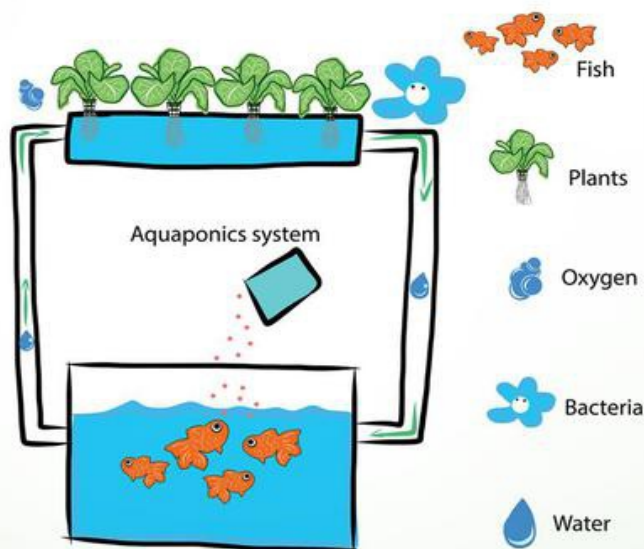


DIY

AQUAPONICS MARIJUANA GROWING



AT HOME

**Learn to Grow
Most Potent THC
Cannabis Ever!**

R O S S T I L L M A N

DIY
Aquaponics Marijuana Growing at Home
Learn to Grow Most Potent THC
Cannabis Ever!

By

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Ross Tillman

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It should also be noted that the legal aspects of growing and the consumption of Marijuana vary in different countries; hence, readers are advised to use their own discretion and abide by the rules of the country for growing Marijuana.

Also, this book is not intended to be a substitute for the medical advice of doctors. The readers are advised to consult a physician in matters relating to his/her health before they start using this herb.

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First Edition

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Foreword

I smoke weed for recreational purposes.

I admit it.

I have issues with anxiety. But then again, who doesn't have issues with anxiety nowadays? So yeah, I smoke to help with anxiety, but really, I smoke because I like to smoke.

Smoking marijuana for me is not easy to do because I live in a state where it is not legal. I used to have a few sources, or dealers, from whom I would buy my marijuana from, but I stopped doing that years ago. I hated the heart-pounding and stress-inducing anxiety that occurred whenever I had to meet my dealer.

Also, I had no control over the quality of the marijuana I was buying, and I never knew the source of its growth. I could be smoking anything. I had to take what I was given. After a time, I had to smoke marijuana to ease the stress caused by buying marijuana illicitly.

In numerous states now, smoking marijuana for medicinal and/or recreational purposes is legal on the local and state level. However, smoking, possessing and or growing marijuana is still illegal on the federal level. This is true even in states where smoking marijuana is legal on the local and state level.

Marijuana is still very illegal on the federal law enforcement level. According to current guidelines, the Drug Enforcement Agency, or D. E. A., and the American federal arm of law enforcement label marijuana as a Schedule I drug. Schedule I drugs are deemed by the American government to have no medical use. They are also considered to be extremely high in abuse and addiction potential.

Why am I telling you these things?

I wrote this book to help you learn how to grow your own marijuana at home. Certainly not in soil. You could do that, but you won't grow any quality weed unless you tend to it all the time, check for infestations and add an extra nutrient supplement.

Growing marijuana plants in soil is just a hassle. You really have to have a green thumb or not be too particular about the quality of your marijuana.

However, as with a lot of things in life, I had choices. You have choices. There is always another way. Another alternative.

I decided to teach myself how to grow my own marijuana. Not the soil grown kind either. I wanted to grow marijuana in a way that would ensure

that it was potent in THC. I spent years buying so-so marijuana with average high-inducing effects. Why should grow similar quality marijuana on my own?

If I were going to grow marijuana, I would grow it to be a healthy and as THC potent as possible.

I learned about growing marijuana through aquaponics.

Aquaponics is the practice of combining fish, plant and bacteria cultivation in mutually beneficial ways to provide a plant with organic food and fertilizer as it grows.

The fish and plants are placed in tanks that recirculate water between them. As the fish excrete poop, the poop is eaten by bacteria that grow naturally in fish tanks. The bacteria convert the fish poop into nutrients, or plant food, that helps the plant grow healthily.

The fish, plant, and bacteria all work together in a way that will produce a healthy and high yield producing crop. Like marijuana buds.

Aquaponics grow system technique is an all-natural and organic way to create food and fertilizer for your plant.

Stuck on fish poop? Sounds crazy?

There are industrial-scale farms that use large-scale aquaponics grow systems operations to grow lettuces, tomatoes and all kinds of fruits and vegetables for the food industry. Aquaponic grow systems are used all over the world. It is an agricultural concept that came into being in the early 1980's.

Using decomposed animal manure to fertilize crops has been a farming practice for centuries. It is still done today. This method was used to grow the food you eat every day. So if you are stuck on the "fish poop," factor of the process, know that it is not abnormal. It is the best way to organically give plants the nutrients they need to grow.

By using aquaponics grow system techniques, on a very small scale, I grew some of the most potent marijuana I ever smoked. I grew it myself. I didn't have to pay for it. I don't have anxiety-inducing panic attacks anymore.

I am not nervous about buying marijuana illicitly anymore. I don't have to do that anymore. Plus, I can use this method for the rest of my life to grow as much marijuana as I want.

Aquaponic growing is a form of soilless gardening. It involves a grow tank, with the plant, and a fish tank, with the fish, circulating water between them. Water recirculates between the fish tank and the grow tank, where your plant will grow.

A water pump will pump nutrient-rich water from the fish tank into the grow tank. As that is happening, the grow tank will drain into the fish tank, and the process will repeat until the plant is fully grown.

The roots of the plant will continually absorb nutrients created by the bacteria.

Aquaponic growing is a way of feeding your plant healthy, organic and natural fertilizer and plant food. You have to feed the fish regularly and have enough fish stocked to provide enough nutrients to grow your marijuana plant. If you have a small scale grow system, this will not be hard to do.

That is the key. Keep your aquaponic grow system small scale. It should be able to fit on a table. In a closet. Or in the corner of the room. Only grow one or two plants. Marijuana plants need a lot of nutrients to grow. Marijuana roots grow out very long in length.

When you grow it, you will need overhead lamps with timers to jumpstart the growing process. If you try to grow more than 2 or 3 plants, at the maximum, you will need more supplies and equipment. It will require maintenance and upkeep.

Marijuana plants produce a pungent and unmistakable odor that is instantly recognizable. You will have to create a ventilation system or buy a grow room tent with a fan.

That brings me back to the legality of growing marijuana. It is an exciting process. You should be excited. But you may want to keep your growing aquaponic project a secret. Especially if you live in a state where marijuana is illegal. If you can't keep your secret, how do you expect anyone else to keep it?

Patience is the key to aquaponic growing. It could take 4-6 months from the start of the process to when you take your first toke of homegrown marijuana. You can probably do it in half this time if you want. Your plants will be small, and your bud harvest will be small. It will also not be very potent in THC.

If you were a farmer, you can't expect a harvest on the first day on the job of farming. Great things take time to accomplish.

You don't have to be a rocket scientist, engineer or botanist to build a small scale aquaponic growing system. You could build one yourself with materials you own at home, storage or in your garage. Assembling all of the materials might cost you a few dozen or few hundred dollars. You could buy a ready to go aquaponic kit online for a few hundred dollars or so.

I decided to write this book to share my experiences growing marijuana with aquaponic grow system techniques. I made a lot of mistakes, but I learned from my mistakes. This book is the result. As well as my own, homegrown stash of marijuana.

Enjoy the journey that you are starting on. There is nothing sweeter in life than the first tokes from marijuana that you grew yourself

I should know.

What is Aquaponics Marijuana Growing?

Marijuana is a very strong plant that is capable of being grown in the outdoors and in the wild. It can be grown indoors with artificial lighting.

How marijuana is grown and where it is grown and how much nutrients, or plant food, is supplied to it while it is growing will determine the quality of the marijuana buds it produces.

Marijuana needs oxygen, regular light sources that mimic the lighting period of the sun, nitrate, potassium, and phosphorus to grow quality, smokable buds. Don't worry. I will break these terms down into more easily digestible meanings later on. Just know now that your marijuana plant requires these nutrients and ingredients to produce quality and THC-potent smokable buds.

The most important thing to know is that soil may not be the best growing medium to grow quality marijuana.

Marijuana needs a lot of nutrients, or plant food, as it grows and blooms, to develop its dense and smokable buds. Using soil to grow marijuana is not the best method to retain nutrients.

Soil dries out very easily. You may need to use nutrient-rich compost which can get expensive if you are buying it. If you make your own compost, it can take a year before it is ready for use. Soil may be dry at the top and soggy with water at the roots, rotting your crop.

Marijuana plants like soil that allows for regular drainage and replenishing of water and nutrients. Soil also hides problems like pests or plant disease, problems which you may not see until it is too late.

There are numerous ways for the soil to keep your marijuana plant from being healthy and from receiving as the maximum nutrient nourishment, or plant food, that it needs to grow.

The point is, when you grow marijuana in soil, it will not be of the best quality unless you pay a lot of attention to it, continually add expensive nutrients and continually look for problems. Marijuana plant roots grow long and need a lot of water and nutrients.

Marijuana is a very strong and sturdy plant. A marijuana plant is a survivor. It will grow in spite of you. You can put marijuana in a bucket growing pot, water it and put a cheap lamp on it, and it will grow.

