

— TOM WHISTLER —



HOW TO GROW MARIJUANA

FROM SEED TO HARVEST – COMPLETE
STEP BY STEP GUIDE FOR BEGINNERS

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How to Grow Marijuana

The Complete Beginner's Guide for Growing Top-Quality Weed Indoors and Outdoors

By
Tom Whistler

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Book - I

How to Grow Marijuana

- *From Seed to Harvest*

Complete Step by Step Guide for Beginners

INTRODUCTION

I want to thank you and congratulate you for purchasing the book, *“How to Grow Marijuana: From Seed to Harvest - Complete Step by Step Guide for Beginners”*.

This book contains proven steps and strategies on how to cultivate marijuana for your personal medicinal and recreational use. This is suitable for beginners and for those who have tried before but were dissatisfied with the results.

The cultivation and consumption of the cannabis plant has been controversial for decades. Despite the widespread and long-standing prohibition in many countries around the world, the said practices were kept. Growers and users used to hide their deeds. Their actions may be illegal but they were not necessarily immoral, unethical or destructive. With the discovery of the different medicinal properties of marijuana, the barriers against the cultivation and consumption are becoming a thing of the past.

The legalization of growing and using marijuana in several states in the US and in many parts of the world is a success of those who took the risk of applying and maintaining the practices. Cultivating your own cannabis plants entails voicing your support for the political movement and enjoying your right to do it. The best part of it all is that you can have a homegrown natural remedy to a variety of health conditions.

It is easy to understand if you perceive the challenge of growing the plant as intimidating. It might be your first foray into the world of gardening. You might not know how and where to start. With this book, you will be able to know about the basics of marijuana cultivation such as:

- Steps in marijuana cultivation
- Seed selection
- Seed germination methods
- Requirements and plant care for outdoor marijuana cultivation
- Requirements and plant care for indoor marijuana

cultivation

- Common marijuana plant problems and their solutions
- Pest control and prevention
- Proper harvesting

Plus, you will also know more about the different medical benefits you may get from marijuana. Hint: There is more to it than just the high!

Thanks again for purchasing this book, I hope you enjoy it!

CHAPTER 1

Cannabis Cultivation for Yourself, by Yourself

Cannabis will go down in history as one of the most controversial plants of all time. More popularly known as marijuana, the plant is notorious for being the source of a substance that many people abuse for psychoactive effects. On the other side, there are researchers, health care professionals, manufacturers and tribesmen who back up the cultivation and use of the plant for medical, industrial and cultural purposes.

In many countries, it is still illegal to grow, possess, sell and utilize cannabis. However, the discovery of its medicinal properties, especially for the management of some cancers and behavioral disorders, has paved the way for the legalization of medical marijuana in countries such as Canada, Colombia, Chile, Israel, Spain, Belgium, Austria, Finland, Netherlands, United Kingdom and Czech Republic. Marijuana use, be it recreational or medical, is still prohibited under the US federal law but 29 states have already legalized medical marijuana as of 2016 and many are expected to follow suit.

The industrial sector benefits from the cultivation of the plant as well. All the species under the genus *Cannabis* used for manufacturing are known collectively as hemp or industrial hemp. It is often utilized for the production of fuel, paper, textiles, biodegradable plastics and construction materials. Aside from its multiple industrial uses, the plant is valued for requiring little to no harmful chemicals for its cultivation and processing. That means it is not only good for the body but for the environment as well.

The first use of marijuana dates back to the ancient times. It has been integrated into different rituals and festivities since then. Take the *Holi* festival in India and Nepal as an example. During the festivities, people therein consume *bhang*, a cannabis derivative containing flowers from the plant.

It is believed that Indian traders brought the plant to Egyptians, and from there, the latter introduced it to other Africans. Slaves who were brought to the Americas were the ones who later on spread the practice of marijuana cultivation and consumption in the two continents.

In spite of its medical, industrial and cultural significance, many people still frown upon the recreational use of marijuana. This, along with the laws banning the use of recreational marijuana, prompted avid users to engage further in illicit trades, covert pot sessions and illegal cultivation of the plant. However, now that the laws prohibiting marijuana cultivation and use have been somewhat relaxed or even lifted in many places, growing your own cannabis plant is worth a try if you are living in a state or country where it is legal.

Why Cultivate

Right now, several big companies are investing millions of money for further research about the plant and its potential uses. Individual marijuana cultivation helps prevent the possible monopoly of the big companies towards the uses of the plant. The practice is also virtuous in many other ways.

If you, or a loved one has a prescription for medicinal marijuana, having your own plant means there is always a remedy nearby. Depending on the laws governing your area, you may also use your plant for self-medication. Get to know the medical benefits of the plant in the next chapter.

Aside from availability, growing your own marijuana plant gives you an assurance of clean produce. You are the only one who knows how your plant is handled and what chemicals are used in your plant. This aspect is valuable if you are using the plant for treatment or if you are into organic farming.

Furthermore, individual and small-scale growers of marijuana attest to the affordability of cultivating the plant and preparing its derivatives. A variety of factors contributed to the high costs of joint and other marijuana products. Topping the list would be the illegal activities involved. Big time marijuana dealers have to bribe government officials in various parts of the world to continue their illegal cultivation, production and sale of the products. The shipment costs are another factor. Keep in mind, the limited number of companies legally allowed to provide medical marijuana. The lack of stiff competition enables them to dictate the price of the useful product. Growing your marijuana and preparing a medicine or joint may require your time, effort and money but it is more affordable than buying it from a dealer.

Legal Considerations

Cannabis cultivation is bound to be a worthwhile activity, except if it is still illegal in your place. Before you jump into the bandwagon, refer to the laws governing marijuana cultivation in your place. Be sure to check the basic requirements and limitations set by the authorities. You have to know all the laws, rules and regulations applicable to marijuana cultivation in your place. Apart from state, federal and national laws, you have to be mindful of laws in your county and city/municipality. If you are renting and/or living in a condominium, you might need to talk to your landlord or building manager about your plan.

The requirements and limitations differ from one place to another. In some states in the US, you have to get a license to cultivate marijuana. If you are going to grow marijuana for trade, you need to apply for a separate permit to do so. Additionally, you must be at least 21 years old. The number of plants you can grow may also be limited. Such is the case in Denver, Colorado. In some states in the US, growers can only grow and cultivate marijuana in an enclosed area.

Verifying the legality of marijuana cultivation and getting documents to do so may be a time-consuming and tedious task. However, this will spare you from possible criminal liabilities, discrimination and headaches later on. It will also help condition your mind and body that you are going to carry out a serious and worthwhile venture.

CHAPTER 2

Medical Benefits of Marijuana

Cannabis has been utilized as a medicinal plant for centuries. You, as well as the majority of medical and recreational users, can attest that the use of such can improve overall feeling of wellness. If you find yourself struggling with the cultivation later on, try to remember the different medical benefits you can get from it.

Cannabinoids are the main forces behind the medical benefits of marijuana. These are also the same compounds that make pot smoking addicting. Unlike other abused substances though, the body is optimized to receive the said compounds thanks to the cannabinoid receptors that are already in the human body even before birth. Even breast milk, which serves as the main source of nutrients for newborns, are packed with the compounds similar to those from marijuana. As the name suggests, the aforementioned receptors and the cannabinoid compounds bind. Their binding brings about a myriad of health benefits such as:

Mood Improvement

Most people who turn to recreational marijuana are after the high the substance can provide. Being on high offers a happy and relaxed feeling. Marijuana indeed has mood stabilizing properties which benefit those who experience typical to extreme mood swings. Some studies even suggest that medical marijuana has great potential in controlling violent mood swings of people with autism.

Pain Management

Marijuana is also popular for the management of different body aches. It can help alleviate headaches and back pain. In addition, some people who suffer from chronic pain report less frequent and/or less intense discomfort after using cannabis derivatives.

Appetite Modulation

Some marijuana strains can trigger the so-called munchies or those sudden bursts of hunger. This only proves that the consumption of cannabis derivatives can affect digestion. However, not all strains can cause munchies.

Other strains, as proven in studies, can actually help modulate appetite. The appetite modulating properties of marijuana are so noteworthy that it is even being studied and used for the management of anorexia and other eating disorders.

Weight Loss

It might seem counterintuitive that marijuana use can bring about munchies and weight loss. After all, plenty of weight loss supplements brag about the fat-burning and appetite-suppressing properties of their ingredients. However, the sudden bursts of hunger from marijuana do not seem to make all users obese. In contrast, majority of users are far from being overweight. There are different factors that affect the weight of users. These are not just about the medical properties of the plant but the behavior of users as well. Some go for pot smoking for comfort while others turn to binge eating.

Sleep Enhancement

Some people regard marijuana as a natural remedy for sleeping problems such as insomnia and sleep apnea. Using it before bedtime can keep nightmares at bay. Aged cannabis derivatives provide better sleep than newly processed ones. It is also helpful to add other natural, complementary sleeping remedies to marijuana instead of over-the-counter sleeping pills. However, this is not advisable to young ones who face sleeping difficulties.

Muscle Relaxation

In some studies, marijuana consumption is effective in relieving muscle spasms and pain for both humans and animals. Some proponents even say that this natural muscle relaxant is better than the ones manufactured by big pharmaceutical companies. It is best to combine marijuana with massages and other remedies that do not involve mass produced pills.

Diabetes Treatment and Risk Reduction

Marijuana use can help improve insulin sensitivity and enhance blood sugar regulation as some studies proved. These, along with the weight loss benefits, are especially helpful to those with diabetes or at risk of developing the chronic condition due to their lifestyle or genetics.

Phobia Management

Some health care professionals warn about the possible paranoia or anxiety

that marijuana consumption can cause. However, many users report that they are able to feel relief for their anxiety, paranoia and phobia. Some people have clinical phobias that are so disruptive that they call for medicines to help them deal with day-to-day living. Many of them turn to marijuana as an alternative and are satisfied by how their decision turns out.

Neuroprotection

The compounds from marijuana affect the brain in many ways. The psychoactive effects are the most controversial of all. These are partly the cause of on-going debates on marijuana legalization. Some antis claim that the legalization is not worth the risk due to the said effects. Pros, on the other hand, highlight the neuroprotective properties of cannabis and its potential in treating Alzheimer's disease, Parkinson's disease and other brain conditions.

Depression Management

Medical marijuana is also seen as a good addition to depression management. It is partly due to its mood stabilizing properties. Aside from mood improvement, it may alleviate fatigue and disinterest that clinically depressed individuals tend to suffer from. However, recreational marijuana may only bring about temporary relief for depression and may trigger addiction instead to some users.

Glaucoma Treatment

Marijuana has the ability to regulate the pressure in the eye which is beneficial in the prevention and treatment of glaucoma. The vasodilation and neuroprotection it offers also helps lower down the risk of vision loss. Smoking pot may treat glaucoma but it is quite time-consuming and dangerous for the lungs. Pills and injections are better and safer alternatives but they require medical expertise.

Cancer Treatment

Cancer patients can benefit from medical marijuana in different ways. Some proponents believed that it could kill cancer cells. While there are few conclusive studies to prove so, it is widely recognized that it helps relieve the side effects of chemotherapy such as pain, nausea, vomiting and appetite loss.

While beneficial in many ways, excessive consumption of marijuana can bring about some health problems. Chills, heavy limbs, burning eyes,

extreme dry mouth, and severe paranoia are some of the signs and symptoms of marijuana overdose. The good thing is that the overdosing is not likely to kill you. Nevertheless, you need to relax, stay hydrated and talk to your health care provider when you experience the aforementioned signs and symptoms.

Plenty of medical benefits from marijuana use are yet to be explored, but the on-going studies are very promising. Before the big pharmaceutical companies beat you to it, make sure you learn how to cultivate your own clean and natural remedy.

CHAPTER 3

Steps in Marijuana Cultivation

Cultivation in general can be quite intimidating if it is your first time. The good thing is that you can master this skill given some time and practice. Aside from honing your gardening skills, you get the chance to reap the fruits of your hard work.

It will take months before you can harvest your own marijuana produce. There is also the possibility that you might not reap anything at all. But that is okay. You can simply start again.

Marijuana cultivation requires time, effort and commitment. It seems hard at first but learning it and harvesting your produce later on will make it fun and worthwhile. Additionally, you will have a better view on gardening as a whole.

There are different ways to grow marijuana and you have to consider a couple of things along the way. But, below are key steps applicable to all techniques of marijuana cultivation.

Step 1: Determine your specific purpose for planting.

Personal consumption is probably your main reason. You have to state though whether it is for medication, recreation or both. Determine the number of users as well. Decide the number of plants you want to grow based on your purpose for planting.

Step 2: Comply with the applicable laws, rules and regulations about planting marijuana in your place.

Search online and visit government websites concerning the cultivation and use of marijuana in your state and country. Read applicable laws, and take note of the requirements and limitations. Talk to your landlord or building manager if you live in an apartment or condominium. Meet the basic legal requirements (such as license or permit) before you even start planting. Always keep in mind the limitations as well. If the law says you can only plant up to 10 marijuana plants, then you should only grow 10 or less. Also, be on the lookout for the recommended techniques and designs. In some state laws, marijuana cultivation should only be done in an enclosed and secured

area to keep minors away.

Step 3: Choose whether to grow your marijuana plants outdoors or indoors.

You should first know what is allowed or recommended in your area before deciding which one to apply. Each technique has its fair share of advantages and disadvantages. You will know more about the best application of each technique in the next chapters. Outdoor cultivation and indoor cultivation with soil as medium remain the most suitable for first-time growers. Once you have mastered one or both of the said methods, you can try out hydroponic gardening which is becoming more popular recently, not just for marijuana cultivation but for growing other crops.

Step 4: Prepare your garden or grow room.

As usual, refer to the recommended designs or the garden requirements if there are any. You have to consider three things for your garden: location, growing medium, and plant needs. Pick the most suitable place in your garden or in your home for your marijuana garden or grow room. As a beginner, soil is the best planting medium you can use, but there are many other growing mediums out there. For your plant needs, you have to focus on lights, water and nutrients. For indoor marijuana cultivation, you may also need to control temperature, humidity, smell and many other aspects.

