

Growing cannabis at home is a rewarding experience. Further, it can save medical cannabis patients a lot of money. But, if anyone tells you that you can grow weed easy, they are lying. You could be growing cannabis indoors. Or you may be on a quest to mix the best soil for cannabis in your outdoor grow. Either way, there's a lot to know. Fortunately, there are industry tips and experienced cannabis growers willing to share their knowledge. This is RxLeaf's Ultimate resource on how to grow cannabis at home.

## **Different Ways to Grow Cannabis**

A successful cannabis grow could mean growing weed outdoors or using an indoor setup. Each has pros and cons. Importantly, there are many growers that have gone before. And while the experts won't share all of their trade secrets, there are some basics. And these put successful cannabis growing in reach.

## **The Pros and Cons of How to Grow Cannabis at Home**

### **Growing Cannabis Indoors**

If you are setting up for indoor cannabis growing, you'll find you have control over a lot of things. These include: lighting, temperature, humidity, and CO2 levels. It gives the grower a chance to be very precise. And this precision will very likely grow some top shelf cannabis. Understand, though, that these potent yields come at a financial cost.

The money to set up an indoor grow can be very high. You must deal with lights, tents, fans, humidity control, and odor removal. Plus, you'll need to pay close attention after setup to make sure these factors stay in the optimal range.

How to grow cannabis at home indoors means stopping infestation from pests. If mold or mites take hold, it can mean a loss of the whole crop. This is because conditions are ideal in a closed system. But pest conditions are ideal too. This allows pests to take firm hold and quickly populate.



## Hydroponic Grows

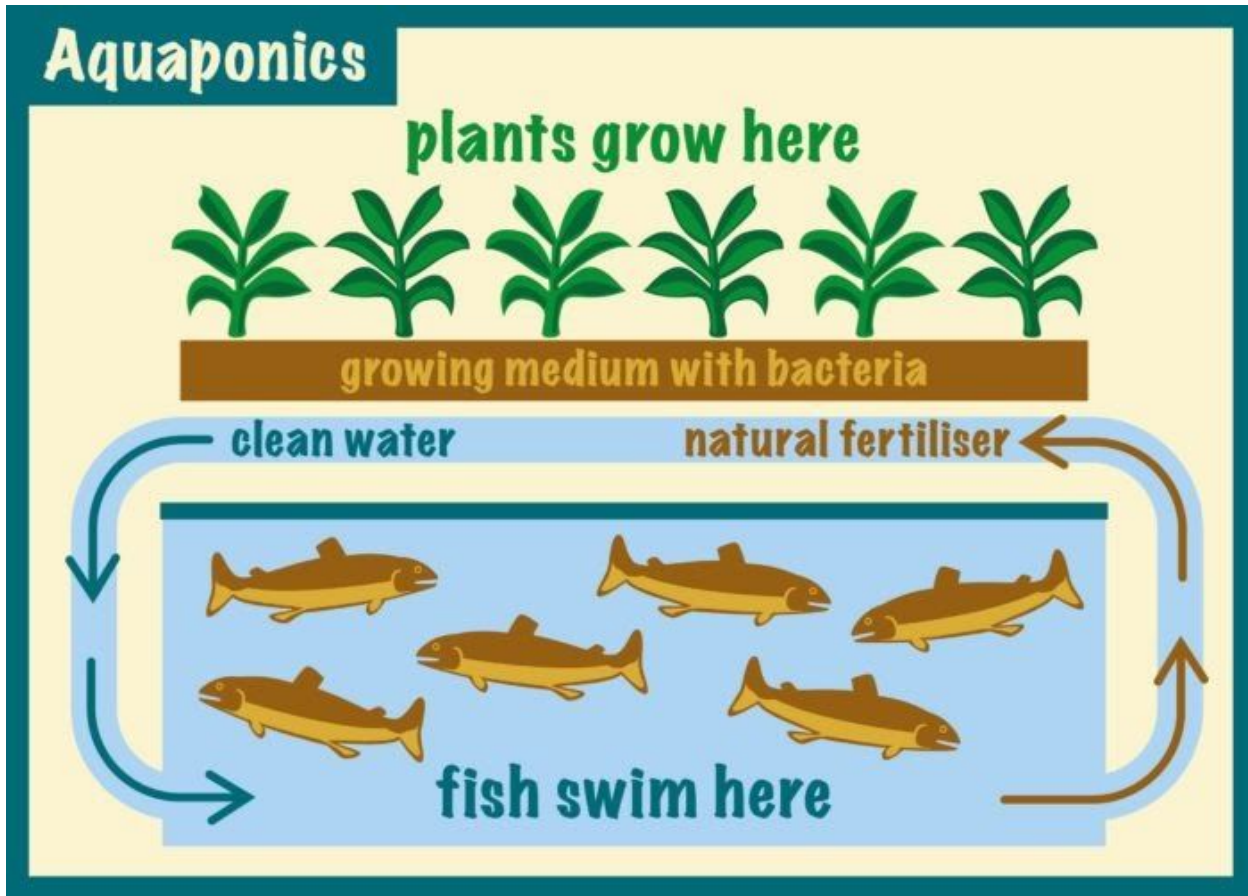
General **hydroponics** are a form of indoor growing cannabis. It uses a different growing medium rather than soil. Basically, you expose roots to a nutrient-rich solution. And the plant gets what it needs without the soil. The big pro of hydroponics is that it gives higher yields while reducing grow time.