You can virtually ignore it, and it will grow. (Although, this way of growing is not recommended.) Rest assured, your crop won't be very good or possess quality levels of THC when you smoke it. It won't give you a quality high. But it will grow.

Of course, the point of growing marijuana is to do so in such a way that increases the potency, or strength of its THC. THC is the main and active chemical ingredient in marijuana that produces its mind-expanding and mentally pleasant, “high.” (Let’s be honest: this is the reason why you are growing it. Right?)

There is no other reason to grow your own marijuana unless you can make it as THC potent as possible.

You may be growing it for medicinal or recreational purposes. All things considered, you are definitely growing it to create a maximum high when you smoke it.

The best way for you to grow marijuana at home with an aquaponic grow setup. With aquaponics, you will provide your marijuana plant with all of the nourishment that it needs to grow as healthy and THC potent as possible.

With a basic aquaponic setup, you grow your marijuana in a small and confined space. You can grow it in a grow tent, or in a closet, or in a dedicated space in your basement or attic.

I will explain in the most basic and possible layperson way how you can easily grow your own marijuana with an aquaponic soilless gardening setup. It is easy, affordable and will only require moderate effort from you.

I will explain everything you will need to do, the supplies you will need and why aquaponics is the best way to grow quality marijuana.

Still, first things first. What is aquaponic soilless gardening? What is an aquaponic grow system?

Aquaponics Soilless Gardening

Aquaponics is a growing method that ensures that a plant receives as many nutrients as possible as it grows. Aquaponics will make your marijuana plants healthy. Aquaponics will keep your marijuana plant well-fed with nutrient plant food.

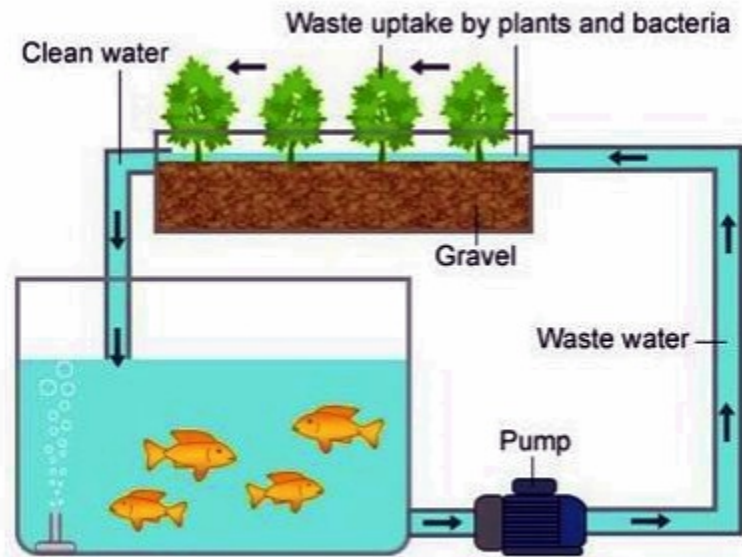
The biggest problem with growing marijuana is attaining the maximum levels of nutrients needed during the blooming phase of plant growth.

It is during the blooming phase that marijuana grows its THC potent buds. This will guarantee a better and stronger high when you smoke.

So, what is aquaponic soilless gardening?

Aquaponic soilless gardening is a method of combining fish farming and plant growth with a recirculating water system filled with natural bacteria designed to provide the nutrients the plants need to grow.

The recirculating water will continually flood and drain the grow bed where the plant, and its roots, will grow. It is by this method that nutrients are delivered more efficiently to the plant.



Source: [NSO](#)

Sounds complicated, doesn't it? It really isn't. You will be using water tanks, or large glass, plastic or Plexiglas fish tanks, to create a recirculating eco-system to nourish and grow your marijuana plants.

An ecosystem is a situation where various things work together for a common purpose. In this situation, it is to provide your marijuana plants with as many nutrients as possible.

Instead of soil, you fill a glass tank, one or two feet tall and a foot or longer wide, with gravel, mulch, lava rocks or peat moss. Instead of soil, the plant's roots will grow in the soil-substituted growing medium.

Nutrients in the water will pass over and feed the plant roots more efficiently than soil. Soils dry out, harbors dangerous bacteria and can impede the absorption of nutrients into plant roots.

The grow tank portion of an aquaponics grow system is where your marijuana plant will grow. Since this will be a small and basic system. You will want to plant one or two marijuana plants only.

You will place a grow bed tray at the top of the tank under the water level and on top of your growing medium. The point is that the water will drain and be continually replenished by the fish tank.

The water, cleaned by the plants, will drain into a fish tank next to or under the grow tank. This will happen via gravity with a drain pipe opening at the bottom of the grow tank leading into the fish tank.

The fish tank, of a similar size to your, grow bed tank, will be filled with ornamental or breeding fish. Fish poop, or the nutrients in fish poop, is one of the keys to a functioning aquaponics growing system.

Whenever the fish poop, their waste will be digested and broken down by good, beneficial and naturally occurring bacteria into nutrients. These bacteria, also known as micro-organisms, are natural and exist in oceans and lakes.

In fact, this natural occurring bacterium are the main component of the aquaponics grow system. Without them, the system will not work. They are not harmful; they are needed.

A water pump in the fish tank will pump the nutrient-rich (remember, this is fish poop digested by bacteria and turned into nutrients) into the grow tank, feeding the marijuana plants.

The nutrient-rich water continually washed over the marijuana plant roots, provided much need plant food. Also, this pumped in nutrient water will replenish the grow tank as it continually drains down into the fish tank.

This continuous cycling of nutrient-rich water feeds the plants and the plants clean the water which is then cycled back to the fish. It's a win-win growing situation which gives your marijuana plants all the nutrients it needs. With soil growing, it is hit-and-miss. Also, you cannot control what kind of bacteria, the good kind or disease-causing kind, will inhabit your soil.

Let's break it down simply: when you feed the fish, the fish poop. The natural bacteria that inhabit the tank turns the fish poop into nutrients. The water has then been turned into nutrient-rich water.

The nutrient-rich water from the fish tank is then pumped into the grow tank, via a water pump. The nutrient-rich water, just pumped into the grow tank, washes over the plant roots, feeding them. As this is happening, the water in the grow tank is draining into the fish tank.

The plant roots clean the water and absorb most of the nutrients. Then the process starts all over again in an endless cycle until your marijuana plants are ready for harvesting.

When your marijuana plants roots are continually flooded and then drained with nutrient-rich water, it will grow better. If you grow marijuana in soil, the water may not drain at all. The plant roots can rot, and you can't control what kinds of bacteria will take up shop in your soil. There are just too many unknowns that you can't predict or control when it comes to growing in soil.

Aquaponics is a way of using good bacterial colonies to create nutrients by breaking down fish poop that will feed your plants through a constantly recirculating water flooding and drainage process. You are basically you're creating your own liquid and organic fertilizer system to feed your growing plant. This is a lot cheaper than buying fertilizer.

So, what do you think?

Hung up on the “fish poop,” part, huh? Decomposing manure into basic nutrients is a large part of modern farming and agriculture. It was a large part of ancient farming and agriculture. It is a process that has been used for centuries to grow food and is still used today.

The food you eat, if it was grown on an industrial farm, was grown using this method. Most farmers, especially industrial-scale farmers, use animal manure that was decomposed into nutrients when they grow crops.

Think about your own digestive system. Billions, if not trillions, of microscopic bacteria colonies, live in your intestines and stomach. When you eat, these bacteria eat and digest your food. They turn your ingested food into nutrients for your body, and everything else is turned into waste.

This is not a direct comparison, of course, but it is close enough. The bacteria that live in the fish tank, which is natural, will break down fish poop and turn it into nutrients that will feed your plants as the water is recirculated through the system.

Aquaponics Marijuana Growing Needs

In the next chapters, we will go more into explaining the three basic components of the aquaponics system. They are the fish, the plants, and the nutrient-creating bacteria. You need all three components in order for the whole system to work properly and to achieve the best results.

However, without the beneficial bacteria, your basic hydroponic setup won't work at all. The fish poop must be broken down and changed into nutrients by the bacteria. Without the bacteria, the fish poop will become toxic to the fish and kill the fish. Fish poop is basically a form of ammonia.

If there are no nutrients in the water, then the plants will starve. They might grow with the water, but the water will become too toxic with fish waste that has decomposed into ammonia to help it grow well. The bacteria must be present to properly convert the fish poop into useful nutrients that will act as plant food.

Remember that the size of your fish tank, and how many fish you have in the tank, will determine how much nutrient reaches your plants.

Remember that the water is always recirculating in the system. The fish tank pumps out water to the grow bed tank, and the grow bed tank drains into the fish tank. Nutrient-rich water from the fish tank washes into the grow bed tank, feeding the plants. The grow bed tank, meanwhile, is always draining water which was cleaned by the plants as it drains back into the fish tank.

You will have to feed the fish regularly. The fish have to poop on a regular schedule to provide the beneficial bacteria something to convert into nutrients.

Marijuana needs a lot of nutrients as it grows. Especially during the blooming phase. This is why it is important to have as many fish as is practical and to feed them regularly.

The bacteria are the most important part of the aquaponics system. In fact, before you begin growing, you should let your system run for a couple of weeks before you even plant your marijuana grow bed. This way, the bacteria will multiply into large colonies in the fish tank and will be ready to provide your plant with the nutrient food it needs as it circulates the grow tank.