Step 5: Select your seeds.

Seed selection is one of the most enjoyable parts of marijuana cultivation. There are only three species under the genus *Cannabis*, but you can also choose from many hybrids that marijuana enthusiasts developed in the previous years. The strains come in fun, mysterious and interesting names. It can get pretty confusing as the names of the strains may be totally unrelated to their advantageous properties.

Before you buy seeds, search for the different strains online. You need to consider different things when it comes to seed selection. As a beginner, you have to research which strains are easy to cultivate and highly resilient. Additionally, get to know the best strains for your medical condition if you are planning to grow marijuana for treatment. You should also weigh on the suitability of strains for outdoor or indoor cultivation. It pays to know the quantity and quality of their expected yield as well.

After choosing the strains you want to buy, it is time to look for a supplier. You can buy from a physical or online store. You may also refer to individual breeders. Always verify the legitimacy of your supplier to guarantee that you are purchasing the right strain for your planting goals.

Step 6: Germinate your seeds.

Germination is the process of allowing your seeds to sprout. It will take a few days to a week. There are various methods to do so. Each method requires a different set of materials. There are also conditions that you need to meet to make sure that seed germination takes place. In some methods, you might need to transplant and that calls for additional guidelines you have to follow.

Step 7: Take care of your plants. This involves:

- *Providing light, water and nutrients*
- *Training your plants*
- *Preventing and managing possible plant problems and pest infestation*

Proper plant care differs for each growing phase. Marijuana plants undergo four growing phases and these are: seedling phase, vegetative phase, pre-flowering phase, and flowering phase. Aside from the phase, proper plant care is also different between outdoor and indoor cultivation. This step will take the most time. It is bound to be the most difficult as well.

Step 8: Harvest your produce.

The best part of growing a plant is being able to harvest and use the fruits of your labor, or in the case of marijuana, the flowers. You do not need a big laboratory or a degree to prepare your own natural remedy out of marijuana. There are basic preparations you can try.

The abovementioned steps are just an overview of the actual cultivation process. More detailed guidelines are provided in the next chapters. Now that you are familiar with the steps, you can proceed with choosing your seeds.

CHAPTER 4

Seed Selection to Seed Germination

Seed selection in marijuana cultivation is a lot more complex than you think. Some books are solely dedicated for that subject alone. As a beginner and an individual grower, you do not have to scour such books for now. If you become interested with experimenting and breeding different marijuana seeds, you might want to invest in a book that offers detailed information about them. For the meantime, you simply have to focus on the best seeds for beginners.

In this chapter, you will know about the basics of seed selection and the methods of seed germination. However, you have to remember that you need to prepare your garden first before doing your seed hunt. Your garden and the materials should be ready so you can focus on the seed germination later on. Get to know the ways to prepare your garden in the next chapters.

Types/Species

Cannabis is a member of the Cannabaceae family, which also includes plants that are used as ornaments. There are three classifications/species of cannabis, but there are also hybrids. The three main species are as follows:

Cannabis indica – This one is native to Central Asia. This one is ideal for indoor cultivation as it usually does not go beyond 4 feet. Body relaxation is among the noteworthy health benefits from this species.

Cannabis sativa – This species is native to Southeast Asia. Outdoor cultivation is the most suitable technique for this species because it tends to grow beyond 4 feet. Mood improvement is one of the notable medical benefits from this species.

Cannabis ruderalis – This species is native to Eastern Europe. It grows in the wild which makes it practically a low-maintenance plant. However, it has low tetrahydrocannabinol or THC (the main cannabinoid in cannabis) content and it cannot be used for smoking. Because of this, its seeds are rarely sold to individual growers.

Hybrids – You can get these from seed banks and individual breeders. These are the best option if you want to get the benefits from two different

Cannabis species. Even strains from *C. ruderalis* plants may be sought for hybrids because even though they are less therapeutic than other species, they tend to be highly resilient.

Females versus Males

Marijuana plants are made up of females and males. The basic difference between the two is their flowers. The flowers from male marijuana plants have no value to individual growers who simply want the plants for medication and relaxation. You should only let males develop if you want to reap seeds for future cultivations, for breeding strains, or for sale.

However, the gender of a marijuana seed is not predetermined like that of humans or animals. Each seed is assumed to be 50% female and 50% male. If you stumble upon charts detailing the physical differences of female and male marijuana seeds, they are most likely to be false.

Right now, feminized seeds are your best bet at getting the useful marijuana flowers. These seeds are specifically bred to be 99% females. But, there is a remaining 1% chance that they can turn into hermaphrodites or develop male-like features. This means they will not provide the flowers you are expecting. To prevent this from happening, make sure your marijuana plants are never subjected to stressful conditions.

Additionally, you need to be on the lookout for the early signs of male marijuana plants even if you used feminized seeds. The surest way to find out whether the seeds are male or female is to wait for their flowers to bloom. However, you cannot afford to do that as the male buds have pollens and these may pollinate or fertilize the female buds, causing the latter to form seeds and rendering them unusable for treatment or relaxation.

The right way to manage a possible male marijuana plant is to wait until it goes to the pre-flowering phase. This comes after the vegetative phase or around the sixth week of the plant since germination. The vegetative phase can be likened to childhood while pre-flowering is to puberty. In the former, the plant just gets thicker stems, develops more and bigger leaves, and grows taller. In the pre-flowering phase, it develops buds, which are attached to its main stem, near the meeting point of the leaves and stem. For females, the buds have two or more white hairs, which are referred as pistils. For males, the buds have the so-called balls which are actually pollen sacs. Remove the plant with the spherical buds early on to prevent the pollen sacs from bursting

and spreading their contents to female marijuana plants.

Auto-Flowering Seeds

When you shop for marijuana seeds, you will encounter the term auto-flowering seeds. These are worth considering if you are going to cultivate multiple plants or if you just want to harvest the flowers sooner. It takes 24 hours of light for a regular marijuana seed to grow and 12-hour light cycle for it to flower. In contrast, a marijuana plant from an auto-flowering seed may flower even without 12 hours of darkness like that for regular marijuana plants. As long as there is at least 12 hours of light each day, the plant may flower. You do not need to adjust the lighting or separate the seedling, vegetating and flowering plants. You do not have to wait long for it to produce flowers as well. You can enjoy your harvest after 2 to 3 months.

Best Strains for Beginners

Some marijuana strains are relatively easy to grow and resilient. These are the recommended options for beginners. Strains that flower fast and produce a high yield require utmost care and attention to grow. Many of these are unable to tolerate high-stress conditions, and so they might not make good choices for first-time growers who are bound to commit mistakes as part of the learning process. You can experiment with high-yielding, auto-flowering, highly potent and other more beneficial strains later on, but for now, focus on strains you might be able to grow even with your limited gardening skills.

The best strains for beginners are as follows:

- Blue Cheese – known for its buds that are stickier than normal ones. This strain is suitable for indoor gardening because it can grow well in tight spaces and under LED lights. It also has high resistance against mold and other plant problems. It can withstand overwatering and under-watering, too.
- Jack Herer – named after a pioneer in marijuana legalization. This one thrives whether cultivated outdoors or indoors. It also has a compact size that makes it an ideal choice for growers who want to keep their planting venture discreet.
- Northern Light – notable for being less smelly as compared to most strains. This is perfect for aspiring growers

living in apartments, condominiums or any other buildings where the proximity and presence of marijuana plants may irritate neighbors. Plants from this strain can also withstand less than ideal temperatures and excessive watering.

- Skunk – regarded as one of the classics. It may be grown on soil or soil-less growing mediums (in the case of hydroponics). It can grow even when given less attention. Unlike other strains, it does not stretch much when it develops flowers.

- White Widow – one of the all-time favorites out there. It is unclear how this strain came to be, but most of the leading seed banks today offer this. It is much loved for its potency, clean taste, energizing high, and hardiness as a plant. It can be grown indoors and outdoors, even in places such as Scandinavia and UK where the climate is not ideal for the regular marijuana plant.

These are just recommendations. You can still ditch these if you find another resilient and low-maintenance strain of marijuana.

Possible Sources of Seeds

You have three possible sources of marijuana seeds: physical stores, online stores and individual breeders. Physical stores that offer these seeds are still quite rare in many parts of the world. Hence, buying from online stores and individual breeders are more sensible.

Online stores (or seed banks as they are called in the cannabis community) are well-known for the numerous strains they offer. They offer original strains along with their respective versions of the classics. Compared to individual breeders, online seed banks are more reliable when providing auto-flowering and feminized seeds. They give tips on how to grow them as well. Below are the steps in buying marijuana seeds online:

- Make a list of reliable seed banks by visiting forums, reading reviews and asking marijuana growers amongst your friends.
- Get to know the delivery methods that they employ. Look for problems that previous buyers might have encountered. These problems may include blockage in borders or confiscation by the

authorities.

- Simplify your list by removing seed banks that do not cater to your area.
- Go to the websites of the seed banks on your list.
- Check their available strains. See if they have the ones recommended for beginners. Some top seed banks offer more variants of the said strains which could be from their own in-house breeders or from their reliable partners.
- Before you place an order, look at the payment options along with the discounts you can avail. The three main options are cash, credit cards and online payment systems like PayPal. Some let you pay using bitcoins. PayPal gives the best online consumer protection but they do not allow transactions involving marijuana seeds and products on their system. Pay using cash or credit card with discretion. If you have issues with this, you may send an email or message your prospective provider on their website about other payment options.
- Once you have settled your issues with payment option, you may now proceed to placing an order. Indicate the number of seeds you want to buy. Provide your delivery information and pay using your preferred option. Wait for the confirmation of your order. Take note of the expected delivery date.
- Wait until your seeds get delivered. If your order did not arrive on the expected delivery date, contact the seed bank. Strict border controls might have something to do with this. In any case, a reputable seed bank will try to replace it.

If the idea of buying marijuana seeds online scares you, you can always go for local individual breeders. You can refer to your friends who use and grow marijuana for recommendations. The advantages of buying seeds from a local supplier are being able to meet up with him and see the seeds before payment. There is no need for you to enter personal information online. The downside is that the number of strains you can choose from is quite limited, but at least you are assured that you can get seeds right away.

Seed Inspection

Once the seeds you ordered online arrive or if you grab the chance to see them before buying them, try to get rid of unhealthy ones as they are not likely to germinate. First, you have to separate the healthy seeds. A healthy marijuana seed has a shape of a teardrop, about 3/16th inch long and about 1/8th inch wide. Its shell is brown with some darker stripes. In contrast, unhealthy seeds are tiny, soft, whitish, yellowish or greenish.

Ideally, healthy seeds should grow into strong plants. However, veteran growers know that the quality of the seed has less to do with the future health of the plants. As long as the seeds are able to germinate, then everything is fine. The way you care for your plants is a more important factor in ensuring their good health.

Seed Germination

Seed germination is a simple and fun chore but it is also easy to make mistakes in this task. You have to be gentle as the seeds are vulnerable. You should also learn how to wait patiently. Do not go checking on them every minute or every hour after leaving them to sprout. Depending on the germinating conditions and method used, they can sprout within 2 to 7 days. You should do this on springtime so your plants can take advantage of more summer days later on. You can choose one from the four germination methods below:

Method 1: Starter Cube

Marijuana seeds do not come cheap so you do not want to waste any of yours. For beginners like you, using starter cubes to germinate your seeds is highly recommended. The success rate of this method is the highest of the bunch. Below are the steps to germinate using starter cubes:

- Buy a pack of starter cubes that is ideal for your growing technique. (Some are not suitable for hydroponic cultivation so shop wisely.)
- Prepare the starter cubes as instructed in the packaging. Some require getting soaked in water while others may be used without any special preparation at all.
- After that, place each seed in its own starter cube. There

is already a precut hole in each cube. All you have to do is put the seed in the hole. Close the hole by pinching it gently.

- Water as directed in the packaging of the started cubes.

Your seeds are likely to sprout after one to three days in this method. The next step is to transplant your seedlings in a bigger container. Or, you may plant the entire starter cube directly on your main growing medium. Just make sure the starter cubes you use are biodegradable.

Keep in mind to transplant with the tiny white taproot facing downwards. The growing medium should be moist as well. These apply to all seedlings regardless of the germination methods employed.

Method 2: Glass of Water

Seed germination using a glass of water is cheaper than using starter cubes. Another good thing about this method is that it can wake up old seeds and make them viable for planting again. Below are the steps to germinate using a glass of water.

- Get a small, transparent drinking glass and fill it with slightly warm water.
- Soak your seeds in the glass of water for 24 to 32 hours.
- Prepare your growing medium while you wait.

Viable seeds will float and sink afterwards. Each of these seeds will have tiny white taproot. Transplant them if it has been 24 hours since you soak them. Do not soak them beyond 32 hours as they might drown and not germinate at all. If some do not germinate, try using other germination methods.

Method 3: Paper Towel

Using paper towel is another low-cost germination method. However, this can get a little risky. Always remember to be gentle and let your seeds sprout in peace. Below are the steps to germinate using a paper towel:

- Get a piece of paper towel and two plates. Place the piece of paper towel in one of the plates. Wet the half of the paper towel.

- Put the seeds on the moistened part of the paper towel and then fold it. Cover it with the other plate. This keeps the moisture inside. Without it, the seeds will dry and die.
- Check for sprouts every 12 hours. Prepare your growing medium as you wait.

It may take one to four days before the seeds sprout. Older seeds may take longer than that. Before you transplant a seedling, create a hole (about 1 inch deep) in your growing medium.

