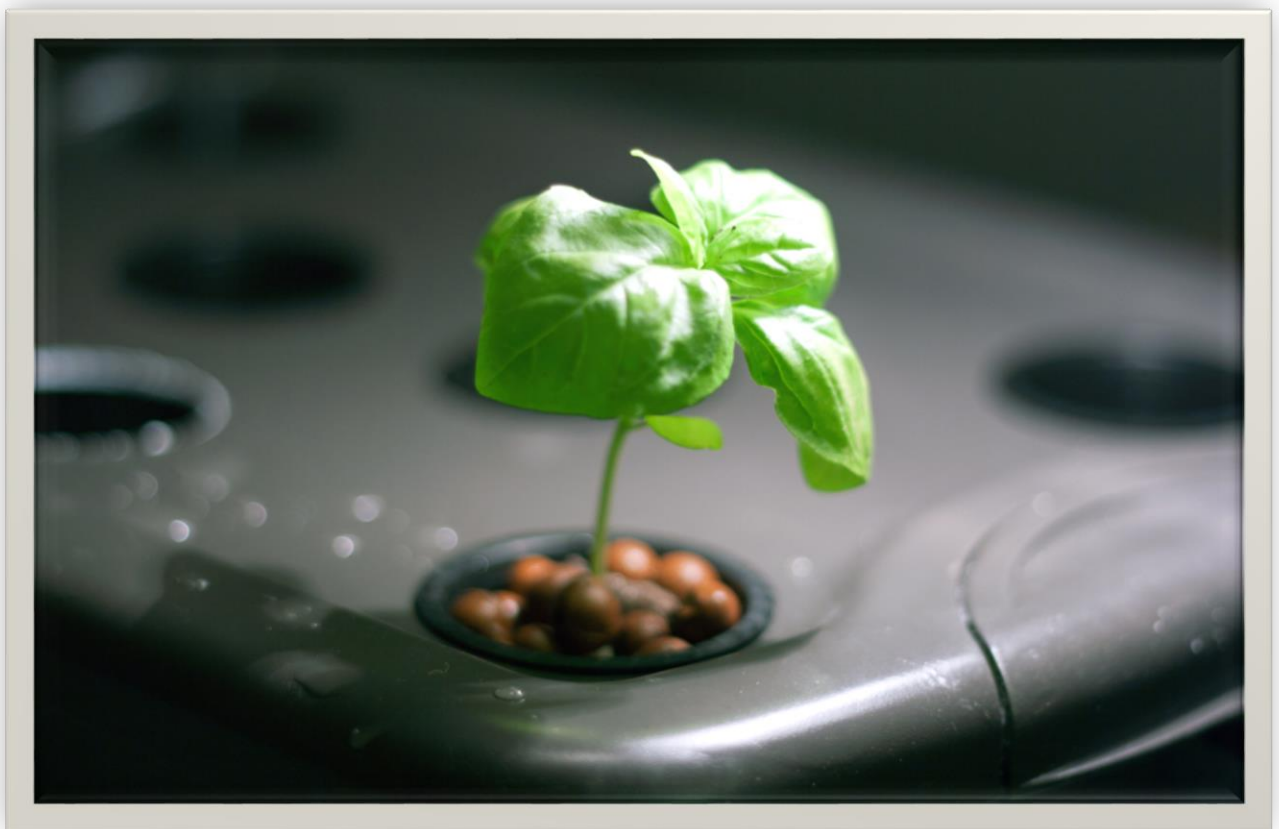


Hydroponic Herb Garden

Fresh Herbs Year Round For Practically
Free

By Epic Gardening



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INTRODUCTION: THE HERB HASSLE

I'm willing to bet that you love using fresh herbs in the meals you prepare for yourself and your family. Herbs are a fantastic way to add flavor and zest to any dish imaginable. Most of the time, we settle for dried herbs for a couple of reasons. First, dried herbs save money. Fresh, organic herbs are expensive! Additionally, if we buy fresh we might not use all of the herbs and our money will go to waste.