Remember, without the beneficial bacteria; there is no aquaponics system. This will be discussed further in later chapters.

You will have to check the PH balance of the water in your aquaponics system every week with a PH test strip. PH balance refers to how acidic or salty water or soil is. The perfect PH factor is 7. If the PH balance is too high or too low, the marijuana plant will not be able to absorb nutrients properly. This will result in less than quality marijuana being cultivated.

You will have to record the PH reading every week in a record book. We will talk about what to do if the PH goes too high or low in later chapters.

As your marijuana grows, it will grow in two phases. This is the growing phase when it grows from a seed or seed transplant, into a full-fledged plant. Then there is the blooming phase when it develops its, "fruit," or dense buds that are later harvested and smoked.

Changing the lighting schedule and pattern as the marijuana plant grows triggers the blooming phase. You will have to adjust growing lights accordingly for these phases. We will also discuss this in later chapters.

As your marijuana grows, it will generate its signature and instantly recognizable smell. You may want to have a fan and venting system in place to recirculate the air in your grow room, if possible. You can use a grow room tent which has a built-in fan and ventilation system as well to disperse strong marijuana odor.

You will also have to consider what to do with the fish. As they die, they will have to be replaced. Fish can be composted. Or, if you breed fish for food, you can harvest them for that purpose as well.

It is recommended that you check on your aquaponics grow system every day. Just look it over a few minutes every day to make sure that it is function once or twice a day. You shouldn't just activate it and forget about it for days or weeks at a time.

This may seem overwhelming. However, if you have a simple closet or corner space setup and grow one or two plants, then this will be a very manageable project.

This is a lot to take in. It has to be. Take it in stride as you begin your journey as an aquaponics grower of marijuana. I have been there. I have done it. I will tell you everything you need to know. Use this book as a baseline for your own aquaponics grow project.

There will be procedures to follow. However, once you have your setup, you will be well on your way to growing quality marijuana to harvest. Just remember that growing marijuana takes time, patience and some basic understanding of what you are doing.



Source: [Pixabay](#)

So, let's talk about the three main parts of the aquaponics system, why one part is more important than the others why you can do this on a very small scale in your closet or the corner of a room.

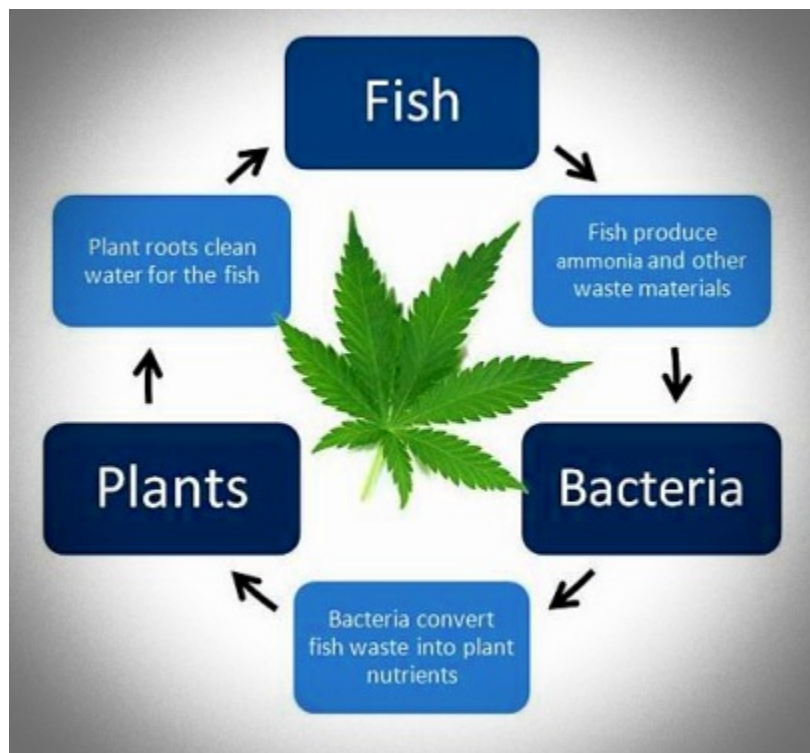
The Three Basic Parts of an Aquaponics Growing System

The Fish. The Plant. The Bacteria.

Once you appreciate what each part brings to the full aquaponics system, you will grow marijuana much more efficiently.

These are the three basic components of all aquaponics growing systems. The main component in the system is the bacteria. Without the beneficial bacteria, the fish will produce too much fish poop which won't be digested and broken down into nutrients.

The fish poop is basically ammonia, which is toxic to fish. The water will not have any nutrients in it if the bacteria is not there to digest, convert and provide it. The plant will die, or it will grow in a way where you will not harvest any quality, or potent, marijuana.



Source: [Growweedasy](#)

If you don't balance your aquaponics system correctly, then you will create a toxic environment that will kill the fish. It will also produce excess fish waste that the plants don't need and cannot use.

The beneficial bacteria are the key. If you have a good working balance of all the components, then there will be a lot less work for you to

do as your marijuana grows.

As you set up your aquaponics system, it will take time for the beneficial bacteria colonies to grow in great enough numbers to provide the nutrients that your plants will need. In fact, you may have to spend a couple of weeks cultivating the bacteria in your aquaponics system before you even begin to start growing.

Remember, if you want to do great things, you need a lot of time, patience, and understanding.

An aquaponics system is where three parts of the system work together in a mutually beneficially way to provide nutrient-rich food to a plant.

The fish, the plant, and the bacteria.

The Fish

Your main goal in setting up an aquaponics system is to create a circulating water system between the fish tank and the grow bed tank. Most of all, you want nutrient-rich food, created by beneficial bacteria, to circulate in that water in abundant amounts.

In short: you will need a lot of fish poop.

You will need to stock the fish tank component of your aquaponics setup with as much fish as it can hold. Talk to an expert at an aquarium, fish store or pet store about what kinds of fish can survive and thrive when packed into an aquaponics aquarium. Ask about what kinds of species of fish can live in an overcrowded environment.



Tilapia. Source: [Pixabay](#)

You can use small ornamental fish, like goldfish, stocked in your fish tank. You can also use larger and edible breeding fish that you can harvest and eat later on. There are many different varieties of fish you can, but you can use catfish or tilapia especially. You could also use crawfish, prawns, and shrimp as well.

Although if you stock your fish tank with such sea creatures, you may have to put a lot of them in there. Just make sure that you talk to a fish pet store or aquarium expert about what kind of fish to use. (Make sure you leave out the part where you are growing marijuana for personal use unless you live in a state where doing so is legal. Even then, you may want to keep such information to yourself.)

When you are growing marijuana, it requires a lot of nutrients as it grows. Marijuana rises and grows into a plant during the growing period and starts developing buds during the blooming period. Marijuana thrives on nutrients like nitrates, potassium, and phosphorus especially as it grows.

The beneficial bacteria convert fish poop from ammonia and into nitrate through a two-step process.

Even with these nutrients, it may not be enough. Marijuana needs a lot of nutrients during the blooming stage. So much so that nutrient supplements may be required. The potassium and phosphorus can be added later on with mulched banana peels as a nutrient additive.

This is a cheap, organic and beneficial way to add a nutrient supplement to your aquaponic growing system. (I will go into full detail in a later chapter.)

You don't have to get too caught up in the official names of the nutrients. You just need to understand how beneficial nutrients are to an aquaponics system. The main source of the nutrients that your marijuana plants will eat to grow are nitrates that are found in bacteria converted fish poop.

I will mention this fact again. You may want to wait at least couple of weeks after you set up your aquaponic growing system before you actually begin to grow marijuana.

During this period, you will add your fish, turn the system on and allow the beneficial bacteria to grow. In the first few weeks, the water may contain a lot of natural ammonia. This is because there will be a lot of fish and not enough bacteria to eat the poop. You may want to gradually add fish as you begin week-to-week or be prepared to replace fish in the first month or two.

Maintaining Right PH Level

You will want to check the weekly PH levels of the water throughout the whole process. Especially so during the first 8 weeks when you activate your aquaponics grow system and before you plant.

You can buy a PH strip at any plant food store or aquarium or agricultural supply store for \$5 to \$15. A PH test strip is a paper strip with numbers going from 0 to 14 and color coding. Once dipped in water, markings that reveal themselves in water will tell you the PH balance of water.

PH is the gauge by which we call tell if something, like soil or water, is too acidic or salty (base). If your PH reading is under 7 in the first few weeks, that is because there are a lot of fish and not enough bacteria to eat the poop. If you take a PH reading and it is over 7, that means that there is a lot of bacteria just came into being and they are eating a lot of fish poop.

A PH reading of 7 is the baseline where fish and plants can benefit from the bacteria eating and converting fish poop, turning it into nutrients.

Just remember: A PH reading of 7 is the natural balance of water and nutrients that will allow plants and fish to thrive. A PH reading of 6.5 or 7.5 is acceptable, but 7 is the magic number.

It takes time for the beneficial bacteria colonies to mature and grow in great enough numbers to convert fish poop into the nutrients. These nutrients will help your marijuana plants grow and produce potent, THC-rich marijuana buds.

Choose your fish well. Get a species that can handle crowding in a fish tank well. Monitor them for eight weeks at least before you plant your first marijuana seed or plant transplant into your grow bed tray.

