

Home and Backyard Orchid Growing – Going Green(house)

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Most new orchid growers are focused on the culture and preservation of their freshly acquired loved ones. We have all been there, starting our collection with great anticipation and desire, making sure that the orchids receive the perfect amount of light, water and are planted in the best media possible. Some of us still are. It is not until we enthusiastically outgrow the space allotted, whether it is inside the house, porch or window shelf, that greenhouses are brought to the table.



Some of us cringe when we hear the sound of constructing a greenhouse. Some think that it's too hard, too expensive, or the upkeep is too much to handle. Buying a greenhouse kit makes it a little easier, but takes out a lot of the custom work. In Florida, we do not necessarily need a fully enclosed greenhouse, but a shade house that we can winterize for the colder temperatures.

Unless you live on a good amount of land that is not governed by a homeowners association (HOA), there are rules that you have to follow. You should always check with your HOA as well as your local building codes to ensure that you do not break any laws or upset your neighbor. Many HOA's require you to have some kind of plans as to what type of structure that you will be building and where it will be placed on the property. Also, they might want to know what kind of material will be used to build the structure. In my case, I had to lower the structure about a foot. Most materials will be either metal, which will not rot and last many years, or wood, which will be cheaper and easier to fasten together.

BREAKING GROUND

After you have checked with your local building codes and received approval from your HOA, if necessary, you'll be able to break ground for the wonderful sanctuary to grow all your plants in. There are many materials that you can use for the 'flooring' of the greenhouse.



Aggregate or pavers are the usual types of flooring for any greenhouse. Before one would go about putting down the flooring, you will want to prep the site.

First, to get rid of any vegetation, you will want to rent or borrow a tiller and till up all vegetation in the specified spot where the greenhouse will sit. Tilling will make removing vegetation, i.e. grass or weeds, easier to

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remove. I would recommend going at least three feet outside of the actual area where the greenhouse will be placed to ensure that no vegetation will grow into the structure itself. After tilling the ground and removing the vegetation, you need to level out the ground as best as possible.

Once you have leveled out the ground to your satisfaction, you will want to install some weed cloth to ensure that no vegetation, that

you just painstakingly removed, will grow back. Weed cloth typically comes in different colors and grades. The main thing you will want to do is choose a cloth that will give you the most protection. Typical weed cloth will come in 5-30 year increments and can be purchased at your local big box stores. After you have the weed cloth all pinned into place, and have decided on the type of flooring you'd like, it is time to call and place the order.

For most of the aggregates and pavers that one might use for the flooring of their greenhouse, it is best to call a business that specializes in that particular product. I would not recommend going with the big box stores. They are typically overpriced and do not deliver like the specialty stores do. There are difference types of aggregate that you can choose for the flooring also. I decided to go with #98 lime stone for my floor material which is 1/2"-1". Lime stone can be bought in different sizes from fine to coarse. You don't want to use the fine lime stone unless you plan to put down pavers as your flooring material. If this is the case, a contractor or handyman is recommended due to certain issues with leveling and spacing.



CHOOSING A FRAME

A metal structure will last longer and a wood structure will cost less. You can even use PVC as a frame. Whichever material you plan to use, there are different kind of frames to construct. From rigid frames to loop houses. Make sure that you pick the right kind of frame that will fit your needs. The most popular frame type and the type that I decided to go with is the rigid frame.



The rigid-frame structure has vertical sidewalls and rafters for a clear-span construction. There are no columns or trusses to

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support the roof. Metal gussets connect the sidewall supports to the rafters to make one rigid frame. The conventional gable roof and sidewalls allow maximum interior space and air circulation. A decent foundation is required to support the lateral load on the sidewalls.



I had acquired a metal carport frame a few years ago, so I decided to use it as my structure to save on cost (I did not pay anything for it). It was, for the most part, a perfect fit for what I had wanted. There were some things that I engineered to make everything fit better and with no cutting.

Since the frame was not as rigid as I would have like it to be, I made some more modifications to it by taking some self tapping screws and adding some horizontal pieces to the legs of the structure itself. To go a step further you can install more horizontal prices to the underside of the roof. Not only will this make the structure more rigid, but will create space to hang mounts, pots, or other items such as irrigation from. Once the frame of the greenhouse structure is completed, we need to decide what the sides and roof will consist of.

WALLS AND ROOF

I have been blessed to visit a few greenhouses in Florida and picked the brains of the owners as well. Most of the places I have visited have used some type of hard walls for the sides of their structure. As others that I have seen before, I decided to go with ribbed metal lathe. Ribbed metal lathe is available at any stucco supply company. Typically, it is used for installing stucco on the ceiling. The ribs on the lathe make it a lot more rigid and sturdy compared to the other metal



lathe that you will find in the big box stores for installing stucco on walls. Also, the openness of the lathe allows the breeze to move through the greenhouse compared to solid walls.

For the roof of the greenhouse we first installed aluminum that is formed like a U. This U-channel was available from a greenhouse supply store down south around Orlando, FL. I used self tapping

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screws to attach the U-channel to the metal poles of the structure. After installing the U-channel, I then draped my UV treat poly cloth over the structure and then fastened into place by inserting wiggle wire into the U-channel that is specifically made for that product. Having the poly cloth, which is just a thick, ultraviolet treated plastic, on the roof allows for any afternoon rain storm from dumping any water on your plants. This allows a strict schedule for water by an irrigation supply or by hand. Once you're roof is on, you will want to install some kind of shade cloth. I decided to go with a 50% aluminet shade cloth so it will reflect some sunlight and help preserve my poly plastic that I used for the roof. The good thing about the channel that we installed to fasten everything together is that you can install a couple of wiggle wires into each channel.



By now, you are probably thinking about what to do come winter. All we will have to do is install some more plastic over the metal lathe and to the front and rear of the greenhouse via the channel that has already been installed. There are many ways to heat the greenhouse also. One way to heat is by an electric or gas heater. Another is by using some irrigation on the

underside of the benches running at night so the constant 72-74 degree water will warm up the ambient temperature inside the greenhouse.

WATER AND ELECTRIC

Having water and electric is a necessity for a greenhouse. Most of the time running both of these is a lot easier when done before laying the aggregate or flooring.

This way you can run all the pipes and not have to disturb whichever flooring you decide to use. It is not necessary to have a complete irrigation on a timer, but it does help. You can always hand water your plants. As for electricity, I recommend going with a contractor that specializes in that field. Nothing is worse than getting a jolt of 220 volts through your body and can be quite damaging even deathly if done incorrectly.



BENCHES

Setting up the inside of the greenhouse is one of the many important things. With limited space, layout of the plants is going to be key. Some use multi-tiered racks while others use single wide racks. As the frame of the house, you can go with metal or wood. There is also the opportunity of going with pre fabricated racks instead of building your own. By building your own racks you have the chance of making small changes to make

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more of a custom fit. Be creative! I installed a sink in my greenhouse to make potting easier and to wash up after spending many hours in the greenhouse.



In closing, while building a greenhouse is fun and very exciting, many tools are used in building this dream house for the 'chids. Always wear protective gear so that you keep all of your body parts. Make sure you call before you do any digging so electrical and phone lines are not disturbed. Have a plan and stick to it. If there are any doubts in the plan, fix it up front and then go on about building.