

## Semi-Hydroponics



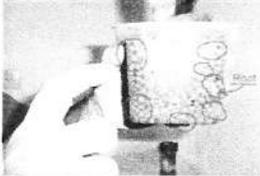
## What We'll Discuss Tonight

- Definition of Semi-Hydroponics (S/H)
- Benefits of S/H
- Which Plants are Suitable
- Materials Required
- Preparing the Plant for S/H
- Repotting Into S/H
- Feeding and Watering
- The Finished Product
- Common Mistakes in S/H
- Resources



## What is Semi-Hydroponics?

- Semi-Hydroponics is a method of growing plants without soil, moss, or bark. Instead, an inorganic, porous medium transports water and fertilizer to the roots by capillary action.



## Benefits of Semi-Hydroponics

- Requires only one type of potting media
- Reduces need for repotting and associated damage
- Allows 'over potting' as medium does not degrade
- Provides constantly available moisture and fertilizer as required by the orchid
- Minimizes salt and organic waste build-up in pot
- Prevents root rot and enhances root gas exchange

### Which Plants are Suitable?

- Plants from Rain & Cloud Forests
  - Most Cattleyas
  - Evergreen Dendrobiums
  - Phals, Paphs, Oncidiums
  - Epidendrum and many others
- Plants **Less** Suitable
  - Plants that Roam and/or Climb, such as Bulbos
  - Deciduous Dens, Vandas, Catasetum
  - Pendant plants or plants that bloom from the bottom



### Perfect candidate for S/H



### Materials Needed

- LECA (Light Expanded Clay Aggregate)
  - Rinsed well & Soaked for 24 hrs. in water
- Sterile Shears
- Suitable pot (Plastic, Glass, Ceramic)
  - appropriate drill & bit
- Suitable orchid
- Name Tag
- Fertilizer
- Stake (if needed)



### Preparing the Plant for S/H

- Soak the plant for 15-20 minutes to soften roots
- Remove the plant from pot
- Remove **ALL** media (bark, charcoal, moss)
- Trim away **ALL** dead and brown roots



### Repotting the Plant into S/H

- Drill 2 or 3 ¼" holes in the new pot 1" up from the bottom
- Fill the pot up to the holes with LECA
- Place the plant in the pot
- Add stake if needed
- Backfill with LECA and add Plant Tag



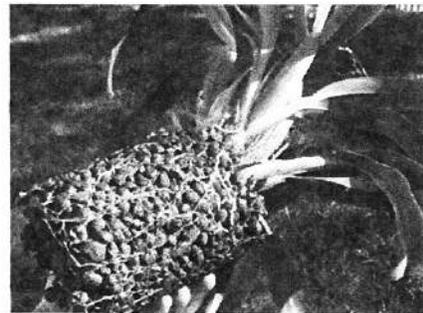
### Watering and Fertilization

- Water depending on plant growth and environmental conditions. Once established, it is almost impossible to overwater.
- **Always** totally flood pot to remove salts and plant waste products
- Fertilize every time you water
- Feed with MSU-type fertilizer at the rate of 30-50 ppm nitrogen, generally ¼ - ½ the recommended dosage.

### Your newly-potted S/H Plant



### Two or Three Years Later



### Common Mistakes in S/H

- Bad Timing
  - Little/no new roots
- Improper Watering
  - Failing to flush pot
- Insufficient Water
  - Allowing pot to dry
- Too Cold
  - Applies especially to Phals and Paphs



### Resources

- Multiple online – Google *semi-hydroponic orchids*; FirstRays.com, Orchidhouse.org, Orchidboard.com, YouTube.com
- S/H Pots – Any ‘big box’ store, dollar stores, yard sales, flea markets
- LECA – Home Depot online (Item VS50), Big Earth Landscaping Supply, 6625 Bee Ridge Rd. Hydroton brand is the most consistent in quality.