Another big advantage for growing cannabis with a hydroponic system is that the growth medium is reusable. This saves time and money. It is also much easier to control soil pH and nutrient levels using soilless potting mix. In fact, the plant roots are continuously exposed to optimal grow conditions. This means the plant doesn't need to spend energy building roots to find soil nutrients. It is a key factor in increasing yield and decreasing grow time.

While the benefits are clear, learning how to grow cannabis at home with a hydroponic system can be a headache for new growers. You'll have to understand nutrient ratios. For example, micronutrients that are naturally in outdoor soil will not be present. On the other hand, you need to monitor hydroponic nutrients. And, you'll need to add micronutrients as necessary.

The second most dangerous problem for your hydroponic pot plant is pH. When using the best soil for cannabis, there is a buffer for pH changes. With a hydroponic system, however, pH can

change quickly – even in a matter of hours! The grower has to watch for pH changes in the hydroponic grow daily.



## How to Grow Cannabis at Home Using Aquaponics

Aquaponics is the combination of aquaculture with a hydroponic system. It uses fish waste to provide nutrients. Truthfully, home aquaponics is not a system for newbies. Cannabis growers using DIY aquaponics will need to create a double-root zone system to manage nutrients. The bottom of the roots are only in contact with the aquaponic fish tank, and the top of the roots are in soil. A burlap barrier can be used to separate the soil and the water.

The best thing about home aquaponics is that it has stability. Basically, it mimics the natural ecosystem. There is a relationship between plants, water, fish, and soil. In many ways, it is less sensitive than a hydroponic system. Be warned, however, there are extra costs for feeding the

fish.

In general, smaller craft cannabis operations lean toward aquaponics. It is expensive to set up, and needs expert level knowledge to maintain the ecology. But, home aquaponics provides a superior product if done well.

## Growing Cannabis Outdoors

Growing cannabis outdoors usually brings cost savings. All the materials needed include: seedlings, good soil, nutrients, sun, and water. One big drawback for outdoor cannabis growers is the length of the growing season. Depending on where you live, there may only be time for one cannabis crop per year. Also, there can be differences in yield and size of bud due to weather challenges. In general, though, you can expect a much higher yield from outdoor cannabis.

But how to grow cannabis at home is not as simple as tossing a seed in the ground and walking away. You will need to watch the plants for disease and pests. Also look for signs of dehydration and lack of nutrients. Importantly, different stages of growth need different nutrients. You will need to plan for this.

## How to Grow Cannabis at Home: Rules for Medical Cannabis Patients

Depending on where you live, it may be possible to grow your own cannabis or assign a caregiver to grow it for you. It is best to check the laws in your geographic area because these vary a LOT. For example, in some places it is illegal to grow cannabis at home and in other areas there is a cap on the number of plants.

Something else to consider is the 'allowable storage.' If you have a big cannabis crop, the laws may say you can't store all of it on site.