The Plant

If you are learning how to grow marijuana and are willing to learn through the use of aquaponics gardening, then you should have no problem getting your hands on marijuana seeds or a small marijuana plant. You can grow a marijuana seed into a small hatchling plant and then transplant it into the grow bed tray.

Remember that when you transplant a small marijuana plant hatchling, it will experience shock as it is introduced to a new growing environment. It may take a few days before the plant can fully adjust to the grow bed and begin growing again.

In the grow tank part of an aquaponics system, the plant will be suspended at the top of the tank in a grow bed tray. The grow bed tray will be right at or just below the water line. A grow bed is a tray or PVC pipe with an opening at the top to receive seeds or plant and multiple holes at the bottom to allow roots to grow out.

The grow bed tray can have a depth of 4 inches to 8 inches. The deeper, the better. Marijuana develops long, nutrient hungry roots as it grows.

The grow tank is filled with a soil-substitute growing medium. The soil is the usual growing medium when we grow plants. However, aquaponics is a soilless growing gardening practice.

You can use many different growing mediums to substitute for soil. You can use:

- Expanded Clay Pebbles (Hydroton)
- Gravel
- Rockwool
- Peat Moss
- Perlite (a kind of volcanic glass rock)
- Coconut Coir (coconut shell husk fibers)
- Lava rocks
- Mulch
- Aquarium Gravel

You may be able to find such alternative growing media in nature and then clean it properly yourself. However, if you do not clean them properly, then you may be introducing harmful insects, bacteria and plant diseases into your aquaponic growing system. You can endanger the safety of the fish and your plant. This will defeat the purpose of your aquaponics grow project altogether.

You may be better off just buying soilless growing substitutes at your local market or gardening supply store. You will need to buy enough to fill a grow tank that is a foot or higher.

As the nutrient-rich water is pumped from the fish tank into the grow tank, it stimulates growth in the seed or plant transplant. (Along with light from the grow lamps.) The roots will grow down in the growing medium.

Imagine the roots of a marijuana plant growing down through gravel or lava rocks. The roots will be able to absorb the nutrient-rich water easier than in soil. The fish tank will have an oxygen pump slowly pumping and

dissolving oxygen into the water as well. So, the plant will also be able to absorb oxygen that way as well.

Aquaponics growing is about flooding the grow media and then draining it as new, nutrient-rich water flood the grow tank again in a repeating cycle. Marijuana is a nutrient-hungry plant. With aquaponics, you will be able to provide your plant with as many nutrients as it needs as it grows. Remember, you are doing this to create as much THC-potent bud as you can.



Source: [Pixabay](#)



Source: [Growweedeasy](#)

The above picture is an example of marijuana grown by aquaponics gardening in an industrial scale grow room. Notice how long, lush and clean the plants' roots are after transfer from its growing medium.

When those long roots are growing through and nestled between gravel or lava rocks, or some other grow medium substitute, then nutrient-rich water will wash over them easily. The roots will absorb the nutrients and clean the water as it drains into the fish tank. Meanwhile, more nutrient-rich water from the fish tank will pump into the grow tank.

Nutrient-rich water will flood the grow tank, the roots will absorb nutrients, the water will drain into the fish tank, and the process will start over again. The process of recirculating nutrient-rich water will continue until your marijuana plant is ready for harvesting.

You may also just want to grow one or two plants in your grow bed tray. Keep it simple. Keep it basic. The more plants that you have, then the

more nutrients that you will need for them to grow properly. Start out basic, and you can do this in a small enclosed space like a closet or the corner of the room.

Also, if you try to grow too many plants in one grow tank, all of the roots will compete for the nutrients. You will need a larger aquaponics system, like an industrial-sized aquaponics, grow system, to accommodate the needs of multiple plants.

You will be growing your aquaponics system in a closet or corner of the room, basement or attic. You will need to have a grow light or lamp situated above the top of your plant. You can also purchase a portable, closet-sized and shaped grow room tent with light reflective materials on the walls.

You can use aluminum foil or reflective, mirror-like Mylar, white paint or anything that will reflect light to all sides of the plant.

A good, portable and closet-sized grow room tent will cost a few dozen dollars to up to \$600, maybe more. Some come with built-in lighting and venting.

Or, you can make a makeshift grow room yourself with standing rods, and cardboards walls painted white or covered with aluminum foil or Mylar.

Consider too that if you grow more than two plants, then you have to increase the number of lighting sources. This will increase your energy bills. Keep it basic.

It takes time to grow marijuana. The lighting sources mimic the light and dark cycle of the outdoors. With a timer, you can program the light to be on for 18 hours and off for 6 hours.

It is very important to start off with this light cycle setting, 18 hours of light and 6 hours of darkness. This will start the growing cycle of the plant, also known as the “vegetative cycle.”

Your marijuana plant will grow leaves and stems and roots and nothing else. It will take one to two months, or longer, for your plants to become big enough to start the blooming process.

You may want to keep the 18/6 lighting cycle for at least 2-months or until they rise to a height of a foot or more. The bigger the plant, the more capacity space of stems and branches it will have to grow bud.

When your plant is high enough, say a foot high or more, then you can switch the overhead grow lighting timers to 12 hours of light and 12 hours of darkness. When you do this, the plants will automatically begin blooming, or begin the “flowering stage.”

During the blooming period, your marijuana plant will begin to bear fruit or begin to grow bud. The blooming phase can be a long process too. It can take another 2 months to 4 months for the plant to bloom fully. You can't rush the growth of marijuana buds. Whether you have an aquaponic grow system or not.

You will know that the marijuana buds are ready for harvest when THC crystals start forming on the plant. The buds will also become dense with growth.

Then you must carefully cut the bud from the plant and hang it to dry for 2 weeks to a month. After you harvest the buds, they will be too wet to smoke.

The buds will be dry in 2 weeks to a month. Then you must place the buds into a Mason jar or airtight container so that it can, "cure." That can take another month. Put simply; curing allows your marijuana to maintain its THC potency. If you skip this step, your marijuana will not be as potent.

The "high, you feel after smoking marijuana will not be as good. After all, you are learning about aquaponics to grow THC potent marijuana in the first place. (Right? I know I did.)

All in all, it can take 6 to 8 months, from seed to bud, before your marijuana is smokable.

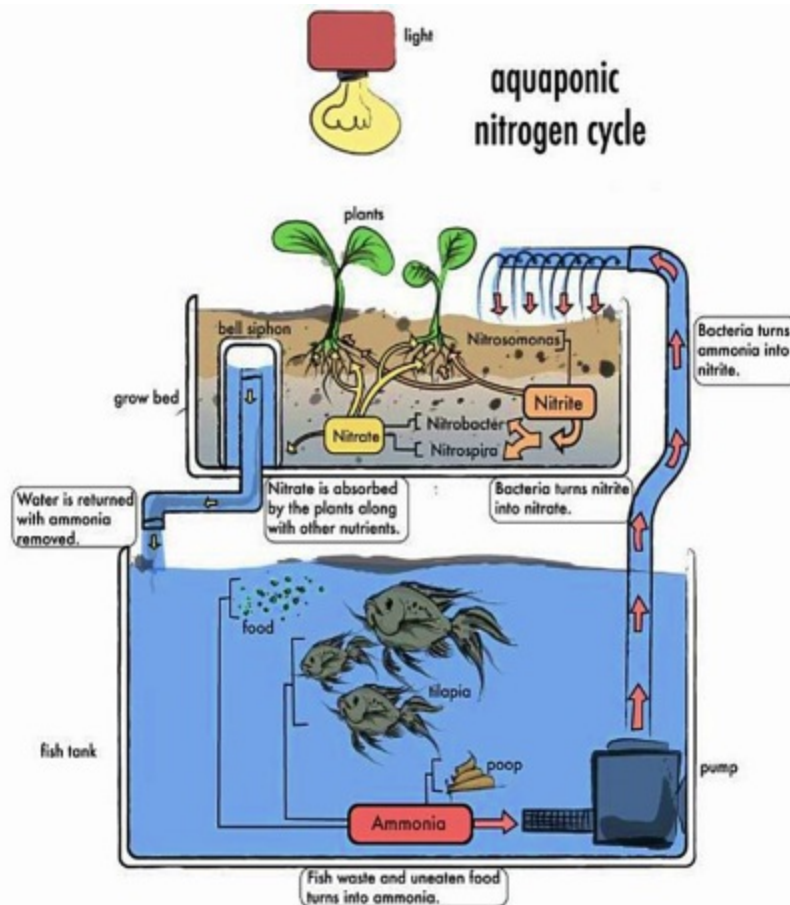
Rome wasn't built in a day, and killer marijuana won't be grown overnight. Remember, success is the fruit borne of patience and labor. If you maintain your aquaponics growing system's balance of components, then you will be exerting moderate labor at best.

The Bacteria

The bacteria are the main ingredient in your aquaponics grow system that will allow it to function. Without the billions of microscopic bacteria, which are too tiny for the human eye to see, the plants will not be able to absorb enough nutrients.

Or they will not be able to absorb them at all. Plus, the fish will die, since the bacteria will not be able to eat, digest and convert their poop into nutrients. Undigested and unconverted fish poop is very high in ammonia, which is very toxic and deadly to fish.

I will try not to get too science-teacher nerdy on you, but it will help you to grow your marijuana better if you understand the aquaponics nitrogen cycle or the nitrification process.