Method 4: Main Growing Medium

The three methods above involve transplanting seedlings but you do not have to do that if you germinate your seeds directly on your main growing medium. With this method, you will not end up shocking and hurting your seedlings as you transplant them. However, the germination rate for this method is not as good as the others. There is also the possibility that the seeds might get stepped on and crushed when left to sprout outdoors. If you still want to take the risk, below are the steps to germinate using your main growing medium:

- Prepare your growing medium. It is either soil or soil-less (such as coco coir). It may be potted or not.
- Your seeds need warmth to germinate. You can fulfill this need by placing a heating pad or installing a light near your growing medium.
- Moisten your growing medium and create holes as many as your seeds and about 1 inch deep.
- Place one seed in each hole. For outdoor germination, the seeds should be about 3 to 5 feet away from each other. For indoor germination, one seed per pot is enough.
- Keep the growing medium moist but not too wet as the seeds might drown.
- Allow your seeds to grow.

If it has been 10 days since you planted the seeds and no taproots have

come out, it is safe to assume that they already died. That makes the germination attempt a waste of time and money. To help ensure that few of your seeds survive and become seedlings, employ two or more germination methods.

CHAPTER 5

Outdoor Cultivation

Cannabis has thrived in the outdoors for hundreds of years. As an aspiring grower, you should be able to try outdoor cultivation at least once. Perhaps, the main factors that can stop you from doing so include, the law, the lack of outdoor space and the thought of kids, pets or someone else messing up your marijuana plants. If you are allowed and have the space to do so, then try it. Regarding kids, pets or other persons who might mess up your home plantation, you can always set up a fence to protect your plants from intrusion.

There are many benefits to outdoor marijuana cultivation. With this method, you do not need to buy pots unless you are going to do it in your veranda or roof deck. You can take advantage of sunlight, rainwater and carbon dioxide as well. This also allows you to apply organic farming methods that are organic. All of these make outdoor cultivation less expensive than indoor cultivation.

Cannabis plants are hardy thanks to their being grown in the wild for years so the preparation of your planting site should not be that hard. Another good thing about this is that you can yield more because you can use plants with better foliage. With such, the leaves can undergo photosynthesis that will provide the plant with more energy to produce the flowers later on.

Remember that it is called a weed for a reason. It can grow nearly in the most random of places and sometimes, in the most random of times. The derivatives from outdoor marijuana plants are also known to have better taste and aroma.

To reap the benefits of outdoor marijuana cultivation, you have to spend much time on garden preparation. Getting all your gears ready makes the latter steps of cultivation easier and quicker.

Garden Preparation

It is best to start your garden preparation during early springtime. Make it a part of your annual spring cleaning. Instead of just de-cluttering your home, you should also get rid of the garden waste that the previous season left by on your yard. Once you are done with a general cleanup of your yard. It is time

to choose a spot for your mini marijuana plantation.

Location

You should pick a location where your marijuana plants will receive sunlight the most. Therefore, areas near or under the trees or the awnings of your home are not ideal. Additionally, the location should be away from areas where there is standing water. The plants will be under high stress if you do so. Aside from that, standing water may attract pests. You should also consider the spacing between your plants (3 to 5 feet away from each other). This is to allow your plants to grow freely and to allow you to move between them with so much ease. You should plan and set up drainage for your garden when you are done picking the right location.

If you are setting up your garden in a veranda or roof deck, make sure your plants will be elevated. The flooring therein, especially if it is tiles, may be too warm that it may put the roots of your marijuana plants in high stress. You can elevate your plants by setting a platform using wood since the material is a good insulator of heat. You can simply create a rectangular box and drill holes where you will place the pots. Coat your wooden platform with a water-resistant finish. Make sure there are trays or saucers below the pots. These are meant to catch run-off water from the potted plants.

Soil

The first thing you need to do is to get rid of grasses or weeds on your planting location. The sight of these organisms might mean trouble but their presence actually indicates that the site is good for marijuana plants. If you have other valued plants in it, transfer it somewhere else. Use a rake to further remove debris in the area. You do not want the possibility of a random piece of broken glass blocking or hurting the root of your upcoming marijuana plants.

Getting your soil ready requires checking its pH level. You can buy a soil testing kit from most gardening stores to know the pH level of your soil. There is no such thing as perfect soil for marijuana cultivation but the ideal pH level of your soil should fall within 5.8 to 6.5.

If the pH level of your soil is not within the said range, you have to improve it by adding compost and other organic fertilizers such as bone meal, bloodmeal, worm castings, aged manure and bat guano. You may add some

biodegradable mulch as well. Chemical fertilizers are more readily available but they can hurt your soil in the long run, preventing you to plant regularly. Once your soil gets polluted, you have to let it rest for a while and treat it with organic soil amendments.

The soil type in your yard matters as well. The soil testing kit you are going to buy is likely to have a tool that can help you know whether your soil is clay, sand or loam. You can simply rely on your observation, too. Clay tends to stick together while sand is too loose. Loamy soil is the most ideal because it may stick together but it drains well which is highly preferred by marijuana plants. Loam contains silt, sand, clay and organic matter.

To find out what kind of soil you have, grab a fistful of soil and squeeze it. If it tends to form a ball, it is probably clay and you might need to boost the amount of silt, sand and organic matter in your soil. If it tends to crumble, it is probably sand and you might have to add clay, silt and organic matter to balance it.

When you are done treating it, pour water in your soil. If it drains well yet remains moist, you have achieved the type of soil conducive for your marijuana cultivation.

Water Supply

Marijuana plants require lots of water in order to thrive. You will not have much problem if you live in a place where it rains a lot. If it rarely rains in your place even in springtime, you should buy an extensive hose or place a water faucet nearby. It pays to have a stream or other bodies of water near your place as well. You can get water from the bodies of water for free but it takes a lot of time and effort.

Protection

Your outdoor marijuana plants have three main enemies: wind, animals and humans. There is nothing much you can do to control the wind but if there is a hilly side in your place, you may use such as a natural shield against wind. If there are no hills, you have no other choice but to set up a fence. This does not only protect your plants against wind but possibly against large animals and humans as well.

That is not enough though. You need to surround your mini marijuana plantation with thorny bushes to prevent small animals like rabbits from

messing up your garden. You may also plant other taller plants such as maize. Elderberry and bamboo are both good shields for marijuana plants as well.

Once everything is ready, you can start your hunt for the best strains for outdoor marijuana cultivation. While waiting for your seeds, decide the germination methods you have to employ. Pick at least two. For outdoor cultivation, you might want to germinate some of your seeds directly on the grounds. If you are opting for starter cubes, purchase them before you buy seeds.

After germinating some seeds indoors, you can transfer them to pots for a while. Let them grow indoors first while the outdoor seeds remain. Keep their soil moist but not too wet or too soaking. For the indoor seedlings, give them 24 hours of light. Transfer them outdoors after 3 to 4 weeks.

Plant Care

After transplanting the seedlings, you are bound to face the most tiring part of marijuana cultivation. This requires you to be observant of the way you handle your plants and the way they respond to care you provide.

Vegetative Phase

After the seedling phase, your plants will enter the so-called vegetative phase. It is usually on the second month after germination. In this phase, the plants will do nothing but grow more leaves and stems. They are going to need lots of water, nutrients and sunlight.

During this stage, you should water your plants every other day if it does not rain much in your place. If it rains a lot in one week, you might not need to water at all.

When it comes to nutrients, you should provide nitrogen, phosphorus and potassium (NPK). The ratio between the three macronutrients should be 10-5-7. Add some micronutrients such as zinc, molybdenum, magnesium and iron as well. You can buy all of these from your preferred gardening stores.

As for the sunlight, you cannot do much about it. However, if there are trees in your yard that tend to over your marijuana plants, you should trim the branches of the said trees.

Pre-flowering Phase

The phase between the vegetative and flowering stages is also known as the

stretch. This one only takes 10 to 14 days, though. (The vegetative and flowering phases take a month or more.) In this stage, you should gradually increase the water supply and nutrients you give to your marijuana plants. As to the nutrients, you should adjust the ratio of NPK to 5-10-7 or 5-50-17.

In this phase, you have to do the elimination for your male marijuana plants. Do not wait until the 14th day before you proceed with this task. Male marijuana plants tend to mature faster than their female counterparts do so you should act as soon as possible.

Remember to look at the appearance of the buds. Male buds tend to resemble small balls while female buds have hairs.

Flowering Phase

This stage may take 6 to 22 weeks. This is the stage where you can finally see the possible quality and quantity of your harvest. If you are using chemical fertilizers, you have to lessen the supply during the flowering stage to prevent the flowers from tasting and smelling like chemicals. Stop supplying nutrients altogether on the last two weeks. In this phase, the plant will stop growing but it will focus more on producing flowers.

Common Plant Problems and Their Solutions

As a first-time grower, you are likely to make mistakes and it might take a toll on the health of your marijuana plants. When they reach the vegetative phase, many of their health problems may manifest. Below are some signs of common plant problems that many beginners tend to experience with their outdoor marijuana plants.

- Drooping leaves – This is a sign of overwatering. In many instances, the foliage remains green and lean, but it is drooping down from the excessive amounts of water they get. The solution here is quite easy. You have just to lessen the amounts you provide but if it is quite rainy in your place and your plants are on the ground, you might want to put some cover to the soil. Improve drainage as well. Make sure that no standing water is near your plants.
- Limping leaves – This is a sign of under-watering. You have to boost up the amounts of water you provide. Aside from

that, get rid of plants or grasses that might be competing with your marijuana plants for water.

- Cupping leaves – This is a sign of heat stress. In this problem, the tips of the leaves are pointed up while the sides are curled up in response to too much heat. In the flowering stage, aside from cupping leaves, extensive growth at the top of the flowers is another sign that the plants are getting too much heat. You may help cool them down by adding some water. Also, you might need to provide some shade to stop the heat from affecting the flowers of your marijuana plants.

- Clawing leaves with brown spots – This is a sign of wind burn. The brown spots are actually burns from strong winds that your plants had to withstand outdoors. Help them by setting up a better fence to lessen the impact of strong winds to the plants.

- Brown spots on lower and middle parts of the leaves – sign of pH fluctuations. The remedy herein is to add compost to your plants. It pays to have your own compost nearby.

Your marijuana may encounter many other plant problems. You can spot these problems on their leaves. They might manifest as brown spots, burnt margins or tips, and yellowish foliage. Always be on the lookout because these problems are going to lessen the potency and quantity of your yield. Also, be mindful of the nutrients you provide. The quantity may be the cause for the plant problems. Adjust the amount you provide accordingly.

Pest Control

Pest control may involve the use of organic solutions, chemical solutions or a combination of both. You can set up fence to fend off the larger pests but for bugs, the battle is harder. Chemical solutions are the fastest of the three. However, too much from these may cause the bugs to develop resistance. You will end up using more, spending more and polluting your soil. It may affect your yield as well. Organic solutions may not be effective but at least they are safe. These are also less expensive. Between the two, organic solutions are better in the long run, unless the pest infestation is severe. For terrible pest infestation, a combination of the two is the most efficient.

Detection is the first step in pest control. This is another reason for you to

inspect your plants regularly. Aside from the top sides of the foliage, check the undersides of the leaves and stems, too. Blisters, bites, glossy leaves and webs are some of the signs of insect infestations. Thrips, whiteflies, beetles, mealybugs, leaf miners, aphids, spider mites, snails and slugs are some of the pests that are likely to feast on your marijuana plants.

Organisms

One organic solution is to use your own hands in removing visible pests. Just wear protective gloves for this. Picking snails and slugs should not be a problem.

You may also seek the help of other organisms. You can actually fight off insects with the help of other insects such as lacewings, praying mantises, and ladybugs. These helpful bugs are now being bred commercially to help growers ward off pests organically. Aside from the said bugs, you may also recruit turtles, lizards or birds. You have to leave some food to attract them to your garden though. Be careful when using this method if you only have a small garden as the help you sought might end up becoming pests in the end if they do not have many pests to feast on. You should only consider these if you already have plants that are around two feet tall. If they are still shorter than that, the helpful animals you are introducing may hurt them during their vegetative phase.

Pesticides

Right now, there are organic and chemical pesticides available in many gardening stores and nurseries. As much as possible, you should go with the organic ones as they are made specifically with a plant's natural pest control mechanism in mind. Of all organic pesticides out there, the most sought after is pyrethrum. The downside with all organic pesticides is that, even though they are supposed to be green solutions, they can actually kill even the beneficial animals that are around the area or the animals you introduced. Keep in mind that you are not supposed to use them in the last few weeks of flowering.

The pests may be indicative of other problems in your plants or garden. There may be pH fluctuations, the soil may not be draining well or your plants may not be cleansed properly. Treat these problems along with the pest infestation.

Prevention

The best solution against pests is always prevention. Before you plant, clean your yard well and look for possible pest infestation in your existing plant. You may also apply seaweed extract on the roots of your marijuana plants while they are still on their vegetative phase.

Homemade Remedies

One low-cost preventive solution is that you bath your plants with mild soap and water. To do this, get a gallon of water of water and mix two tablespoons of mild liquid soap. Put your solution in a spray bottle and spritz it evenly on the entire plant. Wait for two minutes before you rinse it off. It is important to get rid of the solution as the soap may damage the plants when left for too long.

You may also mix minced garlic and water. Spraying this mixture can keep beetle and other bugs away from your plants. Just like the soap and water solution, you should wash off the garlic and water mixture as they might cause damage to the plants. The downside with garlic is that the smell might also affect you. Wear a facemask as you spray.

Some growers use alcohol along with the water and soap solution. This can repel snails and slugs in your garden but too much of the alcohol may negatively affect the resin production in your plants. This might also affect the quantity and quality of yield.

You may find other homemade recipes for pest prevention online. Be careful though and make sure to follow the guidelines.

Companion Planting

Unleash the gardener in you by employing companion planting for pest prevention. Onions, cabbages, geraniums, mints and other plants that have a strong smell are good companions for your marijuana plants. Their strong smell is partly because of the chemicals they have that are toxic to some pests. The smell does not only repel the pests from the odorous plants but to the area where they are planted as well.

Aside from pest prevention, this planting technique is beneficial for providing an additional camouflage for your marijuana plants. The downside herein, apart from the possibility that you might have no idea how to plant

them, is that they might compete with your marijuana plants for water and nutrients. To prevent this from happening, make sure there is enough water for both the marijuana plants along with their companion plants.