If you do decide to buy your herbs fresh from a grocery or farmer's market, they are going to cost you. A pre-packaged container of fresh organic basil can cost up to \$3.99 at most grocery stores. Other popular organic herbs like chives, thyme, rosemary and oregano all cost around the same amount.

Price isn't the only concern. One of the strangest things about buying organic herbs is their plastic packaging. Almost all of the companies that sell organic herbs use plastic disposable packaging. I might be on my own here, but part of the reason I buy organic is to tap into a more natural way of growing and consuming food. Plastic doesn't fit into my picture of organic food very well.

If you decide not to buy organic you will certainly pay a cheaper price, but you won't be able to guarantee the quality of the herbs. Because we don't eat huge quantities of herbs in one sitting, the flavor is extremely important. We use them to delicately flavor our food, so buying herbs that aren't grown in the best of conditions will only harm the flavors of your dishes.

CHEAP, FRESH HERBS YEAR ROUND

Wouldn't you love it if you had a source of fresh herbs throughout the year? You're in luck - that's why I've created this guide! In my posts at xPonics I like to focus on growing plants in easy, affordable and unique ways. I've decided to put together a **Mini Hydroponic Herb Garden** plan for all of you who wish you could have fresh herbs year round but don't know where to begin when it comes to growing your own.

The goal in this guide is to make it as cheap and easy as possible for you to construct your garden using materials you can find at most home improvement and pet stores. I want to make the use of herbs in your kitchen a more dynamic process. From seed to sprout to harvest, I'll teach you a way to build and maintain a hydroponic herb garden that **thrives**.

MATERIALS

The plans that I've included in this eBook are designed for an eight-plant herb garden. If you want to expand it, feel free to do so - there's plenty of room to grow more herbs. Eight plants allow you to grow a lot of different types of herbs. Basil, sage, oregano, thyme, parsley, chives, tarragon and cilantro are among the most popular herbs, but they aren't mandatory by any means. Plant whatever you like in your garden, as long as it isn't an herb that grows to a massive size.

The entire shopping list comes out to around \$80 or so depending on where you get your materials. That might seem like a lot of money to start out your garden but remember - you'll be harvesting fresh herbs year round. In basil alone you're saving yourself at least \$50 by growing it yourself!

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SHOPPING LIST

Feel free to print this page out and take it along with you when you head out to grab your materials. I've tried to make it as easy as possible for you to locate everything. Read on for a detailed breakdown of what each item does for your garden.

Category	Item	Amount	Location	Price
Reservoir	Plastic Tote	1	Amazon / Home Depot	\$5.50
	Spray Paint	1	Amazon / Home Depot	\$7.00
Air Supply	Round Airstone	1	Amazon / Pet Store	\$6.00
	Air Pump	1	Amazon / Pet Store	\$12.00
	Airline Tubing	1	Amazon / Pet Store	\$3.50
	Airline Tubing Holders	2	Amazon / Pet Store	\$3.50
Nutrients/Water	pH Testing Kit	1	Amazon / Pet Store	\$8.00
	General Hydroponics FloraGro	1	Amazon	\$12.00
	2" Net Pots	8	Amazon	\$4.00
Growing Media/Plants	Herb Seeds/Seedlings	8	Home Depot / Garden Store	\$10
	Aquarium Gravel/Hydroton/Perlite	1	Amazon / Pet Store	\$5
Optional	2" Hole Saw bit w/ pilot bit	1	Home Depot	\$15
Total				\$76.50
Total w/ Drill Bit				\$91.50

If you're looking for a one-stop shop, feel free to go to the Epic Gardening store and click the "Hydroponic Herb Garden" category. Everything you need is listed there for you:

[Go To The Epic Gardening Store](#)

Materials Breakdown

PLASTIC TOTE



Price: \$5.50

Location: [Amazon](#) or Home Depot

A container of some kind is needed to house the water and nutrient mixture. It's important that this be opaque, because any light that enters the reservoir has the potential to encourage algae growth. Too much algae can interfere with the herbs' root systems by blocking the amount of nutrients they can absorb. Too much light can also warm up the reservoir, stunting our plant.