Source: [DIY-AG](#)

Ammonia is the main food source for the beneficial bacteria that will inhabit your entire aquaponics system. Fish excrete poop which is high in ammonia and decomposes into ammonia. When bacterial colonies grow large enough, they eat the ammonia and turn it into nutrients. This happens in a two-step process before the fish poop turns into a nutrient that your marijuana plant can absorb and use to grow.

There are some bacteria called, "Nitrosomonas sp," that eat and digest fish poop and ammonia and then convert it into a nutrient called nitrite. Nitrite is very toxic to fish, and in some cases, even more toxic to them than ammonia. Another kind of bacteria, called, "Nitrobacter," or, "nitrospira," then eat and digest the nitrite and convert it into nitrate.

It is the nutrient nitrate specifically that is important for your marijuana plants to grow strong and THC-potent.

This nitrification process is always ongoing, just as long as the PH balance level of your aquaponics system water is 7, 6.5 or 7.5. If there is a PH reading any higher than 7.5 or lower than 6.5, then your marijuana plants may not be able to absorb nutrient efficiently.

Potassium and phosphorus are also important nutrients that your marijuana plant will need to grow as healthy as possible. These nutrients

are especially helpful, and needed, during the blooming phase of growing. You can add worms, vermicompost and banana rind mulch to your grow medium, but we will discuss this in a later chapter.

Remember that an aquaponics system is all about balance. All the components must work in balance with one another. The bacteria must work in balance too. It may take up to a month to two months for the bacterial colonies to grow in great enough numbers for them to convert enough nutrients to properly feed your marijuana plants.

For the first few weeks, the ammonia in the water may be high because the fish have been introduced. Next, the nitrite level may be high because bacteria are digesting and converting the ammonia. Then the nitrate levels will rise because bacteria are digesting and converting the nitrite.

Remember to measure the PH balance on a weekly schedule, and to record the readings in a notebook, to keep track of PH levels. That will let you know how healthy your aquaponics bacterial colonies are.

Now that you better understand the three main components of your aquaponics system let's discuss all the supplies you need, how to put it together and get it started.

Aquaponics Marijuana Growing Supplies and Setup



Source: [Flickr](#)

An example of a basic and small-scale aquaponics system. This system uses goldfish, and the grow bed is not deep enough to accommodate marijuana plants. The point of the pic is to show that anyone can build such a simple and basic setup. This setup is located in a shed, but you can make one in your closet or the corner of a room. This pic is used for reference purposes and can give you an idea of how basic such a system can look. Do you think it would be impossible for you to put together a similar, small-scale system to grow your marijuana? You do not need to be a rocket scientist or engineer to put together a small-scale home aquaponics system. This pic shows you just how small space a basic aquaponics system can be.

All the materials that you will need for your basic and small-scale aquaponics system may cost you anywhere from \$100 to 600 dollars. It shouldn't cost you a lot more than that. You should also be able to find these materials and supplies at any aquarium, gardening supply, and farming supply store, if not at a large sized market.

Also, you might be able to use a lot of materials that you own already that could be in a closet, in storage or the garage.

The following is a list of materials, parts, and supplies that you will require to build a basic, small-scale home aquaponics system. You should

be able to build a small enough aquaponics system that it can fit into a closet or corner of a room in your house.

Remember, if you plan to grow more than one or two marijuana plants, then you will need more space, more supplies, and more lighting. Keep it small, basic and as simple as possible.

Aquaponics System Material, Supplies, and Parts List

- Two 10-gallon or 20-gallon capacity see-through water tanks. Try to get clear, see-through plastic or Plexiglas tanks. Glass tanks are fine but will create quite a mess if they shatter or break.

You can use large, opaque industrial scale plastic containers and tubs as well, but you won't be able to see through them. You will want to be able to see the activity in your aquaponic growing system. One tank will be for the fish, and the other tank will be for the grow tank and grow bed tray. Each tank should cost anywhere from \$10 to \$20.

- Grow medium. As listed before, you can use many other grow mediums to substitute for soil. You can buy aquarium gravel, coconut coir, expanded clay pebbles, small sized rocks, lava rocks, mulch, peat moss, perlite, and Rockwool. How much you pay will depend on the medium. You will need a lot to fill the grow tank and line the bottom of the fish tank. These grow medium substitutes do not cost a lot, but you will need to buy a whole lot to fill up your tanks.
- A basic fountain water pump. You will use the water pump to pump nutrient-rich water from the fish tank into the grow tank. You will want a water pump that can pump up to 40 to 100 gallons of water per hour. A good water pump will cost you anywhere from \$20 to \$50, if not a little more.
- 3 to 4 feet in length of plastic tubing. It should fit your water pump. Plastic tubing should not cost more than a few bucks.
- An aquarium air pump. An air pump injects fresh oxygen into the water into your fish tank and your whole aquaponics system. A good aquarium air pump shouldn't cost more than \$20 or \$30 bucks. You may be able to find one that is cheaper. Just make sure that it is

durable and will last for several months as your marijuana plants grow.

- An air stone. An air stone is a device that breaks up air molecules into smaller bubbles as the air pump pumps air into the fish tank. Smaller air bubbles are easily dissolved into the water this way. Will cost you a few dollars.
- About 3 to 4 feet of air hose tubing. You will need air hose tubing to connect the air pump to the air stone. Make sure that the air tubing you buy fits onto the outlet of the air pump. This will only cost you a few bucks.
- Grow bed tray. This will sit on top of the grow tank. It should be anywhere from 4-inches to 8-inches deep. It should have holes at the bottom to allow the roots to grow down. Remember, you are growing marijuana, so it should be deep enough to accommodate long root structures. This should only cost you a few bucks.
- PH testing strips and kits. This should only cost you a few bucks and not more than \$20 unless you buy some industrial grade stuff. You will need this to regularly test the PH balance of the water in your aquaponics system.
- Fish. You can get this at any aquarium or fish market. Ask for fish that do well and thrive in enclosed and crowded spaces. You can buy goldfish or breeder fish like tilapia or catfish that you can harvest later.

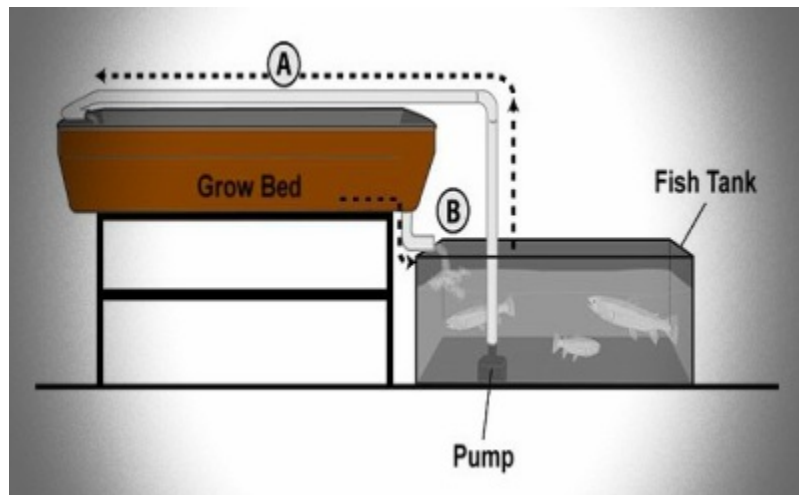
You can also buy crawfish, prawns, and shrimp if you like. Also remember that until the PH balance in your aquaponics system is balanced, which can take up to 8 weeks, you may need to replace your fish periodically.

- Marijuana seeds or plants. This you can get for free if you have bought seedy marijuana or you can buy seeds from a dispensary or online. You can also grow a seed into a budding, small plant in a soilless medium in a small pot. Then you can transfer it to your aquaponics grow bed.

The Tools You Will Need

- Electric drill
- Duct tape or electrical tape
- Large scissors

The grow tank has to be positioned next to or above the fish tank so that water can drain from the grow tank into the fish tank with the aid of gravity.



Source: [H.A.S.](#)

You will carefully drill a hole at the bottom of the grow tank. It must be small enough to accommodate plastic tubing or a small pipe. You want water to drain out steadily from the grow tank but not too fast either.

The water pump hooked up to the fish tank will then steadily pump water into the grow tank. This way, the water in the grow tank will constantly replenish itself just as fast as it drains away back into the fish tank. This is the design of flooding and drainage aquaponics systems.

By this method, the roots of the plants, as they grow, will always be nourished by the constantly recirculating and nutrient-rich water coming in from the fish tank.

Make sure that you have enough tubing to reach from the fish tank into the grow bed tank. You may need more than 3 or 4 feet's worth, depending on your setup. Make sure that your tubing is secured in place when you begin pumping water. (You can always use tape to do this.)

It can be a good idea to put down a layer of gravel, lava rocks or perlite at the bottom of the fish tank. This bottom layer of the fish tank can become a breeding ground and home for the beneficial bacteria that will develop and live in your aquaponics system.

Actually, your entire aquaponic system will become a breeding ground for them. They will grow on and inside the pipe tubing and on the insides

of the grow and fish tanks as well.

Make sure you use store bought, aquarium gravel or other growing medium alternatives. You can use gravel, pebbles and small rocks that you find in nature, but you need to clean them thoroughly. If they are not cleaned thoroughly, then you could introduce harmful bacteria, insects and plant diseases that can disrupt the PH balance and harm the plants and fish.