Outdoor marijuana cultivation will make you fall in love with nature. In a few months, you are going to thank it for helping you grow your marijuana plants and providing you with a bountiful yield. The best thing you can do to pay nature back is to use organic farming methods.

CHAPTER 6

Indoor Cultivation

Indoor marijuana cultivation is an ideal option if you are living in an apartment or condominium, or if you do not have enough space in your yard. If that is what the law in your area says, then you have no other option but to grow your marijuana indoors. It must have a lock if you are living with minors and pets or if you just want to prevent visitors from intruding your plants as they grow quietly.

Growing marijuana indoors may not be the natural and traditional way but it still has advantages on its own. In this method, you can provide better security for your plants against human intrusion, strong wind, heavy rains, and wild animals. This also allows you to control many aspects of the cultivation like water and light supply. With such control, you may be able to influence your plants to flower sooner than their outdoor counterparts may. You can effectively get rid of male plants and prevent the possibility of pollination as well. Outdoors, you may not be able to do the job perfectly due to the possibility of wind carrying pollens from male plants in your area. It is hygienic to cultivate marijuana plants indoor as well. The cleanliness and your control make indoor marijuana cultivation a more suitable option than outdoors for growers who are after the medical benefits of the plants.

However, indoor marijuana cultivation tends to be more expensive than doing it outdoors. You have to prepare for the costs even if you are just planning to raise only a handful of plants in pots. Set aside a budget for utility bills since you will be using electricity and water a lot. Once you have created a spending plan, it is time to start working on your indoor garden or grow room.

Garden Preparation

Unlike outdoor cultivation, you do not have to mind the season to kick off your indoor marijuana cultivation. You are not going to depend too much on the sunlight and rainwater anyway. Decide the number of plants early on to determine the size of your grow room.

Room Preparation

Clear out the room you will be using. Take out all of the unnecessary furniture. Get rid of curtains, clothes, carpet or any other item where mold may grow.

There should be total darkness during the flowering phase to avoid disrupting the plants. Therefore, the room where you want to place them should have no holes where lights may enter. It is important that you set up a room even if you are planning to place your plants near a windowsill during the vegetative phase. Any lights that unintentionally enter the room may confuse your marijuana plants and trigger their hermaphroditism during the flowering phase. They will have seeded flowers. Overall, the quantity and quality of your yield will be affected.

Cover windows or any holes with tough materials. Fabric and paper are not ideal because they might get easily torn and punctured. Paper does not go well with water spills as well. Fabric may become breeding ground for mold. You can seal holes with opaque reflective tape.

There should be drainage as well. Standing water can affect the pH level of your soil when left for a long time. It may attract pests as well.

The grow room should have an area of 1 to 2 square meters. The distance between the lamps and plants matter, too. Make sure the lights and your plants are at least 50 centimeters away from each other.

Grow boxes and grow tents are also worth considering. Each one can hold at least 8 plants. Some can even hold up to 200 plants. Decide the number of plants you are about to cultivate then choose the appropriate grow box or grow tent if you do not want to dedicate an entire room for growing them.

A grow box or grow tent is a great space- and time-saver. It often comes with its own lights and exhaust system. They are also water-proof. You only need to do a few things to make them ideal for your indoor marijuana cultivation. The only downside is its price. However, you may reuse it multiple times as long as you are taking good care of it. It is usable for hydroponic cultivation as well. The best thing about it is that it does not require excessive modifications in your home.

Container

You should buy separate pots for the seedlings and vegetative phases. The right size of the pots depends on the expected height of marijuana plants. For 1- to 2-foot plants, 3 to 5 gallon pots or containers are the most suitable. For 3-foot plants, 5 to 7 gallon pots or containers are the most appropriate while for those up to 4-foot and beyond, 6 to 8 gallon pots or containers are the best options. You should also buy saucers or trays that will catch runoff water.

Growing medium

Get organic soil as growing medium. You may also opt for coco-, peat-, or sphagnum-based mediums. You should make sure that your growing medium is sterilized. Do not just get random soil from public places as they might have eggs from pests.

Artificial Lighting

Photoperiod is an important aspect of marijuana cultivation. Photoperiod refers to the time when the plants receive light. With indoor cultivation, you can only fulfill this need artificially.

Even if you are placing your plants beside the windowsill, it is still important to provide them with a more stable source of light. For marijuana grown in a closet or small area, lights with low wattages (250-400 watts) will suffice. You may even opt for regular fluorescents for such.

For marijuana cultivated in a more spacious room, lights with high wattages (600-1000 watts) are recommended. Metal Halide (MH) and High-Pressure Sodium (HPS) bulbs and ballasts are the ideal lighting equipment for these.

When you shop for lights, always try to find if there are LED lights available. These ones tend not to heat as much as traditional lights.

LED lights costs more upfront but they are energy efficient and cost less in the long run. In contrast, HPS and ML are less expensive but their usage tends to cost more. LED lights also have built-in fan while HPS and ML requires ballasts that allows cooling. You are going to need an outlet timer as well because the plants require specific time frames for their photoperiod.

Improve light reflection in your grow room to use the light more efficiently. For small rooms, emergency blankets are good options because they can reflect up to 70% of light. These are available in camping stores. White paint

and aluminized mylar are more suitable and more efficient in reflecting light for sizable grow rooms. White paint is inexpensive and easy to apply. It can reflect up to 85% of light. Another plus point is its ease of maintenance. Mylar is the most efficient at 97% light reflection but it is also the most expensive. Never use aluminum foil. They do not reflect light well. Aside from that, it is a fire hazard and hard to attach.

Ventilation

There should be fans with ducts providing air for the lights and dragging the warmth from the said lights out of the grow room. This helps in temperature control too. This helps tone down the smell from marijuana as well.

When shopping for fans, always keep in mind the level of noise for their operation and go for something with high CFM rating. Inline fans are worth considering because they are easy to attach to existing ducts.

Temperature

The ideal temperature range of the grow room is 24 to 30 degrees Celsius. Buy and install glass casing to prevent the warmth from the lights from burning your plants. For LED lights, you do not need such glass casing at all. Install a thermometer to help you manage temperature levels.

Smell

Get rid of the stale odor with the help of a carbon filter. Attach the carbon filter into your exhaust fan. You may also use ozone generators.

Humidity

Buy a humidifier, dehumidifier and humidity meter for your grow room. The different growth phases of the marijuana plants require different humidity levels. This help in managing possible mold infestation as well.

Nutrients

Use sea kelp, bat guano and other organic nutrients. You may purchase these separately or you can buy them along with the organic soil you buy. Avoid artificial nutrients due to their high salt content.

The nutrients for indoor marijuana cultivation are the same as the ones for the outdoors. Buy packs of the macro- and micronutrients from nearby gardening stores. Refer to the packaging to know the right amount for each

phase and the preparation.

Water

Tap water is already a good option for your plants. However, you want to know first the pH level of the water. It should be within the range 5.8 to 7. You may boost the pH level of your water by adding lime slices or wood ash. You may also buy a pre-mixed solution. Add pH-lowering solution if the pH level is too high.

Once you are done preparing these things, you may now proceed to seed selection. Go for strains that are shorter than the traditional cannabis plants.

Plant Care and Training

Plant care for indoor marijuana plants is different because training is not optional but it is necessary. Training entails controlling the growth of the plants by modifying them. This is to prevent their stems and leaves from going all over the room. This is to ensure shorter growth as well as denser canopy.

Seedling Phase

In this phase, the plants need 18 to 24 hours of light. Lamps with lower intensity are ideal for the seedling phase. Supply the needed nutrients in the water. Start small then gradually increase as your plants get bigger. The humidity should be 70% to 80%. Use a humidifier to achieve such humidity levels.

Vegetative Phase

During this phase, you may need to transfer your plants to bigger pots. If the plants remain in their small pot for a long time, their roots may not be able to grow properly. This also affects the growth of the entire plants. To transfer, hold the entire soil along with the roots.

Allow the plants to vegetate before inducing them to flower. In this phase, indoor marijuana plants require at least 16 hours of light. If you want to speed up the vegetative phase, you may give your plants 18 to 20 hours of light.

Reduce humidity level in this phase, too. It should be around 50% to 70%. You can achieve this range by using a dehumidifier. You may also opt to boost the rate of exhaust fan.

Employ training during the vegetative phase when the plants grow twice or thrice than their original height. Topping and pinching are common training methods. These are simple and do not require any special equipment.

In topping, you cut the main stem to your preferred plant height. While the main stem heals, other stems of the plants develop faster than usual. If the other stems grow to undesired height, you may employ topping again. However, do not apply this training method more than three times as it may lower down the quality and quantity of yield.

Pinching is similar to topping but instead of cutting, you just need to pinch the main stem. The lower stems develop more rapidly while the main stem heals. The plants may still grow taller as the main stem may still develop after it gets healed.

Low stress training (LSTing) is another way to train your marijuana plants. In this method, you are going to bend and tie the stems of your plants. You need to employ topping first though. A few weeks after, do the bending and tying of stems. This training is also applicable to outdoor marijuana plants if they are likely to grow beyond 5 feet.

Advanced training technique includes Screen of Green (SCROG). This requires a screen in the form of chicken wire. This screen is placed at the top of the plants to prevent the stems from growing beyond it. This requires proper timing. Do not induce flowering until 70% to 80% of the screen is full. If the screen is too full, it may become crowded and the buds may not develop into flowers properly. If you induce flowering while there is still much space in your screen, you will end up with wasted space.

Pre-flowering Phase

When your marijuana plants have grown into your preferred height, it is time to induce them to flower. For the pre-flowering phase, you have to do the cycle of 12-hour light and 12-hour darkness. During this phase, you have to get rid of male marijuana plants.

Flowering Phase

The strongest lights are needed in this phase. If using LED lights, add more on this stage but make sure to shut them down every 12 hours and let them on for 12 hours. An outlet timer can help you sustain this cycle more efficiently. Auto-flowering plants will not need this cycle. You can keep in the room

where others are still in their seedling or vegetative phase. Further lower the humidity level in this phase to keep diseases at bay. The ideal humidity level for the flowering phase ranges from 40% to 50%.

Hydroponics

With indoor cultivation, you may also apply hydroponics after you learn the basics. This technique entails replacing the traditional soil medium with water-soluble fertilizer. It helps you produce more flowers in a shorter period of time but there is a catch: setting up and operating a hydroponic system is a challenging and costly endeavor. This is worth considering if you have plans of selling your produce afterwards. The following are six options you can choose from for a hydroponic system:

- **Aeroponic System** – this is the most effective but the most expensive. This involves a mist that sprays nutrients to the roots of marijuana plants, and a dark sealed box where the roots are kept hanging. Compared to other growing mediums, this means the plants can get more oxygen. The problem with this is that when there is power interruption, the mist will stop working and your plants will die.
- **Deep Water Culture** – this is relatively easy to maintain when compared to other hydroponic systems. The roots of the marijuana plants are in oxygenated nutrient solution. The problem with this, though, is that the plants may also die when there is power interruption and the system stops working. Hydroton clay pebbles and Rockwool are possible growing mediums for this hydroponic system.
- **Nutrient Film** – this is also effective in achieving greater yield but this is meant for experienced growers. This requires expertise in managing the tilted tray, the main feature of this hydroponic system. Multiple marijuana plants are put in the said tray. The nutrients are flown down in the said tray and pumped back afterwards.
- **Ebb and Flow** – this has a relatively simple mechanism. This involves plant containers and a nutrient reservoir. Coco peat

and Rockwool are the growing mediums meant for this hydroponic system. With an ebb and flow system, the nutrient reservoir provides a nutrient-rich solution to the containers of your plants on certain periods. The solution slowly goes back to the reservoir, then the reservoir supplies the solution again.

- Top Feed/Drip Feed – this works similarly to ebb and flow system. The difference is that the nutrients are dripped, not flown, to the roots. The nutrients get drawn back to the nutrient reservoir. Appropriate growing mediums for this are Rockwool, coco peat and hydroton clay pebbles.

- Passive Wick System – this is the most commonly used of all types of hydroponic systems. Coco peat, peat moss and vermiculate are the three ideal growing mediums for this hydroponic system. The plants just sit in their growing mediums then the wick draws up nutrients from the solution below them.

Common Plant Problems and Their Solutions

Indoor marijuana plants are not immune to problems. Aside from those mentioned for the outdoor plants, you should also look for the following signs of plant problems common to marijuana plants grown indoors.

- Yellowish leaves with burnt tips – sign of light burn. Your indoor marijuana plants might be too close to the grow lights. Move the lights further or if it is fixed in place, move your pots lower or further away

- Patches of white powder in the leaves – sign of mildew. The patches of white are actually white powdery mildew or simply known as WPM. This can be remedied immediately. It is easy but do not underestimate this as it might trigger rotting buds later on. Get rid of them as soon as possible by washing them with a homemade remedy. You may mix 4 teaspoons of Neem Oil in one gallon of water. You may also substitute this mixture with milk and water (1:9 ratio) or baking soda and water (2 tablespoons to one gallon).

- Rotting buds – sign of mold growth inside. There is

nothing much you can do to save the affected buds. However, you can prevent the other buds from getting affected. Cut the rotten buds immediately. Trim down some leaves as well, especially those that are near the rotten buds. The mold is a sign of high humidity in your grow room so improve ventilation and use a dehumidifier to further lower the humidity levels.

Pest Control

You should act fast when it comes to pest control for indoor marijuana plants. You may go with organic pesticides or get rid of the pests manually. You do not need to build a fence. You do not need to buy helpful bugs as well as they might dwell inside your home.

Pest Prevention

You are not likely to get slugs, snails or other bugs in your indoor marijuana grow room. As long as you keep the room clean, there should not be much pest infestation. You should maintain a tidy home too. Seal random holes and repair leaks to prevent pests such as rats and snakes from coming in. They might not be interested with your plants but they might impair vital components of your grow room. Keep your tools sterilized as well.

Indoor marijuana cultivation is very intricate. However, it will be a rewarding one. It is like bringing nature closer to your home.

