



How to Make a Simple Homemade Aeroponics System

The main problem I have always had with building a homemade aeroponics system is the clogging spray nozzles. I was in a hydroponics supply store the other day when it occurred to me the aeroponics system I was looking at did not use any spray heads. As I looked over the new hydroponic gardening system, I marveled at how simple the design really was. With the right pump and correct assembly, the following homemade aeroponics system is relatively problem free.

There are four main parts to this simple system. There is a 20 gallon (75 liter) reservoir. There are several channels 4 or 6 inches in diameter and several feet long. Every 6 or 8 inches there is a hole drilled into the channel to accommodate a plant. The channels are pitched to allow drainage back to the reservoir. Next is a 1/2 inch line, run down the center of each channel and capped at the end. All the lines are connected at the other end by a manifold. Finally, the manifold attaches to a pump. At any point along the 1/2 line where spray is desired a 1/16 inch drill bit is used to cleanly make a small hole (usually one between each plant site).

First, 1/2 inch PVC is cut to length and capped at one end. Spray locations are marked and drilled into the 1/2 inch PVC. A 1/2 inch line is run through the length of each channel, which is made from 4 or 6 inch PVC. The line is held in place by drilling two small holes and fastening a zip tie every few feet.

One end of each channel will have to be sealed with an end cap. The other end may be sealed or left open, depending on how drainage back to the reservoir is to be accomplished. 2 1/2 or 3 inch holes are cut every 6 to 8 inches in the channel to accommodate netted pots (or other planting containers).

At one end of the homemade aeroponics system, the 1/2 inch lines elbow out of their channels and are joined together by a series of "T" fittings. This is known as the manifold. One end of the manifold is left open to connect to the pump. Your pump may be an external pump or you may use a submersible pump. Either way, the pump needs to be able to deliver a water pressure of 45 to 60 psi to each of the 1/2 inch lines coming from the manifold.

Finally, any large, cheap, plastic storage tote may be used for the nutrient reservoir. A homemade aeroponics system with 24 to 36 plant sites would require a 20 gallon (75 liter) reservoir. It is always best to choose a dark tote, to keep as much light from the nutrient reservoir as possible. This will prevent algae growth and therefore help prevent fungus gnats. Whenever constructing a homemade hydroponics system you should always use PVC, and not CPVC. CPVC is known to slowly leach harmful chemicals. To prevent leaks, be sure to use PVC cleaner on all parts BEFORE you apply PVC glue and join the parts.

With systems becoming this simple, it is no surprise many people are interested in the faster growth rates aeroponics has to offer.

Bonus- learn how to make an aeroponics cloner

<http://www.jasons-indoor-guide-to-organic-and-hydroponics-gardening.com/homemade-aeroponics.html>

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