



MISSION: BEAUTIFICATION ... CONSERVATION ... EDUCATION

Planting and Nurturing

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All You Have to Do Is Keep It Watered

My college friend gave me an African violet as a gift, and said, “all you have to do is keep it watered.” Before long I had acquired a special pot, the “right” wick, plant food, grow light, instructions for care (before the internet) and a love for African violets that would “grow” into a collection of twenty different types of them within the first year. Okay, I had an African violet problem when at first all I had to do was just keep one watered. Ever since then I go through a “check, check, check” to make sure that my houseplant collection does not exceed my capacity for loving them all. Until now.

I recently discovered semi-hydroponics, and guess what, the addiction to houseplants is back and all I have to do is “keep them watered.” What is this semi-hydroponics trend? Semi-hydroponics is a method for growing indoor plants using a medium that is not bark, peat moss or soil. The difference between hydroponics and semi-hydroponics is that semi-hydroponics uses wicking action to take up nutrients and water held in a reservoir.

What medium is it and why does it work? It is an interesting methodology for those looking for a new challenge to grow plants. Living in Georgia should have given me all the knowledge I ever needed about clay, but this type of clay medium was news to me. It is called lightweight expanded clay aggregate, LECA for short. Clay is heated to an extremely high temperature where it forms air pockets. It is a strong yet lightweight porous puffed clay rounded stone that creates wicking action through a balance of air and water. LECA promotes the development of healthy roots by preventing over or under-watering of houseplants.



1 LECA

The first step for your semi-hydroponics challenge is to rinse and soak the LECA overnight so that you remove the dust and leech out the minerals. Fill your container about one-third of the way with LECA, then add the plant on top. (If taking a plant out of the soil, first remove as much soil as possible.) Add, shake and distribute more LECA covering the roots. Add water with nutrients to just below the roots. LECA is an inorganic medium so you will need to add nutrients such as a root growth stimulant, Superthrive or other appropriate fertilizer. The roots should not be sitting in water because the idea is that the LECA will provide the wicking action that is the magic of semi-hydroponics.

When I first tried semi-hydroponics, I made a mistake, and pass it on so that you will not make the same. I purchased clay pebbles instead of LECA. I thought the pebbles were a better size and aesthetic for my small glass vases, but soon found out that the air and water did not mix properly. Here is a picture of both, and happily, the new cuttings are all thriving now in LECA. (I am saving my clay pebbles for another day.)



2 Left-LECA; Right-clay pebbles

As for containers, I like to use clear glass containers because you can watch root development, however, glass containers may make your plant susceptible to bacteria and fungus if the water is not changed on a regular basis. A benefit of using LECA is the ease of use because you water less often, but with respect to glass, you will need to change or flush the water more often.

Another type of container to use has both an inner and outer pot for each plant known as a net pot (inner) and cachepot (outer). Although you can purchase these pots, they are also quite easy to assemble yourself. There are no holes in the cachepot, and holes around the inner net pot can be made about one-third of the way up.



3 Net pot (inner); cache pot (my water bottle, hahaha)

What are other growing tips beyond potting methods?

- Use of inorganic medium- As discussed LECA is an inorganic material and will not provide enough nutrition for your plants. You will need to add nutrients or consider a mixture of materials that include inorganic and organic matter.
- Water- Make sure you water regularly by *changing* the water and using distilled water. The flushing action will improve your plant's environment by creating air circulation to the deep zone of the roots.
- Spread of fungus and bacteria- Do not reuse water, pots or LECA without cleaning first, otherwise, you could spread bacteria and fungus to new plants.
- Temperatures- Understand the proper temperature for your plants and keep track of how quickly the water evaporates.
- Humidity- LECA may dehydrate your plant at the top of the medium because of larger pieces while the bottom layer stays very wet. Many have found that the wicking action of LECA works best in humid conditions where there is a better chance that wicking will work the entire way through the medium. Some have added sphagnum moss or stones to improve conditions at the top. A hygrometer with thermometer can be used to measure both humidity and temperature and can be purchased for around \$10.
- Water pH- Balance your water's pH level by using a nutrient solution called pH-Up or pH-Down. In general, the best pH range is slightly acidic 5.5-6.5, but you should find out the correct range for your plant.
- Nutrients-Superthrive can help the transition of the plant and reduce shock. Flora Grow, K-lite and Foliage Pro are popular choices for maintenance and growth. These are NPK fertilizers providing the nutrients for a strong root system and leaf growth.
- Light- Provide about 12 hours of light per day and adjust as necessary for your plant.
- Results-Happiness abounds with firm leaves, leaf growth, plenty of roots and blooms.

A list of plants for your semi-hydroponics project follows:

- African Violet
- Alocasia
- Anthurium
- Cast Iron Plant
- Croton
- Dieffenbachia
- Dracaena
- Euphorbia
- Ivy

- Hoya
- Monstera
- Orchid
- Peace Lily
- Peperomia
- Philodendron
- Pothos
- Schefflera



(Above are some ideas from Pinterest. The left picture shows the net pot/ cachepot with an orchid in LECA. The middle picture is a leaf propagation in LECA, and on the right is a picture of a plant in a glass dome that is not only beautiful, but a great way to increase humidity.)



4 This is happening! A new day for me and my African violets.

Be Well,

Linda Doiron

The Hokey Gardener



"It's
impossible,"
said pride. "It's
risky," said
experience. It's
pointless," said
reason. "Give it
a try,"
whispered the
HEART."

- Unknown