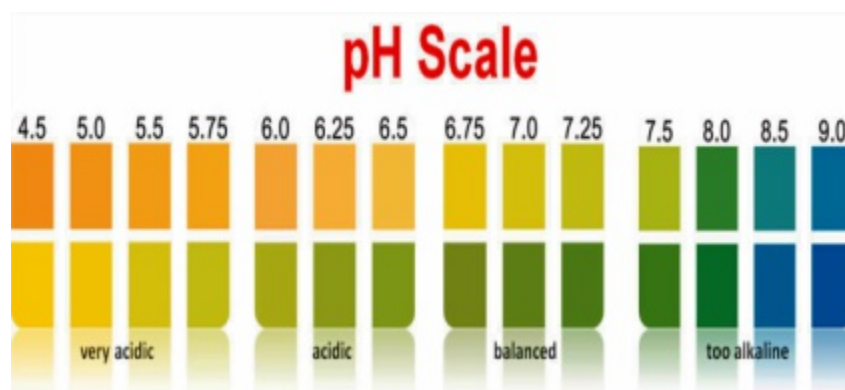
Connect the air pump, air stone, and tubing in the fish tank and turn it on. When you turn it on, the air pump will pump air into the fish tank. The pumped in the air will oxygenize the water as it circulates through the entire aquaponics system.

The air stone will break down the air bubbles pumped in by the air pump into much smaller air-bubbles. This allows the oxygen to dissolve easier in the water.

The grow bed tray will sit on top of the grow tank or will be affixed just under the top, like an inch or so beneath the top. The grow bed tray should be 4 inched to 8 inches in depth. To grow marijuana, 8 inches to 10 inches might be appropriate.

Marijuana roots grow long and need a lot of nutrients and water to grow potent THC. Make sure the grow bed tray has holes in it, or you can drill holes in the bottom of it. Without holes or openings, the marijuana roots will not be able to grow out and down as the nutrient-rich water washes over it.

Test the PH balance of your water with PH testing strips.



Source: [Ali-Cdn](#)

You need to test the PH balance of the water in your aquaponics system on a weekly basis at the very least. You have to check in on your aquaponics system regularly to make sure that it is working properly.

Also, you want to know if there are problems with the PH balance before it gets out of hand. Once dipped in water, the PH strip will indicate the PH level of the water.

If you don't have enough beneficial bacteria to break down the fish poop, then your aquaponics system won't be able to give your plant the nutrients that it needs. As you will be running a small-scale system, you may find that you may have to start over if you run into any catastrophic PH balancing problems.

Amazon Purchasable Home Aquaponics Setup Kits for Growing Herbs

If you are not inclined to build your own aquaponics grow system home setup that is OK too. You can just buy your own ready-to-assemble home aquaponics kit online through Amazon for about \$300.

Just look for home applicable aquaponics products on Amazon. You can buy home aquaponics products like the ECO-Cycle Aquaponics Indoor Garden System with LED Light Upgrade. Or the Springworks Microfarm Aquaponics Garden. There are many another similar such home aquaponics grow systems that you can buy online on Amazon.

These home aquaponics growing systems are specifically designed for herb or plant growing. However, you can just adapt the function of the product's original design purposes to grow marijuana.

You will need a 20-gallon fish tank. Or you will need to purchase one along with the home aquaponics kit. Such Amazon purchasable home aquaponics grow systems are designed to be attached atop existing fish tanks.

Such online purchasable home aquaponics grow systems feature programming Light Emitting Diode, or LED, lighting rigs. They also feature a remote control and a built-in timer for the lighting. Most of the companies who sell such products all offer instruction booklets, instruction videos and/or customer service phone support.

Such home aquaponics grow system kits also claim that plants will grow up to 25% faster in growing medium substitutes than with soil.

If setting up your own aquaponics grow system at home is a little too much for you, this will be the quickest way to get started.

OK. You are all set up and ready. However, remember how I told you that it was important first to begin growing and cultivating bacterial colonies before you start to grow marijuana? You can turn on the system, but you should not add in your marijuana seeds or plant transplant. Not for at least two months.

Let's talk about bacterial colony growth and health.

Before You Start Growing

You want to start growing marijuana. I completely understand. You want to grow it as quickly as possible. Who wouldn't want to? Anyone can buy their own marijuana, if you know what you are doing and have connections.

Still, unless you live in a state where medicinal and recreational marijuana is legal, buying marijuana is a very dangerous thing to do. Also, it can be very expensive and time consuming to travel to a state that permits legal marijuana purchases.

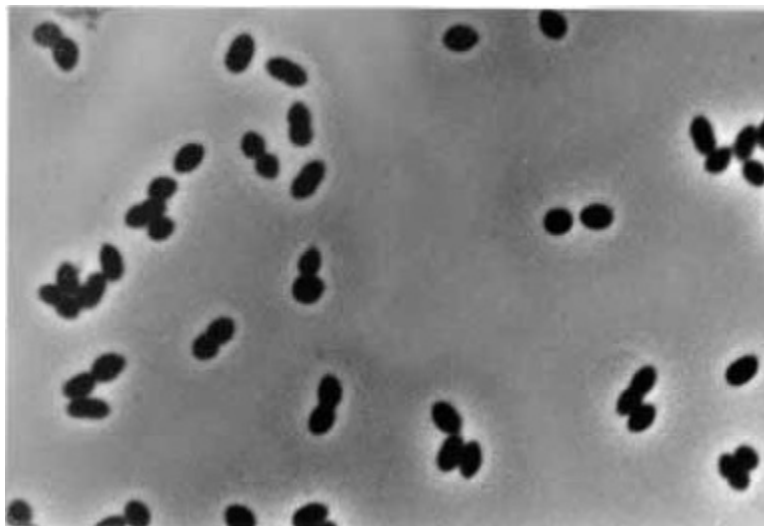
When you grow your own marijuana, you know what is in it, and you know where it came from. You don't know what is in illicitly purchased marijuana. There is also pride that can be gained from growing your own marijuana. With future practice and study, you may even be able to develop your own strain, but that will take advanced work.

The point is, who doesn't want the pleasure of growing and smoking their own marijuana?

Still, great things that you may want to do will take time to become accomplished. Like marijuana cultivation.

In fact, the most important ingredient that you will need in the aquaponics grow system process is patience.

Next, to that, the most important ingredient is the beneficial bacterial colonies that live throughout the aquaponics grow system.



Nitrosomonas bacterium. Source: [Wikimedia](#)

You can add the fish and turn on the air pumps and begin circulating water throughout your aquaponics system. As the fish poop, the ammonia levels

will rise. As ammonia-eating bacteria multiply, the ammonia levels will drop, and the nitrite levels will rise. As the nitrite eating bacteria multiply, the nitrite levels will lower, and the nitrate levels will rise.

It takes time for a colony of ammonia and nitrite eating bacteria to come into being. These bacteria have to eat and convert a lot of fish poop to create enough nitrate, the good nutrient, to suitably nourish your marijuana plants. In fact, two months is a baseline estimate. It may happen a little sooner or perhaps take a little longer.

You could plant your marijuana seeds or plant transplant into your grow bed tray as soon as you turn on your air pump and water pump. However, on the first day of the life of your aquaponics grow system, there just won't be enough, if any, beneficial bacteria in the system.

You may lose a few fish in those first few weeks as ammonia and nitrite levels increase. Ammonia and nitrite are very toxic and dangerous to fish. Also, there just won't be enough nutrient-rich water to help your marijuana plant grow. Your plant could die.

Although, marijuana plants are very tough, and it will likely survive. However, it may become damaged or grow in a way where it will not absorb nutrients properly. That could happen even when the aquaponics system is flush with nutrient-rich water.

As I mentioned before, your best option is to wait at least 4 to 8 weeks before you plant your marijuana seed or plant transplant into the grow bed tray. Allow time for the beneficial bacterial colonies to grow. The more that they are, the more fish poop they will digest and convert into the nutrients your plants will need.

Why make your marijuana plants wait for its needed nourishment? Why not plant your grow bed tray when your aquaponics grow system is steadily recirculating nutrient-rich water?

A farmer can't expect crops to grow on the first day of work. So, neither can you.

Give your aquaponics grow system time to allow beneficial bacterial colonies to grow. Your marijuana plant will be glad you did.



Source: [Pixabay](#)

Grow Room Basics



A marijuana plant growing in an enclosed grow room tent lined with reflective Mylar walls. The reflective wall reflects light from the overhead lamp so that it will reach every side of the plant. Source: [Growweedeasy](#)
OK. You have patiently waited for one to two months to allow your aquaponics grow system the opportunity to let its beneficial bacteria colonies grow and multiply. Your fish are alive and well and are creating enough poop for the beneficial bacteria to convert into plant-healthy nutrients. You have been testing the PH balance of the water weekly with PH testing strips, and the water is fine.

Your aquaponics grow system is recirculating nutrient-rich water between the grow tank and the fish tank.

Now it is time to plant your marijuana seed or plant transplant into the grow bed tray.

Still, before you do that, you will want to enclose your aquaponics system in a grow room tent. A grow room tent has light reflective walls

and a grow lamp at its ceiling. A grow room mimics or simulates the light and dark periods of the outdoors.

You can also carefully move your aquaponics system into a closet or create your own grow room tent or closet. You can use standing rods, room dividers, cardboard or any material that can create a closet-like enclosed space. Install a light or lamp with a timer at the top of the grow room.

Keeping your aquaponics grow system basic, and small enough to accommodate one or two plants, will make it easier to move around and transport if needed. For this reason, as well, it is helpful to use fish and grow tanks made out of see-through plastic or Plexiglas than just regular glass.