## Growing Cannabis for Patients

Some medical cannabis patients may already know how to grow cannabis at home. This doesn't mean they have the space or health to make it happen. Before you agree to become a caregiver, there are some things to think about. Firstly, consider the cost of growing cannabis indoors. Even if you already have things setup for personal use, there will be extra hydro and water costs. Secondly, having a large outdoor grow makes your home a target for theft.

Medical cannabis patients have a license to grow based on their cannabis prescription. For example, in Canada, a [1g/day prescription](#) means you can grow five indoor plants or two outdoor plants. The legal storage limit is 750g.

In every region, choosing to grow for a medical cannabis patient is a contract. And, you must register with the government.

One final consideration is that of growing cannabis near schools. Just about every region has laws against this practice. If you live near a school, check with the municipality to find out how far away you must live.

## Is Growing CBD legal?

This is an interesting question. Just because CBD is legal to purchase in **47 of 50 states** does not mean it is automatically legal to grow your own hemp in the backyard. Learning how to grow cannabis at home can absolutely include the hemp plant. But, a cannabis plant is a cannabis plant as far as the law sees it. You will not be able to grow hemp plants in a garden where it is illegal to grow cannabis. This is true even if you are able to legally purchase CBD products in that same area.

## How To Grow Cannabis at Home: Cannabis Seed or Clone?

Years of breeding the cannabis plant has led to many different cannabis seed options. Each one holds the genetic code to grow an amazing **chemovar**. Which one you choose will depend on your medicinal needs. But, be aware that different types of seeds have different growing times. Here's what you need to know:

### Autoflower Seeds

Autos are the best choice for those trying their hand at growing cannabis for the first time. This is because autoflower seeds flower based on time rather than amount of light. Growing cannabis outdoors with autos is very hard to mess up.

One important ancestor of autoflower seeds is the *Cannabis ruderalis*. This is a hardy variety of pot plant from the harsh climate of Eastern Europe. Some may even begin to produce a bud after only twenty days. So, autoflower seeds tend to finish sooner than other cannabis seeds. It is usually about ten weeks from seed to harvest.

While autos are great for beginners, there is a little drawback. The buds are lower in cannabinoids and this can make them less potent.



## Feminized Seeds

When you look at a cannabis seed, it is impossible to tell if that plant will grow up to be male or female. Cannabis growers, however, need to be sure that the seed will grow into a female that makes big cannabis buds. In fact, having a male pop up in the population of a greenhouse or outdoor grow may ruin everything. The pollen will cause the female plant to germinate seeds and put less energy into big buds. So, with cannabis, it's the female that produces the potent buds that consumers want most.

Feminized seeds are the solution to this problem. Growers make these by forcing a female plant to make pollen and then breed two female plants together. Females can be forced to turn using a spray chemical (colloidal silver or gibberellic acid) or by stressing the female plant.

Therefore, when you buy feminized seeds, you can be certain there will be no surprise males popping up.

## Cloning: How to Grow Cannabis at Home Using a Mother

Starting plants from seed each time is expensive and time-consuming. It also doesn't guarantee you will get the same flavor and potency you have come to love so much. **Cloning** is a form of plant propagation that involves taking a cutting from a mother plant and transplanting it directly.

The clone will be genetically identical to the mother.

Cloning plants also gives plants a head start over those grown from seed. And allows the grower to get flowering sooner.

## What is a Mother Plant?

The mother is a cannabis plant that is not allowed to flower. Some mothers can produce good clones for up to ten years, but most cannabis growers change the mother every six months.

The mother is kept in a vegetative state by manipulating light. She will get eighteen hours of light and six hours of darkness.



## How to Clone Cannabis

Creating cannabis clones is simple. But, it requires attention to detail to avoid the spread of disease. Here's what's needed:

1. Set up two dishes, one with room-temperature water, and another with a rooting hormone to dip the cuttings into.



2. Take a cutting with a sharp blade from low down on the plant (where growth is fresh) at a forty-five-degree angle.
3. Transfer the cutting into the water, and once submerged, cut it again to ensure that the water enters the stem.
4. Wait a few minutes before dipping it into the rooting hormone before transferring it into the rooting medium.

While cloning plants is a cost-effective method of reproducing top-performing plants, it also means that cannabis growers must make sure the mother plants stay healthy. An infected mother means infected clones, and the possibility of greater losses further down the line.

