% magnesium. This modification of 17-5-17 provides a greater acidic potential. Contains an enhanced and complete micronutrient package with 3 chelating agents.

### Plant-Prod Solutions® 18-9-18 pH Reducer

Contains high nitrate, and is urea free. Decreases media pH levels while providing enhanced micronutrients with 3 chelating agents.

### Plant-Prod® 20-8-20 All Purpose High Nitrate

An all season fertilizer with a high potential acidity and a complete micronutrient package.

### Plant-Prod Solutions® 15-0-20 No Stretch®

Works to harden plant structure and prevents leggy growth. Contains a complete and enhanced micronutrient package with 3 chelating agents to improve the availability of Iron and other micronutrients.



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