The grow light can be a simple light that you buy at the store. Although, since you are growing marijuana, you may want to buy a light that will offer as much light as possible.

You can use:

- Fluorescent Light Bulbs (CFL)
- High-Pressure Sodium Vapor Light Bulbs
- High-Intensity Discharge Light Bulbs
- Light Emitting Diodes
- Metal Halide Light Bulbs

Since you are lighting one or two plants, you can buy low to mid-scale wattage bulbs.

The leaves of the marijuana plant convert light into food through a process called photosynthesis. This process will supply the plant with nourishment along with the aquaponic growing system.

However, without the lighting and schedule lighting period, your marijuana plants will not grow. Or grow THC-potent buds. The lighting is the thing. The aquaponics grow system will provide plenty of nourishment as your marijuana plants grow.

To make your marijuana grow, you will need to jump-start its growing and blooming phases. To do this, all you have to do is give your plants light and adjust the lighting schedules for the separate growing and blooming phases of growth.

The Growing or Vegetative Phase

When marijuana begins growing, it only grows stems, branches, and leaves. During the growing phase, or vegetative phase, the plant is just growing out in height and width to support the fruit or buds that will grow later on. This is why the reflective surfaces of the room are important to have.

To begin the growing phase, set the light timer to light the plant 18 hours a day exactly. That means the light will shut off for 6 hours a day. Leave the 18/6 lighting and timer schedule to run for at least a month to two months.

You can allow your plant to grow for as long as you want. The optimal height that you should shoot for is at least 12 inches to a foot and a half.

The growing phase can last for up to two months. You can measure the rate of height as your plant grows. Every system is different, the recirculating and nutrient-rich water of your aquaponics system will be very important during this phase.

The reflective walls of the grow room are essential for these phases as well. When light from the lamp above reaches all sides and parts of the plant evenly, it will grow fully.

When your marijuana plant reaches a height that is acceptable to you, you can jump-start the blooming, or flowering phase, by switching the light cycle again.

The Blooming or Flowering Stage

To induce the blooming stage, all you have to do is to switch the lighting schedule from 18 hours on and 6 hours off to 12 hours on and 12 hours off.



This sudden change in the lighting schedule will stress the plant to start bearing fruit, or buds. You will have to be patient during this period. It can take up to 3 to 6 months before the blooming stage bears you enough bud to harvest.

During this time period, you should just check on it, make sure the timer and lamp are working or to make sure the bulb doesn't blow out.

You should also be checking the PH balance of the aquaponics system water as well. Remember that 7 is the number that you will want to see on your PH test strips. PH test strip numbers of 6.5 and 7.5 are acceptable as well.

Harvesting

When you cut the stems and leaves to collect the buds, you should know that they are still not smokable yet. (Remember that patience is a virtue.)

The marijuana will be damp with THC crystals. Also, the THC will be in a most basic form and can easily lose its potency and decompose into a basic sugar from.

First, you will have to hang and dry the buds you have harvested. You can use a curing room dryer or hang them in your grow tent with the lights off for about two weeks.

After they are dried, you will have to cure the weed. Enclosed it in an airtight Mason jar or container for another month. In the curing process, the marijuana buds will stop breaking down its THC. The curing process will also help the marijuana buds retain and augment its THC content potency.

All in all, it can take up to 8 months in total from the seed or plant transplant stage until the curing stage before you can smoke your homegrown weed. That is not taking into account the two months needed for the beneficial bacteria colonies to grow in large enough numbers before you plant your first seed or plant transplant.

So, you could be looking at a 10-month process, from start to finish, as you grow your own marijuana with an aquaponic growing system.

There are no more powerful combinations in this world than time, patience, and a drive to accomplish something. Nothing worthwhile is gained overnight.

Maintaining Your Aquaponics Setup

As with many things in life, you may need to troubleshoot some problems or issues when it comes to your basic aquaponics grow system setup. You may need to add extra nutrient supplements to your aquaponics growing system.

You will have to deal with the smell of the marijuana as it grows. Marijuana creates a very dank and sweetly pungent smell as it grows that is unmistakable. What will you do with the fish once their purpose is served?

In this chapter, we will discuss some of these issues.

Potassium and Phosphorus Supplement

The blooming, or flowering phase is the most crucial aspect of the marijuana grow cycle. It is more important than the growing, or vegetative phase in my opinion. It is during this period that the bud, the fruit of the plant, the part of the plant that you will smoke, develops.

Marijuana plants use up a lot of nutrients during this period. Marijuana plants require a lot of nutrients during the blooming phase, on a continual basis.

There is some debate among home growers of marijuana that aquaponics grow systems do not provide vital nutrients like potassium and phosphorus as the plants grow. Nutrients like potassium and phosphorus can be vital to the plant's quality as it grows during the blooming phase.

These nutrients, which can be found in bananas, can help your plants develop larger buds. When you provide your plants with as much nutrient nourishment as possible, you will also increase the potency of the THC content.

During the blooming phase of your marijuana plant's growth, you could add some liquid seaweed or potassium and phosphorus gardening supplement as they grow. Still, this can be expensive. Also, since we are going the organic and natural growing route here, why add industrial grade chemicals now?

There is a solution to this process.

You could add vermicompost and vermitea to your grow tank grow media on a daily or weekly basis. Vermicompost is organic compost that was created by worms.

In a vermicomposting bin, tray beds are lined with organic and paper waste. The trays are lined with shredded cardboard, coffee grounds, fruit and vegetable castoffs, orange peels, any kind of organic waste.

The worms eat the organic waste and the poop nutrient-rich vermicompost. Vermicompost is regularly added to the soil by gardeners and farmers to inject plants and crops with added nutrients.

Sprinkling vermicompost and spraying vermitea, a liquid by-product of the vermicomposting process, on your grow media on a regular basis may be a good idea. This will definitely add more nutrient health to your marijuana plant.

I have even a better suggestion, however. It is also a great way to directly inject your marijuana plant with potassium and phosphorus during the blooming stage. Although, if you are squeamish, you may have a problem with the method.

Worms



Source: [Pixabay](#)

Worms have been called the intestines of the earth. When worms eat food and wiggle around underground, they excrete vermicompost directly into the soil. You can replicate this method in your grow tank.

You can put worms directly into your grow bed tray and grow media. They will not drown. Haven't you ever seen worms grouped above ground after a heavy rain. Soil can become so compact and waterlogged after a

heavy rain that the worms do not have any oxygen to breathe. So, they wiggle upwards.

Since you are using a grow media, there will always be air pockets. Also, the grow tank is designed to constantly flood and drain with nutrient-rich water from the fish tank. The worms won't drown.

You can put worms into your grow tank as soon as you plant your first marijuana seed or plant hatchling transplant. Although, you may also want to be more strategic in your method.

The point here is to inject your plant with as much potassium and phosphorus as possible during the blooming stage, remember? You want your plant to develop thick buds that are full of THC.

The most strategic time to put worms in your grow bed and grow tank is during the blooming or flowering period of your plant's growth. During this period, the grow light timers are scheduled to be on for 12 hours and off for 12 hours. This lighting schedule triggers the plant to begin growing its fruit, or the dense buds that will be harvested later and smoked.

This is an important phase of your plant's growth cycle. An injection of the nutrient supplement may not hurt.

After you put the worms in the grow bed directly, you need to feed them. You add dried, and mulched banana rinds directly into your grow tank. The worm will eat the banana rinds and excrete, or poop, potassium and phosphorus-rich vermicompost directly into the grow bed media.

The worms will also aid the beneficial bacteria by eating and converting the fish poop as well.

Also, if any worms die, you can use them as food for the fish. This can be a great way to save on fish feed as well.

This method is not for the squeamish. Especially if you are afraid of worms. Still, it is a great way to inject your growing marijuana plant with the nutrients it needs exactly when it needs it.

Fish Maintenance

When you check on the PH balance, you are not just doing so for the benefit of the bacteria colonies. You are also doing so for the benefit of the fish. If the PH level is too high or low, your fish will become sick or die. The water will just become too toxic for the fish to survive.

Check on your fish regularly. Be prepared to replace fish as needed. It may also be good to only use natural and organic additives, like worms and banana rinds or vermicompost, if you plan to raise the fish for eating.

How many fish you put into the tank is up to you. It also depends on the dimensions of the fish tank that you use. You want to put in as many as possible. Still, you don't want to put in too many fish where there won't be any room for them to move about.

This is a fish tank, not a can of sardines after all. Use your best judgment and just make sure the fish have room to move about.

After you are finished growing your marijuana, you can harvest the fish or keep them in the tank to grow another crop. When you have an aquaponics grow system, you have a lot of options to benefit from its use.

Grow Room Maintenance

As mentioned before, you should check on your aquaponics grow system, especially when you move it into a grow room, on a daily basis. You should not just activate an aquaponics grow system and then forget about it for a few days.

A light bulb can blow out. The air pump or water pump can break down. The plastic tubing pumping water from the fish tank into the grow tank can spring a leak or become dislodged.

If the PH balance of the water move far away from the sweet spot, and you don't check on your aquaponics grow system for days, it may be a complete loss when you return.

You may also want to invest in a venting fan for the grow room. Marijuana gives off a dank, pungent and sweet odor that is unmistakable and instantly recognizable. As you are growing marijuana, this odor will spread throughout the grow room, the exterior room and into your home.

This happened to me. I came home, and to my horror, I smelled marijuana wafting in the air. Also, my marijuana grow room was located on the second floor of my two-story home. When I walked through the front door on the first floor, the unmistakable and instantly recognizable dank stench of marijuana almost knocked me back.

