

Plant Propagation Workshop Notes – Jan 13, 2025

Hi everyone,

The Plant Propagation Workshop on Monday was well-attended and I think everyone had fun and learned a lot. Several asked if we could compile some of the information that was discussed.

We started our discussion with soils – both premade mixes and custom mixes.

Lisa: My favorite potting soils are Pro-mix and 707. I get both from [Grow Goods](#) in Sarasota.

I buy Pro-mix by the bail. It's a great peat-based mix with perlite to make it lightweight and mycorrhizae bacteria that colonize your roots and assist with absorbing nutrients. Pro-mix does not contain fertilizer. Pro-mix is a very dry soil and sometimes almost appears to repel water. I mix it with Roots 707 which has organic fertilizers and amendments that assist with wetting.

I find that many of the commercial formulas found in big box stores are so dense that they suffocate the roots. (Roots need access to air so they so not rot) The soil stays wet for too long and air can not penetrate. I use premade soils only when planting in pots because they are pricey.

When planting in the landscape, I start by embellishing the soil with peat moss (it lowers the pH), some of my homemade compost (created in galvanized garbage cans), and old potting soil (I have a big plastic garbage can in the back of my garden shed where I dump the soil from pots after plants are dead). I dig these things in before establishing a new bed and then mulch with bark mulch. (to reduce evaporation and keep weeds down)

Valerie creates her own soil mix for containers by combining peat moss, perlite, and vermiculite. She is also fortunate to be a Sarasota County Master Gardener and has access to their compost mix.

Deb raves about soil that she purchases from [Homestead Favorites Florida](#) located in Punta Gorda, a business that specializes in organic products. She purchases 5-gallon buckets of soil for \$5.00. If you bring your own bucket the cost is just \$2.00.

All of us discussed tailoring our recipes to the plants.

When potting up succulents, they generally need light, fast-draining soil so we add perlite and/or chicken grit... and sometimes sand. Be careful with too much sand because it is so fine, it can compact and cause suffocation of the roots.

We all put something in the bottom of the pot so soil does not drain out – a piece of screen, newspaper, leaves, coffee filter, etc.



Most potting soils have been sterilized so there are no insects or pathogens, however, if there's a small hole in the bag, even the best mixes can have problems with fungus gnats or fungus. (This is a warning: once you open and use a bag of potting soil, seal it well so nothing can get inside!)

Fungus gnat larvae eat the roots of your plants and can introduce pathogens. You might suspect that you have problems if your plants are not vigorous or the plant appears to be limp and in need of water but the soil is wet. Also, if you see small flies around the pots when you jostle the pots or water, you definitely have fungus gnats. The larvae themselves are invisible to the naked eye.

To avoid potential problems, I always water with Gnatrol the first few times after planting a cutting, transplanting a plant, or when I start seeds. If dormant fungus gnat larvae are in the soil, Gnatrol usually nips it in the bud. Gnatrol is a natural biological larvicide. Finding small quantities is sometimes challenging because it's a professional product often sold in large quantities. [Give it a Grow](#), a company that specializes in houseplant products has it in smaller quantities at a good price.

The humidity in Florida is the perfect breeding ground for many root and foliar fungi. I regularly rotate two products that deal with fungi in the soil – Root Shield and Actinovate. They contain two different strains of soil inoculants that deal with soil-born diseases. They work by colonizing the roots of the plant to resist disease. They both seem to have systemic qualities that assist the leaves from getting fungus as well. Both are available from [Arbico Organics](#), a company that specializes in organic supplies.

When it comes to insect pests on plants, Wendy, Valerie, Deb, and I all agree that the first line of defense is to use the least drastic means. Assess how serious the problem is. If a single branch has insects, their numbers may be reduced simply by hosing them off. Aphids, in particular, have difficulty getting back to the plant after they've been knocked off by a strong stream of water.

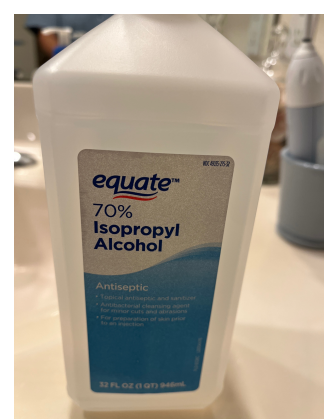
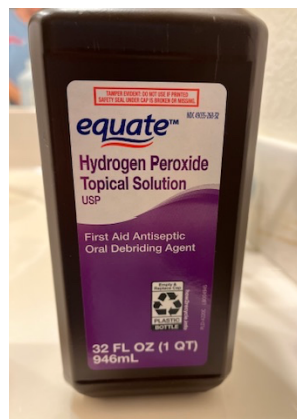
Check your garden plants regularly. It's easier to deal with a few insects than a full-blown infestation.

Learn to identify insects – all stages. Sometimes, a caterpillar eating a plant is the larval stage of a beautiful butterfly that you want! When we grow pollinator gardens, we want to grow flowers for the butterflies and leaves for the caterpillars. If you can't stand to see the damage, locate your pollinator plants in a less visible spot.