I get my totes from Home Depot. The Sterilite line has a 15 quart tote that works well, though they're clear so I have to spray paint them. Make sure that you get a sealable, airtight container with a flat lid – cutting holes in a ridged lid can be a hassle! Also get one that is at least six inches tall to give the roots room to spread and grow.

SPRAYPAINT



Price: \$7.00

Location: [Amazon](#) or Home Depot

If you can't find a tote that is completely opaque you may want to pick up a can of spray paint. I chose a grayish color because black tends to absorb sunlight and heat up the reservoir too much. In my prototype garden, even grey absorbed too much heat – **I would recommend buying white spray paint to reflect as much light as possible.**

AQUARIUM AIRSTONE



Price: \$6.00

Location: [Amazon](#) or Aquarium Supply Store

We need an airstone to evenly distribute small bubbles of air throughout the reservoir. Because the roots of our plants will be sitting in water instead of soil, we have to make sure that they get enough oxygen or else they will drown and wilt. The air bubbles oxygenate the water and allow us to fully submerge the roots without any consequences.

I like the round airstones – they stay secured to the bottom of your reservoir much better than the 12” long models.

AQUARIUM AIR PUMP



Price: \$12.00

Location: [Amazon](#) or Aquarium Supply Store

Our air pump will allow us to oxygenate our nutrient mixture. Without fresh air circulating through the nutrient mix, the roots of our herbs will drown. Roots need a constant supply of oxygen in this hydroponic setup, because they will be fully submerged in water.

You don't need a fancy pump – the smallest and cheapest air pump will work. I got the cheapest model I could find at the local Petco.

OPAQUE AIRLINE TUBING



Price: \$3.50

Location: [Amazon](#) or Aquarium Supply Store

You need this to connect your pump to our airstone. Most packs have around 8' of tubing which is more than enough for your garden. Be sure to grab a package of black tubing to avoid any algae buildup in the airline. If you get algae, the airline may clog and starve your plants of the oxygen they need to grow.

AIRLINE TUBING HOLDERS



Price: \$3.50

Location: [Amazon](#) or Aquarium Supply Store

These are going to hold your airline tube down, so the airstone will stay on the bottom of your reservoir. I've tried building this in the past without using these and it doesn't work out too well. The airstone tends to flip over and float around the reservoir, causing an uneven flow of air bubbles. Without the bubbles, our plants will drown.

2" HOLE SAW AND PILOT BIT



Price: \$15.00

Location: Home Depot

This is optional – you can definitely cut out the 2" diameter holes on the top of the container with an exacto knife or some scissors. I just prefer the hole saw because it makes the whole process a lot easier. With a pilot bit and the 2" drill bit you can bang out eight 2" holes in less than five minutes. Cutting takes a lot longer and potentially looks worse if you don't know your way around a knife.

EIGHT 2" NET POTS

Price: \$4.00

Location: [Amazon](#) or Hydroponic Store



These are what we'll be placing in the holes that we drill. They will hold the plants in place and, in combination with a growing medium, will give the roots something to grab onto as they make their way into the reservoir.

You can find these at any hydroponics store or you can shell out five bucks and buy a 10 pack on [Amazon](#).

GROWING MEDIUM*



Price: \$5.00

Location: [Amazon](#), Petco, Aquarium Supply Store, or Hydroponics Store

The root systems of your herbs will need something to grab onto before they make their way into the nutrient reservoir. The cheapest option is aquarium gravel, found at any pet or aquarium store. If you want to purchase a better growing medium, feel free to take a look at my [hydroponic media guide](#) to get a feel for what growing media you want to use.