## Transplanting Seedlings

How to grow cannabis at home includes the most delicate of operations. That is transferring your little seedling to a bigger pot or to the outside. Most who are growing cannabis outdoors will still start the seed indoors. Then, once the seeds germinate and the weather turns favorable, the grower transplants them from a seed tray into a more suitably sized pot, or into the ground.

But, transplanting is stressful for plants. And it is very hard to avoid damage to the root system. This is “cannabis transplant shock” and it can destroy all your hard work. To reduce risk, pay attention to how to transplant cannabis using these tips:

## When to Transplant Cannabis

-Always at night. This is because the cannabis seedling will be resting before the sun rises and the next round of photosynthesis starts.

-After the cannabis seedling has at least five leaves.

-Once the roots are established. You can peek through the drainage holes at the bottom of the pot. Healthy roots are white. If there is any discoloration, then the transplant is past due. It means the roots are starting to die. Get on it!

-Many will wait to transplant until the vegetative stage is almost over. If you can give the plant 10 to 14 days of vegetative growth in the finishing pot (or garden), you'll see an explosion in growth before the buds start to come in.



## Lighting Set Ups for Indoor Cannabis Grow

Growing indoor cannabis needs a good lighting setup. In the end, it doesn't matter if you have the best soil for cannabis, if there's no light, there's no growth. Cannabis plants need a lot of light, especially during the stage of vegetative growth.

## How to Grow Cannabis at Home: Types of Grow Lights

Grow lights give artificial light in specific wavelengths that promote the best growth for cannabis plants. Different types of grow lights exist, and these vary in energy consumption, power output, and efficiency.

## Compact Fluorescent Lighting (CFL) Bulbs

CFL lighting systems are the most economic option. These have lower energy requirements and a long lifespan. It's a good choice for beginners who aren't ready to heavily invest in growing cannabis.

## High-Intensity Discharge (HID)

HID lights are also economic. But, while these come cheap, there is a short lifespan. This is in the range of 10,000 hours. The short life makes these less desirable in larger grow operations. When considering how to grow cannabis at home, it's not a concern for medical cannabis patients.

## High-Pressure Sodium (HPS)

HPS lighting systems give high amounts of usable wavelengths. It makes these a widely used lighting option for indoor cannabis grows. The big disadvantage of HPS systems is that they give off huge amounts of heat. This means a venting solution to keep the grow room temperature in the right range.

## Light Emitting Diodes (LED)

Thanks to technological advances, LED lighting systems dominate the market. Modern LEDs are the most energy-efficient solution available. These give off the exact light wavelengths for good photosynthesis. LEDs also give off minimal heat.

Although an LED lighting system needs a lot of money up front, it's efficiency makes up for it in the long run.



## Good Soil and Nutrients

### Top Tip: Soil Should Be Alive

Good soil is one of the most important factors in growing cannabis. Quality soil should have good drainage, hold water well, and have a fluffy, light texture.

Without proper drainage, many cannabis growers may end up over-watering their plants and starving them of oxygen. It's called root rot. Likewise, without good water retention, the roots will quickly dry out and become damaged. Finally, if the texture of the soil is not loose enough, then plants can't develop the strong roots necessary for optimal growth. How to grow cannabis at home needs a lesson on soil health.

But, something only the top growers think about is 'living soil.' It is the highest quality of the different types of soil. And is filled with bacteria, fungi, worms, and nematodes. The relationship between the creatures and the dirt that create the perfect, organic soil that supports plant growth without the need for additional nutrients.

## What about Bagged Soil?

Commercially available garden soil is definitely a possibility for improving your adventures in how to grow cannabis at home. Many of these need little more than water because nutrients are already there. These can suffice in a pinch, but are not the very best you can do for your cannabis grow.

Unfortunately, many growers rely on the use of poor soil with the addition of artificial fertilizers and pesticides. This not only destroys soil health, it grows an inferior plant. True living soil benefits from the synergistic relationships of the insects and animals that call it home.

## DIY Living Soil

For those who wish to go the DIY route, here are some tips to improve the condition of existing soil. These should be done before the growing begins.