CHAPTER 7

Harvesting

After months of waiting and caring for your plants, it is time to reap the flowers that you waited for so long. For some, this stage in cultivation is the most fulfilling part. It may even give a more rewarding feeling than the consumption. The great feeling comes from the idea that you are done with the toughest parts of the cultivation process.

There are three major considerations for the harvesting stage and these are: timing, drying and curing. This will help determine the taste of your buds later on.

Timing

This aspect is important because if you do it too early, the beneficial components of the produce may be too low or too insignificant. If you are too late, the said components may degrade. For the timing, do not just rely on the rough estimate from your seed supplier.

To know the proper timing, you have to evaluate the leaves and flowers of your marijuana plants. The tips of most leaves are going to turn yellow as they near maturity. You may remove these leaves to allow flowers below to receive light.

You should inspect the trichomes or the crystal-like parts in the flowers as well. You are going to need magnifying glass for this step. The shape of a trichome is likened to mushroom up close. They look like dewdrops due to their colorless appearance. However, they will turn amber when they are nearing maturity. You may harvest during the time they turn amber or when they appear cloudy.

You may also assess the pistils or the white hairs in your flowers. Do not harvest when there are still new hairs growing. When there is no more new growth, wait until they turn dark. You may start harvesting when 50% to 90% of the hairs have darkened.

To harvest, get a large knife and pruners. Use the pruners to get rid of the large marijuana leaves. Leave the small ones because they protect the trichomes. Use the knife to cut each branch. Handle each branch with care to

avoid wasting the trichomes.

Drying

Drying takes a few days to two weeks. You may set up a drying box or buy a readymade drying cabinet. It should have a fan but it should not be directed to the marijuana flowers. The flowers are regarded as dried when the stems seem to crack easily instead of bending. You may already roll the flowers and smoke them but if you want a better-tasting joint, proceed to curing.

Curing

Have mason jars for this stage. Use small scissors to further remove some of the remaining leaves. You may place the cuttings in a separate container so you may use them for cooking later on. Separate the flower buds from the stems individually. Fill each mason jar with flower buds up to 75%.

Curing is important because it gets rid the grassy smell and taste of the plant. For the first two weeks, open the jars twice a day for 15 minutes. This will help remove the remaining moisture. You may only open it once a week after that. In the 4th week, you may open it once a month. You may continue doing this until the 6th month. After that, keep your cured marijuana in a jar for longer storage.

You may trade your stored marijuana. You may cook using them. You may use them for smoking. Best of all, enjoy the health benefits from your homegrown remedy.

CONCLUSION

Thank you again for purchasing this book!

I hope this book was able to help you to grow marijuana successfully, be it outdoors or indoors. Hopefully, it was able to guide in the entire process—from selecting the best seeds to harvesting the fruits of your labor. Most of all, I wish your yield is high in terms of quality and quantity.

The next step is to enjoy your produce. Share your newfound knowledge to friends who may also be interested with taking their love to marijuana to another level.

Thank you and good luck!

THANK YOU!

Before you go, I just wanted to say thank you for purchasing my book.

You could have picked from dozens of other books on the same topic but you took a chance and chose this one.

So, a HUGE thanks to you for getting this book and for reading all the way to the end.

Now I wanted to ask you for a small favor. **Could you please take just a few minutes to leave a review for this book on Amazon?**

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Book – II

How to Grow Marijuana Indoors

**A Step-by-Step Beginners Guide to
Growing Top-Quality Weed Indoors**

INTRODUCTION

Over the years, the practice of planting and harvesting Cannabis for personal consumption has become an increasingly popular trend. Instead of looking for distributors and distinguishing between good and bad products, making your own stash has become the more economic (and more rewarding) course of action.

Despite the difficulties that veterans would like you to think, planting, caring for, and harvesting your own stash is easier than you think. The main ingredients are good planning and great dedication.

This is where this manual comes in. It will walk you through everything, from seed selection to storage, and consumption. It will also make you a veteran when it comes to caring for your plants. You'll become an expert with Cannabis in no time.

Take note, though, that this manual isn't just meant for experienced "farmers" who want to brush up on their knowledge. It's also meant for the budding beginner that wants to create their own stash. You'll be walked through the basics all the way to advanced methodologies and tricks to make sure your yield is always beyond your expectations.

Happy Reading!

CHAPTER 1

So You Want Your Own Stash

As a beginner, finding the right place to start in terms of studying can be a daunting task, especially if you've just been enjoying Cannabis as a consumer or a patient.

With that image in mind, you're now looking to recreate the product you've been enjoying so far on your own means, minus your regular dealer and minus having to pay for it.

The first thing you have to understand is the product itself. Yes, you've sampled it and know how good it is, but learning about Cannabis is more than just appreciating what it can do medically and recreationally.

A BACKGROUND ON WEED

Cannabis isn't just called weed because it sounds cool. It's called that because the plant is literally considered weed.

With that thought in mind, avoid generalizing Cannabis as something that can be easily found anywhere. They grow in certain conditions, but given those conditions, they grow as tenaciously as any other garden weed you've pulled out before.

Cannabis is known as a flowering plant. Its genus is known to have three species that all contain the same goodness, which is why you have different types. Mixed with different forms of preparation, you end up with different types of Marijuana.

Marijuana can be consumed like any other vegetable, ground for its oil and of course, smoked by drying and preparing certain parts of the plant.

What makes this flowering herb different from others is the fact that it produces many different chemical compounds that have great medicinal use. Among all these compounds, one ingredient stands out – cannabinoids.

Cannabinoids

If you've smoked weed or consumed anything that contains extracts of Cannabis, you may have experienced what most people call "being stoned".

This can be described as having "heightened mood" and even euphoria. It also causes a certain change in your perception, causing you to experience things differently. Hence, it became a popular recreational substance to use.

The reason for those sensations rests heavily on the cannabinoid content of Marijuana, which is unique within the plant. And just like any other chemical compound, cannabinoids differ from one another depending on their chemical make-up.

There are two kinds of cannabinoids found in Marijuana. You have tetrahydrocannabinol (called THC) and cannabidiol (called CBD). These two ingredients are responsible for the sensations that you experience after consuming Cannabis.

If you've been buying your stash from various dealers, there's a good chance that these types contain higher amounts of THC. With that being said, too much exposure to THC may lead to dependence and paranoia.

On the other hand, CBD works with THC to counteract the initial effects of THC once it's ingested by the body. Instead of causing a "high" like THC, CBD aims to calm your bodily systems and restore balance. This compound makes Cannabis a very effective medicine for symptoms-based diseases.

Why is it called Marijuana?

If you're in a formal discussion, the proper term to use is Cannabis, but the term Marijuana has become a more popular choice in daily lexicon.

The term surfaced during the years that preceded the great American depression. The United States was primarily a non-weed smoking union before the depression. This all changed when large numbers of Mexican immigrants legally found their way onto American soil.

The immigrants were of the smoking type, taking their recreational drugs and practices along with them when they made their way into America. One of these practices was weed, which they fondly called "marijuana".

When the US government started to take notice, it began its campaign against the practice and labelled it as a dangerous substance. It was during this great Depression that the people were looking for something to blame for

all the mishap that has been taking place; they found the perfect culprit its Cannabis.

Taking the Mexican term for their hobby and using it to fuel his campaign against Cannabis, the newly appointed director of the Bureau of Narcotics began using the term “marijuana”. It was during Harry Anslinger’s term as director of the Bureau that the term came to surface and earned its notoriety in daily lexicon.

Marijuana Today

Despite having plenty of medical benefits, the legality of using Cannabis is still a hotly-debated topic in many places. Sadly, it is illegal in some states and countries. Although there are many movements made by various groups to legalize the use of Cannabis, it’s important to work within the law and check for the legality of the plant.

As of today, Marijuana is legal in the following states:

Oregon

Washington D.C.

Colorado

California

Maine

Alaska

Massachusetts

Nevada

As for the rest of the world, Marijuana is enjoyed for recreational use in Spain, Uruguay, Switzerland, Spain and even Canada.

One of the first things you have to check before growing your own Marijuana is to check if doing so is legal in your area. If you have the freedom to use, then the freedom to produce your own follows as well.

THE USES OF MARIJUANA

Besides the obvious “high” that many recreational users enjoy, Cannabis offers many benefits due the myriad compounds that it produces as a plant. When processed properly, Cannabis even rivals the fabled coconut when it

comes to medicinal prowess.

Smoked

When the leaves are dried and smoked similar to recreational use, it gives the most immediate effect. You can attest to this if you've smoked Marijuana before. That feeling of euphoria and muddled perspectives can take place within 10 minutes of smoking.

When it comes to smoking weed, there are two varieties of products available. The most common among these two are, of course, the flowers. The dried, processed buds that you commonly see when you make your purchase. This is the mainstream image of Marijuana with which most people are familiar.

On the other side, you also have concentrates. These products have taken the chemical content of Cannabis and have encapsulated its effects in a more potent form. Here, you can either have oils, waxes, cubes, and even hashes that can also be smoked.

The main difference between smoking buds and concentrates lies within the after-effects. Think of smoking buds as sampling a regular bowl of noodles. On the other hand, smoking concentrates is like eating a bowl of the most exotic and spiciest variety available in the market. With concentrates, you're dealing with raw THC which has been extracted from the plant and purified to an extent that the effect is magnified.

Vapor

If you're a beginner, you could start confusing vaporizing Cannabis for smoking because both forms look similar. It's the equipment that differs between the two.

If you roll joints for smoking, you use a vaporizer or vape pen to savor the vapor. When you smoke, you burn the product and inhale the smoke that contains the chemical compounds required for the experience. When you vaporize, you still subject the product to heat but you don't burn it in the process.

Vaporizing Cannabis has become increasingly popular over the years, as it provides consumers with a more effective way of enjoying Marijuana without having to inhale smoke. Although the equipment is more expensive than

rolling paper, other people consider it to be a worthy investment.

Ingestion

Have you ever heard of space brownies? This is one example of ingesting Cannabis. Some people prefer to have Marijuana as an ingredient in the food that they eat. Sometimes, Cannabis oil is used in cooking or incorporated in the preparation of certain food items.

Compared to smoking and vaporizing, ingesting Marijuana takes a different course. Since the compounds are not inhaled and synthesized immediately into the bloodstream, the effects of ingesting Marijuana won't kick in not until a good half-hour or when your digestive system has broken down the meal.

With a later kick, the effects also last longer with ingestion. This is because the compounds stay in your system longer, affecting your neuron capacitors and sensors for longer periods. Hence, ingesting Marijuana has become a very popular method as it provides consumers with a longer amount of inebriation.

CANNABIS DISSECTED

Yes, planting a tree and waiting for it to bear fruit sounds easy enough, but when it comes to Cannabis, a little background knowledge can go a long way when you're monitoring and caring for your plant.

This is why understanding the parts of your plant is just as important as taking care of it.

Gender

Just like most other plants, Cannabis grows into male and female specimens. The product that you're already enjoying as of today comes from the buds of the female side. These plants produce seedless flowers that produce plenty of THC.

In short, the only reason for you to grow male plants is if you want to propagate your own stash and make seeds of your own. Otherwise, male plants are useless for the consumer.

Fortunately, most seed sellers are aware of this and offer seed batches that are dominantly female. Besides the gender, you can also buy seeds that flower on their own after a delayed period of time, but there will be more on

that in a later chapter.

Cola

No, this doesn't pertain to soda, but the most important part of the plant. A cola is a collection of buds that grew closely to each other on the flower. That is what you're looking for in a good harvest.

If you grew your pot plant right, you should have more than one cola on your plant, near budding sites along the branches. Apart from these colas, the one cola to look out for is the main collection of buds which is also known as the apical bud. This one is located at the very top of your plant.

Pistil and the Stigma

Just like any other flowering plant, you also have a pistil on Cannabis. You will know this part to contain the female reproductive parts of your Marijuana. They are usually located within colas as this is where the buds form.

Attached to the pistil are small, strands of fiber or hair that are called stigma. These are what helps pollinate the flower by collecting pollen from male Cannabis.

Trichome

Another interesting part of the plant is known as the trichome. If you've ever seen a whole plant up-close when it has begun to flower, you'll notice plenty of resin-like droplets forming near the buds of the flower. These droplets of resin are the product of the trichomes.

What makes them interesting is the fact that they serve as protection from predators by deterring them from the plant. Interestingly, these droplets contain very high concentrations of THC and CBD. People that make concentrates and ingestible also use the trichomes of the plant.

CHAPTER 2

Getting Started

Now that you're aware of what Cannabis is and what it can do for you, the next step is getting prepared to produce your own stash. Just like any other hobby, determining your goals for growing Marijuana takes precedence over everything else.

PLANNING

When you're sticking to a general plan, it's best to lay out your personal goals. Begin by asking yourself a few personal questions about your relationship with Cannabis.

What do I want to do with my pot plant?

How often do I want to harvest my buds?

Do I want to sell?

For how many people am I preparing Cannabis for?

These questions will help you paint a better picture of what you want to do. These questions will determine the amount of seeds, equipment, lighting fixtures, and space that you should allot for your pot plants.

Another thing to consider is how you're going to consume your Cannabis. Will you vaporize it? Smoke?

KNOWING YOUR LIMITATIONS

It is important to have control on your consumption and yield. Because your pot will become an accessible resource if you plant it yourself, you might become tempted to increase your daily consumption. This may be either be a good or bad idea, depending on your self-discipline.

If you know your limitations when it comes to consuming Cannabis, you can control the amount of weed you produce personally so that you have enough to tide yourself over with having a little to spare for sudden cravings.

If you end up with too much surplus, you could end up wanting to consume everything in a short period, which can lead to addiction and other medical concerns. You don't want to overdose simply because of the fact that you

have too much stash at home.

The beginner with Cannabis should only be able to consume a full gram in one sitting. That should be more than enough to get you buzzed and satisfied. For that kind of consumption, one pot plant should do the trick. With the right seed, it can yield more than enough to last you a few weeks.