***Pictured: Hydroton Expanded Clay Pellets**

PH TESTING KIT



Price: \$8.00

Location: [Amazon](#) or Aquarium Supply Store

Our pH testing kit will help us ensure that the pH of the nutrient mixture in our reservoir is at the correct levels. Without a correct pH, our herbs will not be able to absorb nutrients at optimum levels. Most tap water has a pH of 7.0–8.0 and our plants require a pH of 6.0–6.5. This is one of the most crucial items that we need for our garden.

NUTRIENTS



Price: \$12.00

Location: [Amazon](#) or Hydroponics Store

Without adequate nutrition, our herbs will starve. We need to mix a nutrient solution into our water in the appropriate amount for them to absorb through their roots.

For beginners, [General Hydroponic Flora Gro](#) is by far the best nutrient to start with. Because we are growing herbs, we only need the nutrients that stimulate growth. We don't want to

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bloom our herbs because it tends to make them bitter. This makes hydroponic herb gardening very cost-effective.

PLANTS



The final ingredient is the most crucial – the plants! It's up to you whether you want to start your herb garden out from seed or buy some seedling starts from your local Home Depot or garden center. I've done it both ways.

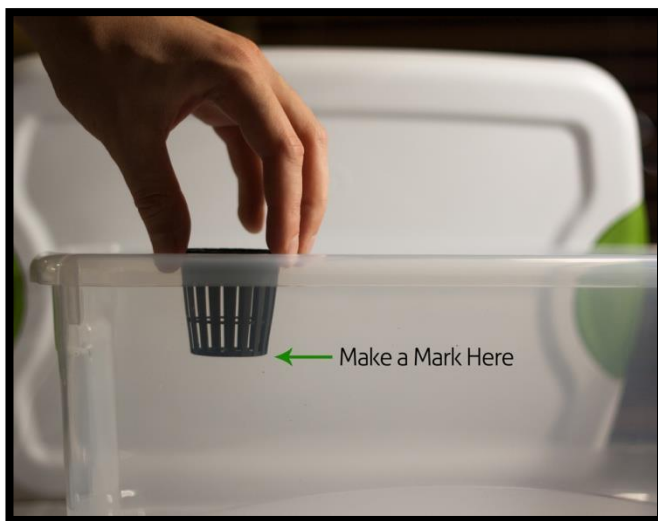
Starting from seed is cheaper over the long term, because the cost of a pack of seeds is close to the cost of one herb seedling. However, some of you might want to give your garden a head start. For you, seedlings are the way to go. There's something satisfying about building your hydroponic system and then planting it right away.

CONSTRUCTION

This garden is simple to build. You should be able to finish building and planting it in under two hours if you've got all the materials. Be sure to follow the instructions, because there are a few key tips and pointers in here that are going to save you a lot of trouble later on down the road. Let's get started!

STEP 1 – WASH AND TAPE RESERVOIR

WASH



You need to spray paint your tote if it isn't already opaque to avoid algae buildup in the reservoir. The tote needs to be perfectly clean before you paint. Make sure to wash and dry it completely to get ensure a smooth, dry surface.

Once your tote is dry, take a net pot and place it parallel to the top of the tote. Make a mark on your tote at the bottom of the net pot – this is where our water line will be.

TAPE

Take a piece of tape and tape off the area from the mark to the bottom of the tote. After we spray paint the tote we'll peel this off to reveal a perfect water level gauge.

Trust me – you're going to want this little feature. Without it you'll have to keep opening the top to check on your water levels, which gets to be a hassle once your herbs start to thrive.



STEP 2 - SPRAY PAINT THE TOTE



Throw down some old newspaper or paper towels and place your tote on top. Make sure the top is fastened tight. Use broad strokes with a can of spray paint to cover the top and all of the sides except for the bottom with a light coat of spray paint.

After ten minutes, give each side a heavier coat. You want to make sure that as little light as possible penetrates the reservoir. Let it dry for 45 minutes.