- Adding compost to soil provides many of the trace minerals and microbes needed for a thriving ecosystem. Make sure it's well composted before adding it.
- Breathability within the soil is essential for cannabis. The inclusion of taproot plants helps break the soil apart. It also makes it easier for the roots of a cannabis plant to extend.
- Mulching soil with woodchips helps increase root activity. It can also increase the amount of soluble sugar in the soil. This will help root-supporting fungus to thrive.

## What Nutrients for Growing Cannabis?

What goes on in the soil beneath our feet is often a mystery to many novice growers. As a result, many find the topic of nutrient selection and application daunting and overwhelming.

Although many ready-made commercially available nutrient solutions exist, there is an essential group of **nutrients** that cannabis plants require more than others. These include: nitrogen, phosphorus, potassium, calcium, magnesium, and sulfur. Additionally, nitrogen, phosphorus, and Potassium are the most important and are called macronutrients. On every fertilizer bag you

can find the NPK rating. This information will help you find the right fertilizer for each stage of growth.



## Nitrogen

Nitrogen is what fuels the plant's development during the vegetative phase. With insufficient nitrogen, cannabis leaves lose their vibrancy and turn yellow. Also, nitrogen forms part of the amino acids proteins need for strong growth.

## Potassium

Potassium regulates salt and water content by controlling the conversion of CO<sub>2</sub>, H<sub>2</sub>O, and oxygen. Potassium also regulates glucose production. This is the main fuel source for the plant. If a cannabis plant lacks potassium, it will starve.

## Phosphorous

Phosphorous plays an important role in making soil nutrients available to the plant. The best nutrients for flowering stage will include a higher 'P' value. A lack of phosphorus will result in a poor root system and difficulty making buds.

## Growing Cannabis Without Fertilizer

It is possible to grow cannabis without fertilizer, but not recommended. You get what you put into each grow. If you are insecure about how and when to add nutrients, you can stick with an NPK that is balanced. This means that all numbers are the same.

Additionally, you can try adding nutes through natural means. For example, banana peels for potassium. As the peel rots, it also adds phosphorous, nitrogen, and magnesium to organic soil. There are many, many tips and tricks. The key is to prepare with research and be brave.

## Watering: A Common Pitfall

Surprisingly, watering is a tricky skill to master. Growers can't observe the roots directly, and knowing when and how much **to water** is challenging for novices. These two things depend on plant size, stage of growth, climatic conditions, and soil condition.

Overwatering is a common mistake when growing cannabis. In order for the roots to make best use of the soil, they need a regular cycle of wet and dry. When soil is too wet, the roots can't pull in oxygen, and the plant drowns.

Although less likely to occur, underwatering is also problematic for obvious reasons. Under-watered plants often have weak yellow or brown leaves.

Another important and often overlooked aspect of watering is pot size. In pots that are too big, roots can't absorb the available water, and the resulting stagnation may attract unwanted pests. Conversely, in pots that are too small, the roots can't spread out in search of nutrients, something that will likely stunt growth.

As a simple rule of thumb, check the moisture levels of the soil two inches down. Stick your finger into the soil. If it's dry at that depth, then the pot plant needs watering.



## Get Maximum Bud Yield From Cannabis

While it's possible to set and forget, yields will increase dramatically if the gardener tends to the plants frequently. Without selective defoliation and plant training, cannabis plants will grow unevenly at a multitude of angles. Thus it will make poor use of available light and buds will be smaller.

## How to Train Your Cannabis

### Selective Defoliation

**Defoliation** is the act of trimming the lower bits of plants to help it focus on the buds growing higher up. Plant growth that's low down on the plant doesn't get good light. This means it will suck precious resources from the plant.



To defoliate, remove the leaves lower down that aren't connected to a bud site. When done regularly, defoliation also helps maintain proper airflow within the grow, and also helps with light penetration.

## The Low-Stress Technique (LST)

Stress training is a form of manipulation that helps achieve higher yields. Without stress training, cannabis plants will often end up with one large cola. But, by stress-training a plant, it helps ensure the growth of several colas populated with larger dense buds.

To stress-train a plant, tie a piece of twine from the stem to the edge of the pot, bending the plant slightly. Branches lower down on the plant should begin to extend upward and eventually provide an even canopy. The secret is to move the tie in a clockwise direction at regular increments every day or two. It takes time to train plants effectively, but the effects on final yields and bud quality are often well worth the effort.