As a beginner, taking care of one pot is also a good start. Once you get the hang of taking care of one pot, then adding more pots as necessary, becomes a more realistic approach than just starting with a large amount of pots with zero experience.

CHOOSING THE INDOOR APPROACH

Regardless of the legality and acceptability of growing Marijuana in your locality, it's always a better option to grow your herbs indoors. This is especially true for beginners who are also looking to understand their plants better.

Control

If you grow Cannabis outdoors, your plants are subject to the unpredictable twists and turns of Mother Nature. You will find yourself on the lookout for rain, sleet, and hail that might damage your precious product.

On top of that, your pot plants are also subject to nature's schedule. It is important to take note that growing Cannabis is being able to increase your yield. To do so, you have to allow your flowering plants to absorb as much nutrients as possible before it blooms. When it blooms, whatever is on the stalk is what you get.

To get the most stalk, most experts try to delay the blooming process by increasing the amount of daylight the plant gets, fooling the plant into a state of nutrient absorption and delaying the blossoming.

You cannot do that if you grow your Cannabis outdoors. That means you harvest, whether you're happy with the buds or not.

Quality

In line with control, you get a better product when you're able to dictate the terms in which your pot plants grow. Because you have better control over the various elements that affect the growth of your Cannabis, you can turn the

tides into your favor by ensuring the plant gets more than its fair share.

You can use aerated soil so that the roots breathe better. You can provide supplemental vitamins that other additives to help increase yield. This means you dictate what kind of flowers you harvest, depending on how well you take care of them.

This is also where variety comes in. With the freedom to manipulate elements such as lighting and fertilizer, you can cultivate different kinds of Cannabis products that have different flavors and effects. There are certainly more avenues to explore when cultivating indoors.

Security

Because you're within the confines of your property, your only concern is the smell of your product. This is especially true in places wherein Marijuana for personal use is still deemed as illegal.

Placing the law aside, cultivating within your home also secures your product from would-be thieves that could just waltz right up to your garden and snag your whole harvest for free. That could be damaging to you especially if you're planning to market your own product within your social circles.

The Down Side

Of course, if growing indoors has its advantages, then it also has its fair share of challenges. The biggest of these challenges is the absence of a natural ecosystem to care for the plant.

Being a flowering plant, Cannabis is prey to mites and other parasites that are attracted to this certain kind of flowering plant. When grown in the wild, Mother Nature provides natural guardians for these plants such as wasps, bees, and other elements. When you grow your Cannabis indoors, these natural forms of protection disappear and you find yourself battling against the elements to keep your pot plant healthy before it can yield.

There are also claims that Cannabis grown with natural light has a crispness that artificial light fails to replicate. With the many tastes, variants, and consumers out there in the market, this crispness can be considered a matter of personal preference as both indoor and outdoor products both have high-quality.

TIMING

Since you'll be planting indoors, you won't have to worry about the seasons and the weather. Whether it's right in the middle of summer or bordering into winter, you can grow your pot plant as long as you have the proper equipment and seeds.

Do not be afraid of starting late in the year with your new hobby. As long as you can take care of the plant, it will yield and provide you with a personal source of Cannabis.

Despite that, you will still have to rely on your calendar when it comes to planning your harvest. Upon planting your seeds, give them about six weeks to absorb nutrients and bulk up. After that, you're sure of a bountiful harvest when the plant starts to bear flowers.

You'll be looking at around four to five months before your first batch becomes ready for curing and consumption. It's a laborious wait but the reward is worth the trouble.

CHAPTER 3

The Bare Necessities

Despite it being weed, Cannabis is an in-demand commodity. You of all people should already know how difficult and costly it is to get your hands on a good batch.

The same thing can be said about growing your own stash. No, you're not going to need a massive botanical garden with state of the art equipment to ensure your first pot plant is successful, but what you already have in your backyard shed may not be enough of a start.

SPACE

The first thing your pot plant is going to need is space in which to grow. You're looking at a flowering plant that should be as tall as your shinbone or knee. In rare cases, your plant may grow to as high as your hips and thigh.

Depending on the seed you're getting, you're going to have to allot plenty of vertical space for your pot plant. However, you don't need to clear out a room, but you will want to make sure that it's an undisturbed place where your Cannabis can suck in light on its own and germinate.

In that same sense, you may not even need a whole room for your Cannabis, especially if you're starting out with one plant. Some experts choose to raise their stash in cabinets, closets, and even underground basements that haven't been used in a long time. Just be sure that you can position the rest of your equipment in your chosen space.

Remember that your space should be easy to clean. Since you won't have Mother Nature's natural protection, you will have to ensure that your plant will have as little critters around them as possible. Keeping your grow area clean all the time will keep away rats, mice, termites, mosquitoes, and other pests away from your precious pot.

Also, make sure that you have access to electricity within your chosen space. As you will learn later, your plants are going to need plenty of artificial lighting and ventilation. To do that, you'll need lights and fans.

In addition to that, your growing space has to be "light-tight". This means you're the one in charge of how much light gets into that space. Because

you're manipulating the amount of light your plant gets by using artificial light, unexpected light from other sources that come at night may confuse your plants and screw up your whole process.

In a way, when you need to have light, you're the one that provides it. When you don't want your plant to experience light, you're in charge of making sure zero light gets into the area.

This can be done with thick, black drapes that cover holes and other openings in your growing space. When your pot plant has had more than 12 hours of sunlight, pull down the drapes to cut off any other light from other sources. This will fool your plant into thinking it's night time.

On top of lighting, you also have to worry about the general temperature and humidity of the area. Although you're dealing with weed here, growing in a humid and warm area is not ideal for your Cannabis. You're going to want a cool and breezy space. If the space is close to a window where fresh air can enter, that's the best.

LIGHTING

This is where things can get expensive. Choosing your growth light is a little like choosing a car, there are plenty features that sound nice but may end up being unnecessary.

Since you're only dealing with one pot plant in the meantime, you don't want anything too fancy. Just make sure that your light can do several things and you're fine:

- You want to make sure that your chosen light covers the entirety of your grow area. Your light adjusts to your plants; not the other way around.
- You will also want lights that can go into different spectrums. This is because plants can thrive better when their light source can give them different wavelengths of energy.
- You also want something with minimal maintenance. Nothing ruins a batch more than having to change bulbs in the middle of a daylight run. This tips off your plants and screws up your harvest.

Choosing a Light

With those considerations in mind, heading into the market for a good grow light should sound easy. Despite that being true, it's the vast number of types and choices that may scare any beginner. This is why understanding what each type does is important for the budding botanist.

High Intensity Discharge (HID)

This is probably the most common type that you'll see in the market because it's considered the industry standard. That means if you had to go with a bare minimum that ensures high-quality products, then HID models are the best way to go.

The main difference these lights have from your regular fluorescent lights at home is the output. For the same amount of electricity these bulbs use, you get more light.

Concentrated in a small area, these bulbs will do a nice job of simulating sunlight for your pot plant, hence the name high-intensity discharge. Simply put, they're brighter.

The main problem with these bulbs is that they produce a lot of heat because of their light output. This is common problem with most high-power lights. Although sunlight is good for growing your Cannabis, too much heat will damage the leaves and ruin the photosynthetic process that bulks up your potential harvest.

Since you're starting with a small bunch or even just one pot plant, you don't want to put too much power there and cook your plant long before it even blossoms.

Fluorescent Lights

Now these aren't like the ones that you have at home. These models use high-output bulbs that aren't as powerful as the earlier entry but do good for smaller batches.

Primarily, they're more affordable because they're not as powerful as the other market leaders. This makes them popular with small-scale gardeners and first-timers.

Despite that, most enthusiasts still use these bulbs at the first stage of the growing process as they don't consume much electricity and get the job done. Later on, they switch to stronger lights to increase their yield.

Light-Emitting Diode (LED)

Considered one of the newer models in lighting, LED grow lights have already been saturating the market for quite some time, generating mixed reviews from various users.

The main premise for LED usage is the need to have a light source that can cater to different light wavelengths to promote the growth of your pot plant. They're more efficient and flexible compared to other models.

Because they use diodes instead of filament-based bulbs, they're virtually more efficient in the sense that they can produce just as much light as any other bulb with less the amount of electricity.

The biggest drawback to using these modern lights is that they're quite pricey. Compared to other forms of lighting, these could be the most expensive things you can handle as a grower, being as much as 10 times pricier than other grow lights in the market.

PICKING THE RIGHT LIGHT

While there are many options in the market when it comes to grow lights, there are a few constants that you have to keep in mind as a beginner:

The first thing you want to consider is your budget. Although lighting is important, you can't blow your whole budget on just the lighting. There's also seed selection and ventilation methods. Don't feel frustrated if you're not using a fancy grow light at the start.

The next thing to consider is the amount of skill that you have to use with the light. Although they're just lights, different models have different set-ups. You could be looking at stands, panels, and other accessories to ensure that the grow light does its job well.

Take into consideration the general appearance and measurements of your grow area. You don't want to get lights that are too bulky for a small area. On the other hand, you also won't do any good with a small light in a large area.

VENTILATION

When you've selected your grow lights, the next thing to consider is how to deliver air to your pot plant.

You may be surprised as to why aeration is something equally important as

air has to be controlled and maintained for a pot plant, but proper ventilation is just as vital as a steady supply of light when it comes to photosynthesis.

This is where things get more complicated. With your chosen lighting system already in place, you're going to have to do some more tweaking with your set-up before setting your pots in.

You'll be needing two things. First, you will need to supply your plant with a consistent stream of fresh air. Second, you should have something that takes out the warm air being caused by your lighting system.

To be able to deliver fresh, outdoor air into your growing area, you'll need an exhaust fan. This tool will serve a dual purpose in bringing in fresh air and expelling warm air from your growing area.

This fan should be installed in an opening close to the top of your growing area but not on the ceiling. Take note that this fan will be operating for days on end, which means you need to find something low maintenance and not too powerful to be safe on your electric bill.

With the exhaust fan in place, you're also going to need one more opening in your growing area, ideally parallel to the position of your exhaust fan. Since the fan will be blowing outward of the growing area, the fresh air has to come in from somewhere. This is what the other opening is for.

This second opening should be protected by a filter or vent that prevents other things from coming into the grow area. You don't want flies or bees or wasps coming in from the outdoors and onto your pot plant.

Testing Your Area

Before placing your pots to get a feel of things, start by placing a thermometer within the area. When you have that, you take two readings.

The first reading to take is when both the fans and the lights are on. In that state, you want to be able to maintain a crisp 70 to 80 F at all times. If your set-up isn't doing that, you're either not getting enough light or your fan is too strong. One of them has to be adjusted. Repositioning the light should remedy the situation.

When you're able to reach that level, and keep it that way for a good 15 minutes, turn off the lights and wait for the area to cool down a bit before getting the second reading. Without any heat from your grow light, the

optimum temperature should be in between 58 and 70 F.

Anything hotter than those temperatures and you'll start burning your leaves. When that happens, your yield becomes affected. This is because photosynthesis happens in the leaves and that process becomes compromised when the leaves are damaged with heat.

Optimizing your equipment to meet those temperature requirements is very important. This temperature range will keep your pot plant healthy and boost your harvest by giving it plenty of carbon dioxide and sunlight needed for great photosynthesis.

Soil

In what medium will your pot plants grow without soil? What sounds like an easy choice to make may not be as simple as it sounds because regular dirt, although accessible, may not be the best thing for your pot plant.

Despite being the traditional method of raising Cannabis, regular soil simply won't do at all. Remember, your pot plant will also be drawing nutrients from its soil. If you give it something sub-par in which to grow, you're also going to end up with sub-par buds.

This is why top-quality soil is required for Cannabis, with it being a weed and everything. The question is, what is top-quality soil?

Take note that standard garden soil doesn't count in this regard. You're looking for potting soil. This is because potting soil is designed for smaller spaces, allowing for breathing space for your roots and more room for nutrients and other additives you might have for your plant.

One good way to go is to approach your local gardening boutique and ask about the best kind of soil for a flowering plant in your area. Chances are, you'll be directed to sample pre-fertilized soil.

Interestingly, you can also prepare pre-fertilized soil using natural methods that don't involve chemical additives and fertilizers. All you need is natural fertilizer like worm casings, bat droppings, dead leaves, and even compost. Mix these things in with a batch of good, firm soil and have the whole mixture sit for two weeks.

Of course, you can also obtain pre-fertilized soil from many gardening

supply stores that create these mixes for you. Simply ask for top-quality soil or pre-fertilized soil.

Important Reminders for Soil

When you've found yourself a good batch of soil, remember to keep some extra stock in handy. This isn't for the next batch, but to replenish the soil that you lose as you move through the germination process.

Remember that soil isn't just a plot on which your pot plants will flourish. It's a hotbed of nutrients and good bacteria that promote the movement and growth of the roots. As your pot plant develops, you will be losing soil and you will notice that your pots will thin out. Hence, you need to replenish that soil right before you have your Cannabis bloom for you.

You also need to consider the container of your plants. In what will you place your soil and Marijuana seeds? A simple pot is woefully insufficient.

Most expert enthusiasts prefer to use small plastic bags or containers in which to grow their product. Although they are cheap and accessible almost anywhere, you will have to put up with transferring your plants once your soil becomes too wet; and you'll find yourself doing that very often.

This is not a bad place to start, especially if you're on a budget. On the other hand, you can also choose to invest in "smart pots", which can be purchased from your local gardening store. These are specially-designed containers that allow for water drainage and promote aerating the soil to give the roots more room in which to grow.

An alternative is to recycle water containers to entertain soil. Old pots and pans can do the trick as well. What's important is to allow for proper drainage. If you're reusing a container, be sure to drill holes that are big enough for excess water to fall out but small enough to keep the soil in as you grow your plants. One thing you don't want to happen with your plants is to have it drown in soupy soil.

NUTRIENTS

Like any other plant, Cannabis also requires a delicate mixture of nutrients in order to thrive and blossom with many colas. In order to reach that, the plant has to be able to absorb various nutrients and synthesize them to translate these nutrients into buds and volume.