STEP 3 - DRILL/CUT THE HOLES

NET POTS



After the paint dries, take your net pots and align them on the cover of your tote. Make sure that you space them out evenly. I wanted to leave room to add an additional six net pots in my design, so you can definitely space yours out better if you are sticking with eight net pots. Once you're done with the layout, start drilling eight 2" circular holes into the cover in an X pattern. Be sure to scrape off all of the extra bits of plastic so you have a nice smooth set of holes with no debris.

AIRLINE HOLE



Drill a hole slightly larger than your 1/8" airline tubing in the short side of your tote, just below the top edge. This will be the airline feed hole. It's important that this hole be drilled above your water line, or you'll have a constant leak and never be able to maintain adequate water levels in your reservoir.

STEP 4 - INSTALL AIR SYSTEM AND ADD WATER

AIR SYSTEM



Feed your airline through the hole you just drilled. Use a suction cup on the side and bottom of your tote to secure the airline and then connect the airstone to the inside of the tote.

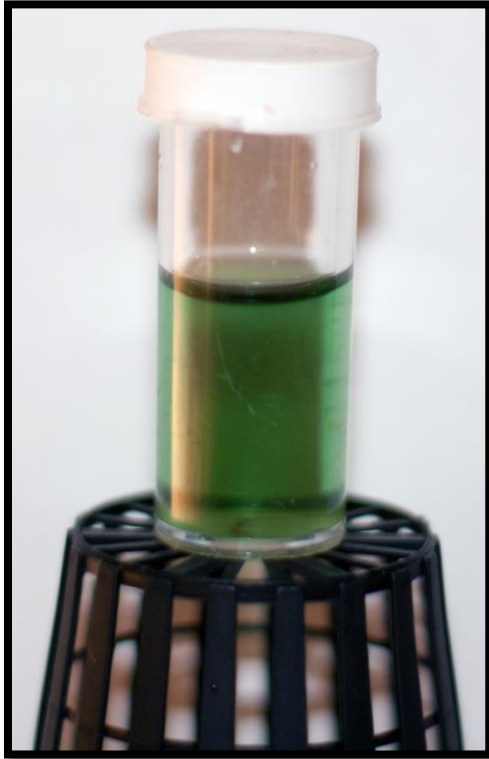
ADD WATER



If you bought a 15 quart tote, you'll need around 2.5 gallons of water to fill the reservoir to the water line. Regardless of how much water your reservoir requires, be sure to write it down. We need this number for later when we add our nutrient solution.

STEP 5 - PH AND ADD NUTRIENTS

PH YOUR TAP WATER



Now that we have built our reservoir and filled it with water, we need to pH the water and add nutrients. Most tap water is in the 7.0–8.0 range. The herbs you will be growing need water with a pH in the 6.0–6.5 range, so you will need to use some pH down. The picture to the left shows the forest green color of average tap water in the 7.0–8.0 range.

pH down is highly corrosive, so be sure not to get it on any part of your body. You don't need much to adjust the water – try a few drops to start. Mix it into the water thoroughly and then test again. When the color on the strip matches the 6.0–6.5 range like the picture on the right, you're ready to mix the nutrients.

It can take a while to get the color just right – try not to get frustrated. This is one of the most important steps in making sure that your plants get all of the nutrients that they require for vigorous growth. If you don't correctly adjust pH, you will prevent your plants' roots from absorbing certain nutrients. [Click here for more information about how pH interacts with nutrient uptake.](#)



ADD NUTRIENTS



Now we need to remember how much water we added to the reservoir. Take a look at the nutrient mixing chart on the back of your bottle of General Hydroponics FloraGro. This will give you the exact amount to mix into your system. If you're starting from seed or cuttings, use ¼ tsp/gallon and if you're starting from established plants you've bought from a garden store, use 1 tsp/gallon. In my example system I added 2.5 gallons of water to the reservoir and bought some herb starts from the local Home Depot, so I added 2 ½ tsp of nutrients to my reservoir.

