

HYDROPONICS SYSTEMS Q&A

What hydroponic system do you guys like the best?

We get asked this question A LOT and we definitely have to say that we like drip systems the BEST. They are easy to use, easy to clean, and they produce consistently great results time and time again. Drip systems provide tons of oxygen to a plant's root system and contrary to popular belief, they do not clog up that easily as long as they are built properly. (Please inquire as to how to properly build your drip system.) Along with the fast and healthy growth you will see, drip systems are very versatile. They can be run using any type of grow medium, ranging from coco coir to rockwool, to HydroCorn grow rocks. Even in a specialty soil based medium.

Remember in any type of system which uses a medium other than grow rocks, (such as HydroCorn or silica stone,) one must make sure the medium (soil, coco, peat, rockwool, etc.) goes from wet and "heavy" to barely moist and "light." Aeration and drainage are of critical importance if you want your plants to thrive!

What is the ideal watering cycle for VidaWool Block 190 (6x6 rockwool) cubes? With or without 3 ft. rockwool slabs?

This is another very common question for us. Rockwool has really made a comeback in the last 10 years with the emergence of the new 6x6 VidaWool cube of wool. Again, what is most important is that rockwool goes from "wet" to "barely moist" before it is watered again. The most common mistake with rockwool (and what generally is responsible for its 'bad rep') is that it is over-watered. Rockwool holds about 80% water and 20% air when oversaturated and needs to dry out (similar to a soil-based medium) before it is watered again. In an ideal environment, VidaWool rockwool blocks generally need watering once a day in the vegetative growth stage and twice a day in the bloom stage.

If slabs (we prefer 8" expert slabs that are 3ft. long) are to be employed with VidaWool (6x6 cubes) then you will want to make sure that once the roots have grown down into the slabs that both the cube and slab go from wet to barely moist before being watered again. Again, in an ideal environment the slabs and cubes will be watered once every other day in the vegetative stage and once a day in the bloom stage.

What is extremely important to glean from all of this is that rockwool REALLY needs to go from WET to BARELY MOIST before it is watered again. So, even though we just provided a neat watering schedule for either cubes, or for slabs and cubes (all grow spaces are different), this will NOT work unless your medium goes from wet to barely moist again between waterings. Also, make sure you do not squeeze the 6x6 blocks or the slabs—if you do, the absorption of water is decreased and less uniform. Make sure that rockwool doesn't dry out completely. Rockwool should be barely moist (not dry) before it is watered again.

Is drain-to-waste really that much more expensive than running a recirculating system?

Drain-to-waste provides more control over your plants and helps to prevent diseases. A common concern is that a drain-to-waste system will waste too much nutrient due to excessive amounts of "waste run-off." This is simply not the case. A dialed in drain-to-waste system will only waste 10-15% of the fed nutrient solution as run-off. An example of this is as follows: A given garden uses 5 Gallons of water to feed all the plants. The waste run-off will only be $\frac{1}{2}$ to $\frac{3}{4}$ of one gallon of solution. If using drain-to-waste with coco, soil or rockwool, the frequency of watering is down to a minimum (usually once a day or once every other day.)

How often should I water my plants in my hydroponic system?

How much you need to water depends on three things: the type of plants you're growing, the size of the plants, and the type of medium you're using. The first thing to decide is if your grow medium retains or repels water. You'll want your medium to dry out from wet to barely moist between waterings, so if you are using a medium that holds a lot of water, you'll need to water less frequently. If you are using a medium that retains almost no water, you must water more frequently. Keep your eye on your plants before and after watering, watch for signs that they need more or less water. Change your watering slowly as needed to reach the optimum watering schedule.

Most growers choose to control irrigation with a timer. A typical schedule with HydroCorn grow rocks in a drip system would involve a watering cycle set for 15 mins ON and 15 mins OFF all day (for the plants daytime light cycle). But the duration and frequency of watering cycles varies from one system to another and is dependent on the crop, the plant size and environmental conditions.

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How long should I water my plants in an ebb & flow system?

In an ebb & flow system, you are flooding a tray with nutrient solution to feed your plants. The roots are basically underwater for a short period of time. You don't want to keep the roots flooded for too long or you'll risk drowning them. Here's what we suggest: water just long enough to completely flood your tray and then let the system drain. Most timers are set for 15 minute increments or less. The shorter the amount of time to fill the tray and reach the overflow level the better. We want the roots to be fully submerged in water for as little time as possible—living primarily in an air based (oxygen rich) environment for as long as possible.

What is the difference between aeroponics and hydroponics?

Aeroponics is a form of hydroponics. In aeroponics, the roots of the growing plants are suspended in the air and are misted by high pressure sprayers. The sprayers break the nutrient into small particles and saturate the roots. The levels of oxygen in the water are kept high by the constant circulation of the water. Experiments with aeroponics have shown that plants can grow up to 50% faster than in regular hydroponic systems.

How often should my pump run for a NFT or aeroponic system?

In these systems where there is no growing media to hold any moisture, the roots can dry out very quickly. Watering cycles need to be frequent and it will be up to you to determine what that takes. Some NFT growers leave their systems on continuously. To be safe, you could begin watering every half hour and ease off until you find the perfect point. Most growers opt for 1 minute on / 5-10 mins off.

What is the best system for growing lettuce?

The 'best' way is for you to decide, but many commercial lettuce growers choose to use NFT systems for a variety of reasons. A few of these are as follows: NFT is less labor intensive than some other kinds of systems, as there is less grow media to deal with (that also makes it less expensive to produce lettuce,) The systems are easy to clean, and finally, the style of NFT growing is well suited to the quick growth and frequent harvesting of lettuce.

How is capillary matting used in a hydroponic system?

Capillary matting is an inactive sheet of growing medium which retains and distributes water evenly. It is often used with potted soil plants as a way to bring water to plant roots. The capillary action of the mat draws moisture up to roots for a constant supply. Plants draw only on as much water as they need. Capillary matting is often used in NFT systems to ensure that young plant roots receive enough moisture and nutrients.

I started my tomato seeds late. Will hydro-gardening help speed my growth or increase my yield?

Hydroponics is a great option for tomatoes and produce excellent fruit. One of your best choices is to use something like the WaterFarm to grow the tomatoes in from seed to full bloom. However, we recommend that you chose one or another soil for hydroponic growing, it's what's best for the plant. Since you're starting these a little late what will really help you is light. We suggest you try giving the plants some strong fluorescent light such as the T5 until they are about a foot tall and that will help them catch up. Hydroponics is known for producing some really great tasting fruit and vegetables and if you're looking to get involved with it we highly recommend it. Take some time to research about hydroponically grown fruits and vegetables online.