Because you're growing indoors, you will have complete control over what your plant eats as it grows. In order for it to yield the kind of harvest you want, you're going to have to supply your pot plant with nutrients.

Depending on the kind of soil you're using, you're already doing half the job if you're placing your Cannabis in pre-fertilized soil. This kind of soil already has a steady amount of Nitrogen, Phosphorous, and Potassium. These are the three nutrients your pot plant needs.

In addition to these three primary components, your Marijuana also needs the following micronutrients to yield a good harvest:

Magnesium

Calcium

Copper

Iron

Again, if you're using top-quality soil, there's a large chance that you already have these components in the soil. The only time you're really going to have to supplement these nutrients is if your plant is showing growth problems.

These problems could range in between being too short, not yielding anything, blossoming out of time, generating disappointing buds, having small leaves and the like.

Unlike humans, you can't just plant vitamins into your soil and expect your plants to enjoy their supplements. These supplements are to be fed to your plant in liquid form. They are watered into the soil where the root bacteria of the plant break it down and synthesize it.

Again, you can obtain these supplements from any gardening boutique. If you're getting your supplies from one shop, you may no longer need to get vitamins and supplements if you're already getting top-quality soil.

CHAPTER 4

Choosing Seeds

Here's probably one of the more exciting parts of growing your Cannabis; choosing what seeds to plant. Although you're just talking about one species, Marijuana has taken such a huge leap in variety when it comes to flavors, growth mechanics, and even gender control.

Although plenty of seeds are self-explanatory, it's important to know what's in the market before placing in an order for some seeds.

If you're a consumer starting with zero background knowledge on seeds, it's easy to become confused by the many terms and types for seeds out in the market right now. If you live in an area where Marijuana is legal, you'll see that the competition is very stiff and every distributor is aiming to come up with the most unique product.

But how can you get more unique than a bunch of buds?

SATIVA VS INDICA

It was mentioned earlier that the genus Cannabis is divided further into sub-species that have mild differences. Two of the more common sub-species are Cannabis Sativa and Cannabis Indica. While both strains are ideal for smoking, vaporizing, and ingesting, their mild differences could throw you off.

The main difference between the two strains lies within their effects on the body. If you're looking to get more relaxation from your product, then you're going to want to get your hands-on Cannabis Sativa seeds.

On the other hand, a more euphoric and energizing sensation comes from Cannabis Indica. These strains have a higher amount of CBD compared to their THC count. Sativa, on the other hand, has more THC. This is the reason behind their differences.

AUTOFLOWERING SEEDS

As the name implies, these seeds begin flowering after a certain time, depending on where you get them. Whatever it is that you've done in between the germination stage and the flowering stage, that's all you're reaping.

These seeds are great for beginners in the sense that you know when to expect your harvest. You can also give yourself a timeline on which you can make predictable results. You won't have to see what happens with your pot plant with these seeds because flowers will bloom regardless of the amount of sunlight and nutrients you give them.

On top of that, these seeds produce smaller plants that are easier to manage. They consume less space and allow you to grow batches in different stages of growth next to each other.

If you want your first batch to be a successful one in the sense that you end up with something to consume, your best bet is to go with an auto-flowering seed strain.

FEMINIZED

Male Cannabis seeds do not produce flowers that are rich in THC and CBD, making them useless for the consumer. Thus, enthusiasts all around the world struggle with the notion of identifying the gender of their plants and getting rid of the male specimens in their population.

When it comes to the reproductive cycle of plants, it's almost impossible to ensure that 100% of your seeds will all be feminine. Despite that, you can come statistically close to this margin with the right breeding methods.

Thanks to many years of research and experimentation done by many seedbanks around the world, you no longer have to worry about weeding out most of the seeds you buy. You can actually buy seed batches that are already feminized by default. This is done by chemically-treating the seeds to produce mostly female plants.

Most feminized packages can guarantee up to 95% female populations of you plant the entire batch. If you're a first-time grower that is looking for a good yield, you will want to look for feminized batches.

Despite that, male seeds also have a purpose, especially for those in the business of distributing Cannabis. To make seeds of your own, you will be needing male plants to pollinate your females and created buds that have seeds.

In those cases, you're going to want to have a regular batch of seeds that haven't been modified to be predominantly female. This is why you have to

be thankful even if your batch of females still produces males. You're probably going to want them to start a new batch once you're consumed your first harvest.

Since Cannabis can also become hermaphrodites (have male and female parts), you will still have to inspect all the flowers on your pot plant to make sure that you only have female flowers. If you miss a male flower by any chance, it will pollinate the other female flowers in your batch, ruining your harvest.

OTHER CLASSIFICATIONS

If you're looking for seeds online, you've probably seen some common names popping up on multiple sales portals:

Super Skunk

AK47

Afghan Skunk

Bubble Gum

Afghan Kush

While these names sound like fancy brand names to attract your attention, they are actually smaller, more specialized strains of Cannabis that have specific effects.

There are some strains that help energize you while giving you less down-times to help you get on with your day. There are other strains that allow you to ease into your evenings easily.

There are also strains that have particular flavors along with the smoke when they're prepared. Others also give off certain scents that some consumers are very particular with.

This is where seed selection becomes interesting. Here, you're opened to the possibility of finding something more specific to your preferences as a consumer. You can begin by duplicating the kind of product with which you're familiar. The best way to do that is to ask your dealer what kind of Cannabis you're buying. There's a good chance the name of the package is the same name as the seeds you want.

When you've successfully grown your first pot plant or batch of plants, you can start experimenting with other varieties. Mixing seed batches and cross-pollinating breeds will give you more customization.

ORDERING SEEDS

If you already have a strain that you want to grow, the next step is finding the best deal for your selection. This can become a bit confusing because global competition is rather ferocious despite the question of Marijuana legality in certain parts of the world.

Here, research is the key. Because of the stiff competition, it's easy to fall into a scam and get duped into thinking you've got a good deal on a shipment only to be disappointed when the harvest comes. Check these sites to find a good provider:

[Dutch Passion](#)

[Nirvana](#)

[MSNL](#)

[Amsterdam Marijuana Seeds](#)

You can call these organizations "seed banks" in the sense that they store and ship seeds all over the world. These are just a few examples of the myriad banks that provide quality shipments to interested enthusiasts.

Of course, you can also go close to home and approach your personal dealer. If you already have a regular supplier of Cannabis, there is a good chance that these dealers are also connected to enthusiasts that are willing to sell you seeds.

SEEDS VERSUS CLONES

Another interesting aspect of growing Cannabis is the possibility of raising a whole plant from the branches of another plant. These are known as clones.

Since Cannabis is considered as a weed, certain parts of the plant that are left alone in ideal conditions will also grow roots and become a full plant in its own regard, just like any other weed when left alone. This is why you can also opt to grow a clone instead of a seed.

The only advantage you'll have with growing clones is that you won't have to nourish any seeds so that they germinate. It's already been done. What

you're doing is you're taking an amputated part of the plant and helping it regenerate.

Once the clone has developed roots of its own, the differences in growing disappear as you already have another new plant that will sprout flowers for you.

CHAPTER 5

Germinating Your Seeds

Now that you have a growing area, seeds, equipment, and everything else you could possibly need, it's time to put your knowledge into practice and have those seeds germinate.

The word “germinate” refers to the process of plants breaking out of their seeds and start growing roots. The process of germination is the first sign of a good yield and is a very delicate process.

THE NATURAL METHOD

For beginners, the best way to germinate a seed is to follow the course of Mother Nature and bury it about a centimeter deep into you pot and soil.

If you bury too deep, your plant will not get enough sunlight to germinate properly. If you bury too shallow, your seedling's roots won't be able to get into the soil well enough to establish itself.

As a grower, the next thing you want to see is a small bud protruding from the surface of your soil. To make that happen, you have to meet a few conditions:

- Your soil has to be moist, but not flooding. If you're using nutrient-rich pre-fertilized soil, then you don't want to be washing away all those nutrients with too much water. You also don't want to drown the seedling.
- The temperature of the soil and its surroundings should be warm, but not too hot as you might damage your seed. It is advisable that you bring your light close to the soil to give the plant a good idea in which direction to grow.

If these conditions are met, you should see the first signs of life spring from the top layer of the soil. As the tap roots of the plant begin to burst from the coating of the seed, your first few leaves should make their way above soil where your healthy lighting system is waiting for them.

SEED SOAKING

On top of the natural way of things, you can also try placing the seeds in a glass of lukewarm water. It's better if you use a clear glass so that you can monitor the progress of your seedlings as you soak them.

As simple as this sounds, soaking your seeds is one of the best ways to get your plants to break their seed coatings. By subjecting the seeds to water, you change the environment of the seed and induce a softening of their outer casings.

This works well if you're using very old seeds that haven't been planted in a long time. They're also great for thick and sturdy seeds that need more time than usual to germinate.

After a few hours of soaking, you will notice that the seeds that are healthy will sink to the bottom of your container. Give a few more hours after that and you'll notice white spots forming on the seeds.

These spots are the taproots trying to break out of the seed and absorb the water. This is a sign that the soaking is working. It's also a sign that means you will have to take the seeds out soon.

Once the taproots have visibly sprung out from the seed casing, take them out of the water and transfer them to your soil and pot. There, the seedlings will not have a complete environment that has everything they need to flourish.

When using this method, it is important to count the hours that you've been soaking your seeds. You cannot leave them in water for more than 24 hours as this will simply down your seeds and make them unusable.

With that being said, there will still be some seeds that will not germinate even if they're left in water for almost a day. When this happens, don't fret, simply take the stubborn seeds out and place them in a warm and damp area to promote germination.

Although this method is fast, it's a precarious method that could end up killing your seeds if you're not careful. When you're buying seeds, be sure to consult with your source if your selection has hard seed cases that need to be soaked. Seeds with soft shells don't really need the soaking and will do just fine in regular conditions.

THE PAPER TOWEL

Another way to get your seeds to germinate is to use a damp paper towel placed on a plate. Make sure that the paper towel isn't too wet. Run it quickly through tap, with just the mildest flow, and wait for the water to cover the whole towel.

When you have your wet towel, place it on a small platter. Place your seeds on top of the towel and then fold the towel in half. After that, cover the whole thing with another platter of the same size. That will provide the seeds with some warmth to stimulate germination.

After about 3 days, check on the paper towel once more. By that time, some of your seeds should have broken through and you should see some tap roots coming out into the paper towel for nutrients. From there, you should immediately transfer your seedlings into their pots and soil.

TRANSFERRING SEEDLINGS

If you're germinating outside your pot, it's very important to immediately transfer your seedlings once they've broken through their shells.

This is because your plants are in dire need of nutrients and water and sunlight in order to garner more building material. If you've placed them on a paper towel or in a glass of water, you're not going to be able to give them everything they need.

Once your plant breaks through, it's done germinating. It's garnered enough energy to pass its first hurdle which is to destroy its seed coating. It goes into the next stage of development which is the vegetative phase.

To get it through that, you're now going to need proper nutrients and sunlight which you can only provide in your grow area. Don't wait for the first few leaves to pop out. As soon as you see your tap roots, transfer them right away.

When transferring your seedlings, be sure to imbed them with the roots facing downward. You already know where the nutrients are and you have to make sure that your seedling is facing in the right direction.

Another thing to note when transferring your seedlings is not to touch the tap roots. You can use tweezers or tongs. This is because your seedling's roots are very sensitive and hungry at this time. They will absorb almost anything they can find. You don't want to be giving them anything else than

the stuff you have for them in your soil.

On top of that, these roots are very tender. You can easily cripple your plant if you don't handle them with care. With damaged roots, your plant won't be able to get everything it needs to give you a bountiful harvest.

Before transferring your seedlings, make sure their new apartment is all set up. Create an opening in the soil which is about a centimeter deep and in the center of the pot. Once you drop your seedlings in, cover up the hole and turn a light on it.

CHAPTER 6

The Vegetative State

Once you've gotten your plant into the pot and into your grow area, you begin the next phase of development: the vegetative phase. Here, you have to make sure that your seedlings get full 24-hour periods of straight light. Your young leaves are going to be spending all their time in photosynthesis and they'll need all the help they can get.

It's called the vegetative phase because all you'll be seeing from your plant are longer stems, more branches and leaves. It's only giving you vegetative life without any flowers or buds. This stage is equally important as what comes after it because this is the time that you prepare your plant to give you a big payload when it's time to harvest the buds.

PRE-VEGETATION

Before you declare that your seedling is done germinating, be on the lookout for the bud that comes from the surface of the soil.

When your Cannabis first shoots from the ground, you're going to notice two smooth leaves from the initial stem. Take note that these leaves will look nothing like any other Cannabis leaf you've seen before.

That's completely normal and no cause for worry. That's a natural part of the germination process. Think of those two abnormal leaves as baby leaves that have resulted from the germination.

Give the seedling about two more days in this state and you'll notice two more leaves from your initial stem. There, you'll notice that these new, serrated leaves are more characteristic of Cannabis leaves. Those are your first official adult leaves. That's the signal that your pot plant has begun the vegetative stage.

Think of this stage as the time that the plant has to create as many leaves and branches as it can before it focuses on giving you flowers. This is why it needs as much help as it can from you, the grower.

Besides being the next phase of development, it's also the longest part of the plant's life. It could take anything in between two weeks to two whole months to get it into the flowering stage.

At this point, your pot plant needs plenty of nitrogen which will come from the soil. This is to help the plant make plenty of healthy branches and leaves. It will also need sunlight so that the leaves have plenty of building material.

If you're using auto-flowering seeds, there's a good chance that you'll have roughly three weeks until your plant starts flowering. If you're not using auto-flowers, then you can dictate the time that the flowering starts by controlling the amount of daytime your plants receive.

MATTERS OF SIZE

The time your plant spends in the vegetative state has a big impact on what kind of harvest you'll be making at the end of the plant life cycle.

Naturally, the larger the plant you grow, the better the harvest. This is because you'll have more leaves and more surfaces on which for colas to grow. When you get more colas, you get more usable Cannabis. You get your money's worth of investment in seeds when the time comes.