Good point from Wendy: If a plant consistently has insect damage you can't tolerate, get rid of the plant! It's not worth it!

Deb talked about her arsenal of tricks which includes hydrogen peroxide as well as rubbing alcohol that she keeps at the ready in spray bottles. Hydrogen peroxide is well known to kill insects and their eggs on plants and in the soil. She sprays it in pots and work surfaces for a few days to sterilize.

She also sprays rubbing alcohol on her pruning tools between cuts to sterilize them and avoid the spread of disease.





There comes a time when we must deal with insect damage to save a plant. We advocate using organic controls that deal with the insects at hand, are quick-acting, do not have a long-term residue, and are not biomagnified in the environment.

While many insecticides are available in ready-to-spray bottles, they're also expensive. It's so much more economical to purchase concentrates. You can purchase most at [Arbico Organics](http://ArbicoOrganics.com).

Insecticidal Soap (Safer is a popular brand) coats insects and works by dissolving their exoskeletons. It will also kill larvae and eggs by smothering them. I recommend against using dishwashing soap because it may also contain solvents to cut grease which can damage leaves. Insecticidal soap works very well on aphids and mealy bugs.

Pyrethrum – (Pyganic is the concentrated professional strength) is a great, general spectrum insecticide that can deal with a *wide variety* of insects in many stages. It's also known to have repellent qualities that can be a bonus to keep insects away. It's my go-to insecticide that I always have on hand.

Neem Oil kills a wide range of insects and is purported to reduce fungal diseases. It appears to have a residual repellent effect. I know it is widely used but I hesitate to use it on plants that grow in full sun locations because it is an oil.

WARNING: Spray all insecticides late in the day, early in the morning, or on very cloudy days. Never spray plants with insecticides on a bright sunny day. Insecticides often have an oily residue that coats leaves (and insects) but, that residue can act like a magnifying glass and subsequently cause your leaves to be damaged.



Liquid copper is a good fungicide to spray on leaves. It's available at Lowe's and Home Depot.

Most palm trees that are not native to Florida exhibit yellowing as a result of poor nutrition. If you want nice green leaves, you must fertilize – period! And it takes a while to make a yellowed tree green. The yellow leaves will not turn green again. After consistent fertilizing, only the new growth will start to exhibit dark green leaves. That said, it's important to start fertilizing soon after a palm tree is planted and a few times a year going forward.

PALM TREES NEED SPECIAL FERTILIZER. You will not be successful with general-purpose Miracle Grow or 10-10-10 chemical fertilizers. If anything, you may cause more problems. You need fertilizer that is formulated for our sandy, salty soils and contains the micronutrients that are lacking in Florida soils. There is only one fertilizer recommended by the Florida Master Gardeners:

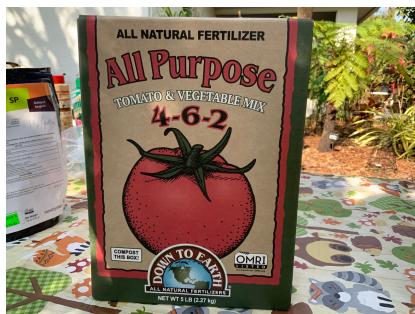
LESCO Palm & Tropical Ornamental 8-2-12 CRN Micros 4% Mg 9.06% S 3% Mn 2% Fe 0.05% Zn
It's a granular fertilizer that is only available in a 50 lb. Bag. If that's too much, split it with a friend. In our area, it is only available at Site One Landscape Supply, 1464 Market Cir., Port Charlotte. This is a warehouse that sells to landscapers. Don't be put off by their appearance. They are more than willing to sell to informed gardeners.



Lesco Palm Fertilizer is a slow-release fertilizer. Application rates are listed on the packaging. You can use this on all tropical plants. I spread a 50 lb. bag in all my garden beds - spring and fall.



Chelated Palm Nutritional can be sprayed on palm trees and watered into the soil. It is supposedly more quick-acting than granular fertilizers. There's controversy about which strategy is best. My understanding is that leaves do not absorb nutrients efficiently and it is best to apply soil drenches. Both formulas are on the label.



I only use organic fertilizers on my containers of vegetables. This is one brand available from Grow Goods in Sarasota. They carry several other brands of organic fertilizers.



When a plant has been well-fertilized but still appears to be yellow, I apply iron which is not readily available in Florida's alkaline soils. Iron is quick-acting and you will see results fast. Caution: iron will stain driveways, sidewalks, and clothing. Use with caution.



I use Dynamite time-released fertilizers in all my containers. The green bottle has more nitrogen (first number) so is best for foliage plants. It can be found at Home Depot and Lowes. Seek out the "Florida" formula which contains micronutrients and is formulated to deal with the heat of Florida. I create small sachets or teabags with sheer fabric and tie them near my orchids so that when it rains, they get a little bit of dissolved fertilizer.