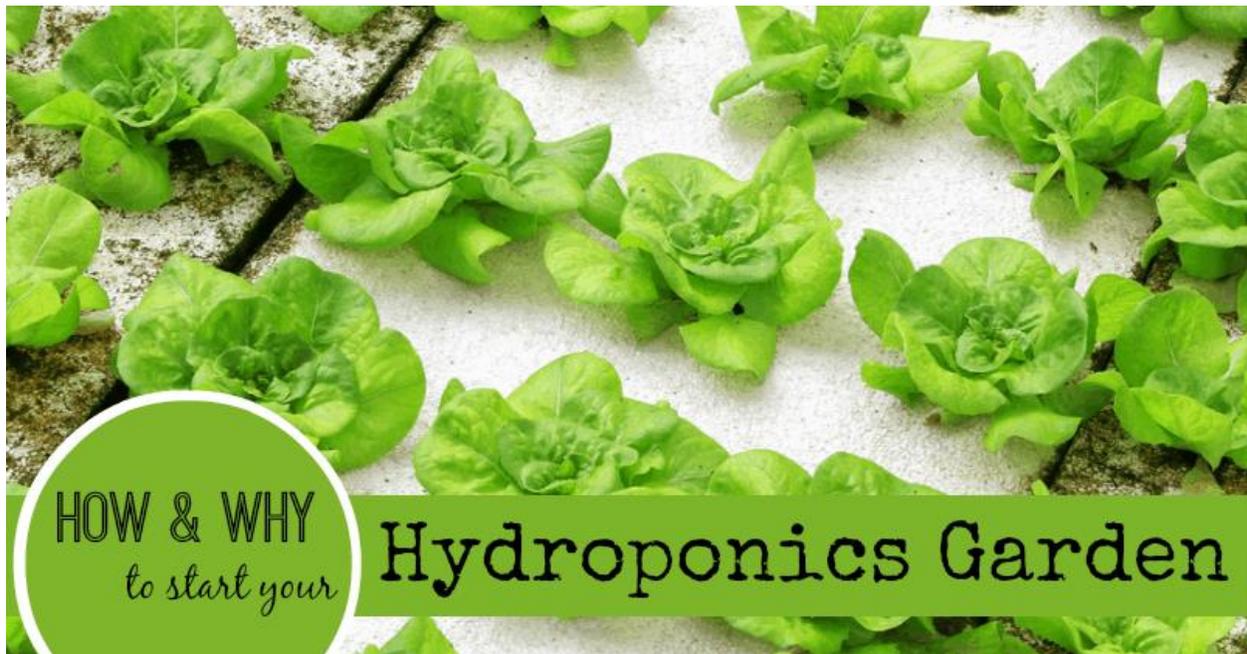


## How and Why to Start Your Hydroponic Garden

Chris Wimmer



Today I am thrilled to have Chris Wimmer of Healthy Smart Living guest posting for me today! Chris is a urban homesteader who uses hydroponics to make the best use out of his small spaces. I think you'll enjoy learning from his post as much as I have!

This is my homestead and it provides me exactly 440 square feet of outdoor space. I truly feel blessed to have that much space as I live in downtown Chicago. However, it's also a major downsizing from my childhood where I worked on a farm and lived on a couple acres of land.

Over the past couple of years, I've started using hydroponic growing techniques with some really good results.

Now before I get ahead of myself let me now explain just what is hydroponics. **Hydroponics in Latin literally means "working water"**. The reason the water is called working is because hydroponics does not use soil to feed the plants but rather a nutrient rich solution which is continuously flowing to the plant roots. Many different types of systems have been developed but the one commonality is growing without soil.

## So why use hydroponics and what are the benefits of using hydroponics over a traditional garden?

- Increased crop yield
- Faster growing cycles
- Can be done indoors
- Surprisingly cheap
- Reduced labor
- Environmentally sound

For me, there are 2 main reasons I use hydroponics for my homestead. First, I can raise bigger crops faster which is critical with limited space. Second, I can extend the short growing season in Chicago by setting up a winter garden in my spare bathtub.

This can be one of the biggest challenges of trying anything new so I'm going to quickly walk you through how to get started with a simple hydroponic system. This system is simple yet effective at growing crops. You can follow this step by step or use it as a guide to create a system that is right for your situation.

The system is technically called a deep-water culture system but I prefer to call it a storage tote system for reasons that will become pretty obvious.

### Supply list:

- Plastic tote
- Air stone
- Air pump
- Tubing
- Air tube clips
- 2" hole saw with guide bit
- 2" net pots
- Clay pellets
- Rapid Rooter plugs ([buy them here](#))
- pH Control Kit (I use [General Hydroponics' Ph Control Kit](#))
- Hydroponic nutrients (I use [GH's Floraduo A & B](#))
- Seeds of choice

**Note about hydroponic supplies:** Be creative and use what you have around your home. Aquarium supplies make great supplies for hydroponics.

### Step 1: Create the planter

- Drill the 2" holes in plastic tote lid

TIP: I like to cut one addition 'access hole' so I can test the water and adjust during the growing season without opening the entire tote.

## Step 2: Preparing the reservoir

- Fill the tote with water leaving about 2-3 inches of space. This should allow the bottom of your net pots to touch the water but not be completely submerged
- Add the nutrient solution according to the directions on the bottle
- After 30 minutes test the water's pH and adjust according to the pH control kit directions

TIP: Most plants like a slightly acidic environment so target a pH of 6 to 7.

## Step 3: Aeration system

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- Drill a hole above the water line to allow the tubing to pass through
- Attach the air stone and secure the tubing inside the tote with clips
- Attach the air pump to the opposite end of the tubing outside of the tote

TIP: Plug in the air pump and ensure everything is working. It is much easier to trouble shoot before planting.

## Step 4: Planting

- Moisten Rapid Rooter plugs by soaking them in water for 30 seconds
- Place net pots in pre-drilled holes
- Put one Rapid Rooter in each net pot
- Drop 3 seeds into each plug to ensure at least 1 germinates
- Fill in the extra space with clay pellets

### Key Steps during the grow cycle:

- The seeds should sprout in about one week
- Maintain the water level to always touch the bottom of the net pots
- Test and add any required nutrient according to the label each week

## Plant recommendations:

This system can accommodate many types of plants but herbs and lettuces are great first crops. If you want to try something that will grow a bit larger just plan to add some trellis supports much like you would for peppers or tomatoes in a traditional garden.

So that's it! Welcome to the world of hydroponics. I hope you take the plunge and try. It's become a fun hobby for me which also provides a cheap source of quality food.

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