

Hydroponics at Home

Hydroponics is a great way to enjoy fresh fruits and vegetables anywhere! Just keep in mind a few simple things, and you'll be on your way to growing your own fresh produce today!

With hydroponics, you get to be in control of all the plant's needs. Make sure yours are getting:

- Light... 6-8 hours per day
- Water
- Nutrients...plants need food too!
- Air... even the roots!
- Support

Getting Started

You can build a hydroponic system from just about anything! Use what you have at home, or follow these examples to start your own hydroponic garden.

Vertigro



Raft or Deep Water



Dutch Buckets



Almost anything can be grown hydroponically, if the right conditions are met. Great plants to start out with are lettuce, spinach, kale, and herbs.

Plants should be started in a hydroponic medium such as coconut coir, perlite, or rockwool. These are available from a hydroponic retailer.

Setting Up A Hydroponic Grow Tank



Materials

- Aquarium, bucket, or container to hold water
- Air stone
- Nutrient solution (see below)
- Styrofoam board
- Rockwool or coconut coir (available from a hydroponic retailer)
- Seeds
- Litmus paper or pH meter
- Sunny space (or grow light)

Instructions for assembling a hydroponic grow tank

- 1) Seeds should be started in hydroponic media in advance.
- 2) A container with clear sides should be covered to prevent algae growth. Leave the top uncovered.
- 3) Measure your tank and cut your Styrofoam board to fit loosely inside the tank. Leave some room on the outside so the piece floats on the water.
- 4) Connect the air bubbler to the pump and insert check valve to prevent backflow. Insert the air stone into the bucket, leaving the pump outside. Pump should always be placed below the water line in the bucket.
- 5) Fill your tank with water and mix in nutrient solution.
- 6) Turn on the air bubbler and place it in the tank with the nutrient solution.
- 7) Position your premade Styrofoam board in the tank so it floats on top of the nutrient solution.
- 8) Insert the rockwool cube containing the seedling into the Styrofoam board. Be sure the bottom of the cube extends beyond the board so it can absorb the nutrient solution.
- 9) Enjoy watching your produce grow and harvesting some great fresh produce!

Nutrient solution

Pre-formulated nutrient solutions are available from several suppliers. An Internet search will locate the closest one in your area. Do not use soil amending fertilizers. These will not provide the right form of nutrients for your crops. Nutrient solutions can also be created using fertilizer salts, compost teas, or fish excrement.

Tips

- Wet down the rockwool before planting. There is no need to cover the seeds, just place them in the holes and watch them grow!
- Before transplanting, check the seedlings for an established root system by gently lifting and checking the bottoms of the rockwool cubes for the presence of roots.
- Keep pH around 5.8 - 6.2 for optimal growth. pH testing can be done with litmus paper or a handheld pH meter. Lemon Juice, or pH Up and pH Down plant solutions are available for pH correction. Check online or at a local hydroponic retailer for these amendments. Monitor weekly and make the necessary adjustments.