## Trellising

**Trellising**, also known as scrogging, involves the placement of a large net over the cannabis grow. This net keeps the canopy at a uniform height and encourages the plants to grow horizontally. By growing horizontally rather than vertically, plants make much more efficient use of both the available light and space. This has a big impact on the size of the final buds.



## Harvest Time and Beyond

### Flushing Two Weeks Before Harvesting

**Flushing cannabis** refers to the act of allowing the plants to use up available nutrients before harvest. The process involves watering the plants without applying nutrients. It also makes for a much smoother smoke in the final product because it forces the cannabis plant to use up nutrients.

Flushing is only necessary where growers apply supplemental nutrients during the grow phase. Flushing agents, while not entirely necessary, can help. These contain chelates that bind with other compounds and help remove unwanted nutes and salt via natural processes.

The timing of a flush is important, and it's often chemovar-specific. As a general guide, many growers do a flush two weeks before harvest.

## Harvesting

Harvesting is the culmination of the growing phase and is often the most exciting. Timing is of critical importance when harvesting. Harvest too early and cannabinoid levels may not have peaked. Harvest too late and you'll lose potency as cannabinoids, like THC, degrade.

Most cultivators will want to harvest when THC levels are at their maximum. And the best way to gauge THC levels is by studying the **trichomes**. Clear trichomes are present on the young, developing buds. But, when these become cloudy, it's a sign that THC levels are peaking, and the harvest should begin. If the trichomes start to turn amber, this is a sign that the THC is converting to CBN (and you are leaving things too late).

Bear in mind that not all trichomes will develop at the same rate. The buds up top may well reach maturity before those lower down. In such cases, some growers prefer to split the harvest in two, one for the top half and one for the bottom. You don't have to harvest all of the buds on the same day.

## Drying and Curing Cannabis

**Curing cannabis** begins after harvest. It's a method of preserving the buds by removing excess moisture, something that ensures optimal taste and high potency. Curing properly also eliminates the possibility of **dangerous molds**.

To cure cannabis, the first step is to dry it. Begin by placing the branches on a drying rack or hanging them from a wire. Ensure the temperature remains stable at between sixty and seventy degrees Fahrenheit. The humidity should be in the forty-five to fifty-five percent range to encourage consistent drying. You will need to have a gauge that measures temperature and humidity. Depending on the drying space, you may need the help of a dehumidifier.

After one to two weeks, when the branches snap easily rather than bend. This is when the plants are sufficiently dry.

The final curing phase is completed in a glass jar. Trim the buds carefully and place them in an enclosed glass jar in a cool, dark place. Every day, you will 'burp the jar' which means unscrew the cap and let excess moisture come out. At the end, your careful attention we create perfectly cured, dank buds of cannabis medicine.



Photo Credit: C.Cronkel

## **Cannabis and the Rapid Growth of Canadian Home Healthcare**

Pests, such as aphids, spider mites, and thrips, can wreak havoc on any grow. It can mean the end for some. And for inexperienced growers who don't spot the warning signs in time, a seemingly innocuous mark on a **leaf** can quickly wipe out an entire crop.

### **Introduce Beneficial Insects**

No one wants to douse their plants in cancer-causing chemicals. It defeats the purpose of growing good medicine. A **holistic approach** that works alongside mother nature is a more preferable approach to pest control: introduce a predator.

Insects such as ladybugs, predator mites, and predatory nematodes will all feast on those

problematic invaders and keep their numbers under control. You'll hardly notice them there and you surely won't notice any pest damage.

## Plant Oil Extracts

Whether cayenne pepper, rosemary, garlic, cinnamon, or thyme, there are many seasonings that we humans love that pests find offensive. Plant oil insecticides are made from a mixture of plant extracts and are a powerful natural insecticide.

If growing cannabis outdoors, consider using companion plants. These are plants that you place alongside the cannabis that act as good friends and keep the pests away. Basil, garlic, marigolds, and mint are companion plants that will ward off leaf-eating insects as well as deer and rabbits.

## How to Grow Cannabis at Home

For those who have remained busy and vigilant throughout the growing season, an abundant crop awaits. And there's no greater pleasure than sharing some freshly cured home-grown cannabis with friends. Enjoy your cannabis growing!