X-Aponic's

Cleaning and Maintenance Manual

How to take care of the system

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Having an aquaponics system is a great way to help you become self-sustainable and grow your own fish and produce of your choice. However, to keep it running smoothly and healthy you will need to regularly clean it and keep it balanced. Below is a list of weekly maintenance that need to be completed to keep your system running well.

Checking Ph

Checking the water's Ph is determining the acid and base levels of the water. To keep the fish, plants, and bacteria healthy, water Ph of 6.4 to 7.4 is the ideal range. For best results a Ph of 6.8 to 7.0 is recommended. If the Ph gets too low, add a base consisting of calcium hydroxide or potassium hydroxide.

> Achieve the greatest volume and highest quality of produce possible, while reducing operating costs, and maximizing your profitability by growing smart.
>
> —**Tom Blount**, Expert at US Hydroponic Association

Adding nutrients

An aquaponics system is generally self-sustaining; however, it is recommended to add an ounce of chelated iron and seaweed to the system once a week in order to help your plants grow. Most fish food does not contain enough iron to help your plants grow, and seaweed is very nutrient rich for the plants as well.Adding an ounce of both once per week provides the system with nutrients it needs to succeed.

Checking Ammonia, Nitrates,and Nitrites

It is not a shock to most people that plants need water and sunlight in order to survive. If you're interested in aquaponics, you also have to be aware of another necessity, nitrates. In order to get nitrates, ammonia needs to be converted into nitrites that then turn into nitrates. Ammonia levels should be under .225 ppm. Nitrites are very toxic for fish and plants and therefore should be as close to zero as possible. Nitrate levels should consist of being 150 ppm or a little lower at all times.If ammonia levels are too high, this concern can be addressed by how much you are feeding the fish.If levels are too low, the amount that you are feeding your fish must increase. To adjust the nitrates, assess the amount of plants or harvested fish. Adding more plants or removing fish will help with this problem.

Final Cleaning

Last but not least, cleaning is a very important step in providing your aquaponics system a good grasp at succeeding. So how do you clean sufficiently? Well you're going to want to make sure that no algae is growing anywhere, along with making sure no buildup of any kind is on the pump's surrounding area or any of the piping. If you have an ibc tank you will also want to clean the filter. To do this you will want to turn the pump off and detach the pump, take the mesh filter out and spray it off with a hose. Next, empty the dirty water into your other gardens. Then, reattach everything and turn the pump back on. If you then have a significant water level drop in your tank then add water back into the system. ***(DO NOT FILL DIRECTLY WITH HOSE WATER)*** *Instead, fill a 5 gallon bucket up with hose water and let it sit for a week. This water can then be added to the system and be safer for the fish.*