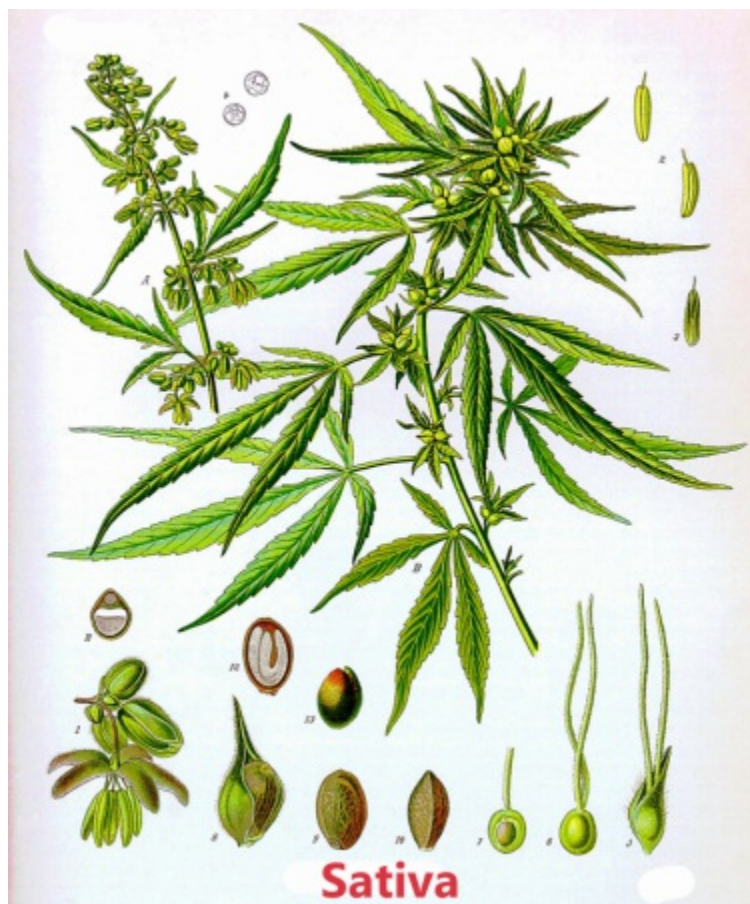
Make sure that your grow room is properly insulated from the rest of your room and ventilates properly. Or you, your guests and neighbor will always get a noticeable whiff of marijuana odor in the air.

Male and Female Marijuana Plants

This may be a little technical, but still very important to understand as you are growing your marijuana.

You want to grow and cultivate female marijuana plants only. Female marijuana plants are called, “Sensimilla.” Female marijuana plants contain dense buds with THC crystals on their leaves on their stems.

Female marijuana plants have no seeds or pollen sacs. Female marijuana plants are very potent in THC and provide a great high when smoked.



Source: [Wikimedia](#)

Whenever you see pictures of marijuana buds on a marijuana plant, ripe for harvesting, in a magazine, TV or social media, you are looking at a female marijuana plant. In the drawing above, the, “A,” model drawing represents the male marijuana plant.

Notice that the stems are full of seeds and pollen sacs. The, “B,” model drawing represents the sensimilla or female marijuana plant. Female marijuana plants have leaves and dense, growing buds with THC crystals forming on them.



A budding female marijuana plant that is crystalizing THC. Source: [Pixabay](#)

A male marijuana plant grows much less bud. Some male marijuana plants don't grow any buds at all. Male marijuana plants mainly grow seeds and pollen sacs. If the pollen sacs release their pollen on a plant, it can make your plant grow more seeds and pollen sacs than THC potent dense buds that can be harvested for smoking.

When you trigger the blooming phase of your plant's growth, when you switch the lighting timer to 12 hours of light and 12 hours of darkness, your marijuana plant will begin blooming or flowering. During this period, your plant will start growing dense buds on the stems and leaves that can be harvested and smoked later on.

As your marijuana plant is blooming and budding, you should pay close attention to the stems, leaves and the area where the stem meets the branches. If you see seeds and pollen sacs growing, clip them.

It is not the end of the world if you don't clip them, or if you cannot tell the difference. You can reference such pics on the internet. The point is, after so much effort, it will be quite a shame to end up with a fully male plant that will bear you more seeds than smokable buds. Remember, male marijuana plants are much less potent in THC than female plants.



Source: [Ilovegrowingmarijuana](#)

You don't have to worry about this if you don't want to. Still, since you are going through the effort of growing marijuana in your home with an aquaponics grow system, it might be worth your while to learn the difference between male and female marijuana plants.



The "fruit," of a matured female marijuana plant, harvestable buds.

Source: [Pixabay](#)

You may want to purchase sensimilla or female marijuana, seeds to put in your grow bed tray when you start the growing process. That will be the best way to know for sure. You can also use the seeds from marijuana that you have bought to smoke.

Still, unless you are an expert, you have no idea of knowing whether those seeds are from male or female marijuana plants.

Conclusion

We live in an era where legalized marijuana, once taboo, is becoming largely decriminalized. Legalized marijuana is slowly becoming accepted in mainstream society. We live in an era where marijuana dispensaries and marijuana-friendly hotels exist.

While it is great that you can buy marijuana legally or illegally nowadays, why not grow your own?

If there is anything that I wanted to stress in this book, it is that anyone can do it.



Why not grow your own marijuana, the safe and organic way, instead of buying it? It will be expensive if you buy it legally from a dispensary or illegally from a drug dealer. Plus, you won't know how it was grown, where it was grown or how potent it is if you buy it illegally.

Why waste money buying marijuana from unknown sources? Why waste money on marijuana that probably isn't THC potent?

If you live in an area where marijuana is not legal, especially growing it, it is in your best interests to keep your small-scale grow operation a secret. After all, if you can't keep it a secret, how can you expect some else to? Don't create a situation where you can be put into criminal and legal jeopardy.

As you have read this book, I hope I have made it very clear that you do not have to be a rocket scientist, engineer or botany expert to create and

maintain your own aquaponics growing system. As long as you keep it small scale, something small enough to fit in a closet or a portable grow room, then you can easily put together and manage an aquaponic growing system.

It may cost you a few hundred dollars to get all of the parts and supplies. Although, you can also substitute parts from materials you have in storage or your garage. It is important to keep it small scale. If you try to make this a large-scale operation, then you will need more supplies and have to supply more nutrient needs for the marijuana plants.

As I have stressed in this book, marijuana plants are very nutrient hungry. You will need multiple tanks of fish to create the nutrients you need to feed the plants. The larger scale the operation, the more potential there is for breakdowns and problems. You will also have to dedicate a lot of time for maintenance.

Keep the operation small scale and manageable, and you will do fine.

The basic thing is to understand the three main components of the aquaponic grow system. The fish. The plant. The bacteria. All three aquaponic components work together in a mutually beneficial relationship. The nitrification process is the key.

The beneficial bacteria colonies are consuming, digesting and converting fish poop into nutrients that can nourish your marijuana plant. With an aquaponic grow system setup, you are basically creating your own organic fertilizer and plant food.

Don't forget the importance of growing your beneficial bacteria colonies before you begin planting your marijuana seeds or plants. You may have to wait two months or longer. Otherwise, there will not be enough nutrients in the recirculating water between the two tanks to nourish your marijuana plants.

The recirculating waters between tanks will nourish your plants as long as the PH balance is 7. There are some things you need to pay attention to, you have to check in on it daily, but if you keep your system in running order, it will look after itself.

You can re-read and reference the other technical aspects of maintaining your aquaponic grow system and your grow room. These are the main points. Every person who builds their own aquaponic grow system will do so in a way with material and supplies unique to their own situation.

Remember the virtue of patience as you embark on your aquaponic grow system project. It will probably take about ten months from the time you begin until you take the first toke of your own homegrown marijuana.

Nothing worthwhile in life is ever easy. Plants do not grow on our timetables. Plants grow on their own timetables. Plants will grow faster based on the efficiency of your aquaponic grow system setup and on how you care for them.

You can't rush something like marijuana cultivation. Keep it small scale and pay close attention to what you are doing, and you will be harvesting buds in no time.

You know, you can buy a fully functional aquaponic grow system home kit for a few hundred dollars, if not a few thousand. They are practical and easy to assemble. They are also very expensive.

You can create your own aquaponic grow system easily. As long as it is small scale and you keep it in a grow room, grow room tent, closet or corner of your home, it will be easily manageable.

In the history of humankind, no one has ever overdosed on marijuana. The recent decriminalization of marijuana in multiple American states speaks to mainstream culture's acceptance of marijuana as a beneficial substance. Whether you are growing marijuana for medicinal or recreational purposes, growing your own the organic way is the best way to go.

This book was borne of all my experience growing marijuana with aquaponic grow systems that I built from scratch. I made a lot of mistakes that I learned from, and in the end, I was successful. I know nothing about aquaponics when I started either.

If I could do it, I am sure you can do it. Don't get hung up on technical terms or the materials that you will need. Think about what area in your home could accommodate an aquaponic grow system. What materials do you own could serve this purpose? What materials would you have to buy? Take it step by step. Your own aquaponic grow system setup will be signature and unique to your own needs. Use this book as a guide, a baseline to learn what you need to do to create your own aquaponic grow system setup.

For the perfect, homegrown marijuana high, it is worth the effort.

Keep on toking my friends.

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