We're almost done! On to the final step...

STEP 6 – ADD GROWING MEDIA & PLANTS



Now you need to add a bit of your growing media to the bottom of each net pot. This will provide a little base support for the root structure once we begin to plant our herbs.

If you're not starting from seed but instead decided to get some herb seedlings, then you'll need to wash away the dirt from the root systems. You want to start out with as clean a plant as possible to avoid any contamination in your reservoir.

Gently wash the dirt away from the roots, being careful to damage your plant as little as possible. When it is about as clean as shown in the picture to the left, you can go ahead and place it in your net pot.

If there are long roots that you can pull through the gaps in the net pot, go for it! This helps the root system hit the water sooner and flourish in the rich nutrient bath. If not, that's okay – just cover the rest of the root system up with your growing media and plant the rest of your herbs.



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FINISHED PRODUCT

Congratulations, you're now the proud owner of a really awesome looking hydroponic herb garden! Barely takes any work to maintain and produces year-round!



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PLANT DETAILS

Here's a list of all of the herbs that do well in a hydroponic environment. I've listed the most popular five at the top. I'd be wary of planting mint or tarragon because they need to come from a cutting, but you can buy seedlings if you want – it's up to you! I made this chart to give you an idea of when you can expect your herbs to be fully grown. Typically, hydroponically grown plants mature much faster than their soil counterparts, so I wouldn't be surprised if the times listed here could be sped up by a few weeks.

Herbs	Germination (days)	Seedling (weeks)	Harvest (weeks)
Basil	5-10 days	8 weeks	5 weeks
Chives	15-21 days	12-16 weeks	11 weeks
Oregano	8-14 days	6 weeks	6 weeks
Thyme	8-20 days	6-8 weeks	4-6 weeks
Sage	10-21 days	8 weeks	4-6 weeks
Mint	12-16 days	Cutting	4 weeks
Tarragon	10-14 days	Cutting	7 weeks
Marjoram	8-14 days	6 weeks	2-4 weeks

In my example garden, I planted **Sweet Basil, German Thyme, Greek Oregano, Common Sage and Cilantro**, doubling up on a few of the herbs that I use all of the time. I would recommend all of these herbs if you're new to hydroponic gardening. They transplant well and thrive in a hydroponic environment. It's your garden though, so get creative – it's up to you to plant your garden however you wish!

MAINTENANCE

LIGHTING

Place your garden in an area that gets as much natural sunlight as possible. Ideally, you want an area that's getting at least six hours a day. If you can't find a spot in your home that fits these requirements, you may want to consider lighting it artificially. A compact fluorescent bulb (CFL) will do wonders for these plants. Make sure that your plants get no less than six hours of sun per day, supplementing with lights if you can't get this much light naturally.

WATERING

Taking care of your hydroponic herb garden is simple. All you have to do is make sure that you keep the water at the correct level. To save time, just pH and mix a few gallons of the nutrient solution to keep on hand when the water levels dip.

HARVESTING

Harvest your herbs whenever you need them. By only using FloraGro, we are keeping them in a permanent vegetative state. If some of your herbs start to "bolt", which means put out flowers, then you should pinch off these flowers and let them continue to grow. Once these herbs put out flowers they tend to lose some of their taste, so be sure to pinch off the flowers and harvest continually!

CONTACT

Thanks for checking out my first hydroponics guide. Hopefully you'll use this and some of your own creativity to build an indoor herb garden that fills your kitchen with fresh herbs throughout the years!

If you have any questions that I didn't answer in this guide, shoot me a message on any of these:

<http://www.facebook.com/epicgardening>

<http://www.twitter.com/epicgardening>

<http://instagram.com/epicgardening>

<http://www.pinterest.com/epicgardening>

<http://www.youtube.com/epicgardening>

<http://www.epicgardening.com/forums>

Keep growing,

Kevin from Epic Gardening