This is the main reason the vegetative stage of development is important. Some long-time enthusiasts give their pot plants at least a full month or even more in this state, carefully watching the growth of their plants and providing them with additives and vitamins to ensure a good harvest.

If you're not using auto-flowering seeds, there's a big chance that you can screw up the growing process if you get things wrong. Getting the wrong photoperiods, poor conditions, and negligence when it comes to watering.

GETTING IT RIGHT

If you want to get the biggest yield possible, you have to spoil your plants so that they have everything they need. To do that, several requirements should be met.

First is proper lighting. With your set-up, be prepared to get a boost in your electric bill because you will need to subject your plants to light for more than 18 hours a day.

To do that, your lights have to be on for a considerable amount of time. That will take a certain toll on your bills. The good thing about this is that you don't have to worry about your natural day and night cycles. Since you're growing indoors, you can start your pot plant's "daytime" whenever you want.

Some expert growers even choose to start lighting up their grow areas at night when they sleep so that they don't disturb their plants. They also make sure that they keep their plants in the dark once their photoperiod ends.

One important consideration is to never ever let your budding plants get anything less than 18 hours of light in a day.

The reason behind this is that you want the plant to think that it's still in the early ages of development. In such a state, the plant will eat and grow as much as it can for you. To do that, you'll need to fool the leaves of the plant by giving it as much daylight as you can for as long as possible.

Sometimes, expert enthusiasts decide to give their seedlings a full 24-hour period of light and then just give their plants a mere 6 hours of darkness before starting the next 24-hour period of light.

When your buds start getting an equal amount of day and night, it will start to prepare for the winter. As you already know, the lifespan of Cannabis only lasts short of a year. When the plant starts to feel that winter is around the corner, it'll act accordingly. Whatever nutrients and building material the plant has garnered over its lifespan will be channeled into flowering.

WATERING

In addition to plenty of sunlight, you also want to hydrate your pot plants. They will need an adequate amount of water to power up the process of photosynthesis.

With that thought in mind, it's not just enough to open up the tap and take out the old watering pail. Remember that you're feeding something to your plant when you water it. You're dealing with an organism that has different resistances and requirements from humans. What may be palatable and potable to you may not be the same for your Cannabis.

On that same note, reaching out for that bottle of mineral water could be just as bad an idea as tap water. You could end up flooding your soil with unneeded minerals that could just make your Cannabis sick.

Your water may be clean by your standards because human throats and stomachs can weed away certain contaminants, but your delicate plants don't have stomachs full of bacteria. They have sensitive roots that will take in anything you give it.

You could be looking at too much chlorine, fluoride, calcium, bacteria, fungus, and parasites that could give your plants mineral clogging and even root disease. When that happens, one bad plant will affect the healthy plant sitting next to it if you're growing batches. One small mistake could cost you your whole growing area and everything green inside of it.

Depending on your water source, you could be looking at a combination of good and bad things for your plant. Look back at the discussion of the nutrients your plant needs. If your water has those things, then it's doing the job right. Anything else is going to get in the way of you growing the best batch you can.

This is why you should be filtering your water on your own before watering your plants. In fact, investing in a home-based filtration system isn't just a wise idea for your plants, it's also a great idea for your whole household.

With filtered water, you're sure of what goes into your soil and what your plant eats. That way, you'll be able to determine the causes of problems that could arise in the middle of your growing stages.

One more thing that you have to remember is to never overwater. You would rather want to underwater the plants than to drown them. Malnutrition is easier to remedy than a drowned-out plant.

The next question to ask yourself is how often should you be watering your plants then? This is where your love for your hobby begins to show. Different strains of Cannabis plants will have different watering requirements. There is no universal rule that dictates how much each strain needs.

Watering your Cannabis requires close monitoring of your plants. One good indicator that your plants need watering is when their leaves start to droop. That indicates poor energy and moisture in the area.

When you're actually watering your plants, be careful not to drown your plants. The idea here is not to create a pool with the water. You simply want to improve the moisture of your soil.

If you're using smart pots, any excess water you would have poured out with the holes in the pot. If you're using regular containers and you start having water run-off, you're going to have to delicately transfer your plants to a new container.

CONSISTENCY

Take note that during this stage is that your lighting schedule has to be followed down to the ledger. If you've decided to give 18 hours of light everyday, it has to be the same throughout the whole vegetative stage.

When you start off with a specific lighting period, you have to keep it at that for as long as possible before you enter the flowering stage.

If your lights only operate on a switch, you're going to have to time these photoperiods and act accordingly. When your photoperiod is up, the lights go out and you ensure that your plants live in complete darkness to start their resting period.

One way to circumvent this issue is to use timer switches and link them to your lights. These are inexpensive devices that can be bought separately from lighting boutiques. In some cases, lighting systems for plants will already come with a timer switch included in the package.

With a timer switch, you don't have to monitor the hours of sunlight your plant gets. Simply set the timer to your desired length and it will do the rest. The lights go off when the timer clocks out without you having to be there to flip the switch.

MONITORING

Despite using a timer, you can't just leave your plants unattended for days without checking up on them. Because of all the active elements in your small ecosystem, you will need to monitor the various factors of these elements to ensure that your plant is living in optimum conditions.

It may sound like nitpicking at such an early stage, but every detail that is catered to will contribute to a satisfying number of flowers at the end of everything.

pH Levels

You'll be surprised to know that even soil has a pH level, and it's just as impactful as the Ph level in an aquarium when it comes to taking care of fish.

pH stands for the power of Hydrogen. The presence or absence of Hydrogen in something will indicate if it either acidic or alkaline. This is measured on a scale of 1 to 14.

If the pH level of your soil is pegged at 7, then it's neutral. It's neither acidic nor alkaline, which may mean different things for your plant. Depending on the strain that you have, different seeds may need different pH levels in order to thrive. Most seed packages will have that value indicated with them.

If you're unsure, the safest way to go would be to maintain a pH level dancing in between 6 and 7. This is the safest range for your pot plant in the sense that the soil isn't burning away your roots and it's feisty enough to host all the nutrients that the plant needs.

But how do you measure pH levels in your soil? To do that, you need a testing kit. These are devices that are sensitive to the presence of Hydrogen ions in soil. Testing kits are a bit pricey and can cost you anything from 30\$ upward. But a testing kit will help you ensure that you have the right pH levels for your soil, to ensure proper growth of your plants.

The next thing to ask yourself is what do you do if your pH levels are beyond the 6 to 7 scales as per the testing kit? How do you repair something like that?

The pH kit will help you with that.

There are simple substances that you can also buy at any gardening shop to adjust the pH levels in your soil. What you get are bottles of compounds such as potassium silicate or even essences of Hydrogen inducing agents such as crushed marble and dolomite lime.

You'll only need to drop minute amounts of the substances into the soil. These substances are proactive and can cause immediate changes to the nature of your growing medium.

Should you find a need to correct the pH level of your soil, you must do so sparingly over the course of a few days. If you up the dosage of these substances to adjust the pH level, you're going to create a new osmotic environment to which your plant will adjust. If the change is too drastic, you will stress out your plant and hurt your harvest. This is why going in small steps over a few days is better.

Thus, you'll need to monitor the pH level of your soil daily. This is because your soil will go through myriad changes as your plant's nutrient requirements change over time.

The more your plants eat out of the soil, the less the soil has to offer. The longer your stems and roots grow, the less space is there in the soil for nutrients and good bacteria to grow.

Humidity

On top of the pH level of the soil, you also need to keep the humidity in check. You don't want to maintain your plants in an extremely damp environment with high temperatures from your light. That will allow other life forms to appear on your plants such as unwanted bacteria and other parasites that might have found their way into your soil.

Using a humidifier, you can measure how moist your grow area is. Although you don't want an extremely dry grow area, you still have to adjust. This can easily be done by adjusting your lights so that more of it hits moist areas. You can also change bulbs that have higher light output if your overall grow area is feeling moist.

Temperature

Just like the humidity, the temperature also has to stay constant. Do you remember the initial thermometer readings you took when you selected your growing area? Those conditions have to remain constant throughout the plant's life.

When the temperature changes drastically, you could be giving your plants the wrong impression of the time of year and you could end up flowering ahead of schedule, affecting the amount of Cannabis you're going to yield.

To do all this monitoring sounds like a lot of work, but this is why a lot of enthusiasts call it a labor of love. Cannabis is one of the very few things in this world that share a direct correlation to the labor you cater. The more effort you put in, the better the yield.

POSSIBLE PROBLEMS

As with any other hobby, you will also have your share of problems with growing your first batch. If growing Cannabis didn't have any difficulties and challenges, everyone that was in a legal area to do it would have done it by now.

Pests

Despite growing them in your special growing area, you cannot completely erase the threat of external pests getting in the way of your growing. If you're doing it in a secluded area of your house, you could be looking at rats, mice, cockroaches and even pets that could ruin your batch.

Even parasites from outside your house could make their way into your grow area where they could wreak havoc on the plants you've taken such good care of.

Some stories include enthusiasts finding "buds" on their plants that actually turned out to be caterpillars that have decided to feast on Cannabis leaves before turning into butterflies.

Aside from the temperature, humidity, and pH levels, you should also inspect your plants if they've become unwilling hosts to other organisms that have discovered your makeshift ecosystem.

Be on the lookout for damaged leaves that could have been bitten by other things. Check the corners of your grow area if they've become nests for some spiders or mice. You will also need to check on your ventilation system once in a while. You never know what might get caught in your fans and cause them to stop functioning in the middle of a photoperiod.

Poor Growth

Another thing you can expect from your first batch is the possibility that your plants aren't performing as expected as well as other members of your batch. This could happen during the germination phase at the very beginning.

Some seeds may not germinate as early as the others. Some plants could be shorter than the others. Some could even be a few branches short with small leaves. Some could even look dried out compared to the others.

In these cases, your investigative efforts come into play. As caretaker, it is your job to find out what is causing these deficiencies and to find a way to counteract.

These issues are usually fixed with adding more nutrients to the soil. These supplements can also be obtained from your local gardening boutique.

GROWTH JOURNAL

In line with your monitoring and care for your Cannabis, you should also maintain a growth journal.

Unlike other kinds of journals, you log the details of your observations in your grow journal. Label each plant you have and address them accordingly in your entries. Measure how high each plant grows each day and record their heights on a regular basis.

Count the number of leaves your plants have as well as their branches. Log the temperature readings at various points of the day. Each detail of your plant should go in the journal.

This is important because by recording your plant's development, you begin to get an idea of what works and what doesn't. When something goes wrong, you can systematically trace your steps backward to see if you've made any errors with your growing procedure.

When your plants are stunted, you can note on what day this occurred and trace your steps back to what you've done on that particular day. Were you quick with the watering? Was there an issue with the lighting that time? A growth journal makes your troubleshooting a lot easier and makes finding a solution a more accurate effort.

CHAPTER 7

The Flowering Stage

All your trouble during the vegetative stage transforms into the promise of buds during the flowering stage. Here, all the effort and nutrients you've been giving your plant will come into play and you truly see the value of your investment in your seeds.

The flowering stage of Cannabis denotes the most awaited time for any enthusiast. Here, the plant exhibits the results of your care and attention by beginning to form flower buds that will later on be harvested for their cannabinoid content.

This stage follows the 3 – 6-week vegetative period you put them through. Despite shifting the focus from vegetation to flowers, you have to remember that the plant is still growing. You have to change a few things about your approach but maintain a few more practices.

LIGHTING

Whether you're using auto-flowering seeds or not, you have to help your Cannabis enter the mood and stick with the program. Change your lighting patterns and reduce the number of hours of lighting that your Cannabis gets.

From the usual 18+ hours under the lamp, kick it down to a simple 12-hour cycle with an equal amount of darkness. What this does is that it alerts the plant that winter is coming (even if that isn't the case).

During that stage, the plant will start allotting building material to create the flowers you're hoping to harvest at the end of the cycle. You'll be surprised to know that your Cannabis plant is sensitive enough to notice these changes in temperature and lighting to enter the flowering stage with the right stimuli.

NUTRIENTS

Given that you've already entered the flowering phase, your Cannabis is still going to need plenty of Nitrogen. This is to support the flower in making large amounts of colas for you. If you're supplying nitrogen to your soil, there's no reason to stop doing so.

You're also going to need Hydrogen to support the continued growth spurt of your Cannabis. Yes, it still has more room to grow, especially at this point.

This is known as the “flowering stretch”.

Here, the Cannabis starts to prepare its stems, leaves, and branches to support the number of flowers it will create. As you’ve read earlier, the larger the plant, the larger the yield. Don’t be surprised to see a few inches more on your plant despite you changing your light schedule.

With that in mind, you will have to introduce some new elements into the equation; which are phosphor and potassium. Again, these supplements are readily available commercially.

Nitrogen, Phosphor, and Potassium will work hand in hand in helping your Cannabis put on a few more inches to support the large colas you’ve been expecting. This makes it extremely delicate and critical time for your pot plant.

If, by any chance, you fail to supplement these nutrients or neglect your plants, you will affect your final output and all those weeks of labor and monitoring will go to waste.

SIGNS

You’ll know you’re nearing the finish line when you see pistils and stamens near the leaves of your pot plant. Those are its sex organs and that means it’s preparing to propagate itself for the “winter” you’ve made it feel.

In addition to that, your plant will have shorter spaces in between its leaves to support the nutrient needs of the flowers. When that happens, you’ll see a the first few buds starting to show.

This initial phase and adjustment will take about two to three weeks from the end of your vegetative period. When you start noticing these changes, record them in your journal and mark your calendar. You’ll be harvesting 6 to 8 weeks from that point.

You’re going to want to prune away premature buds that form under the shadows of your plant. These buds aren’t going to be getting enough sunlight to be of any use to you. You also don’t want to be moving your plants around and have them adjust to new altitudes and stress them out at this crucial point.

If you’re noticing large leaves that are blocking some of the buds on your plant, do not cut them. It’s better to sacrifice one bud that won’t grow well instead of cutting of a leaf that could supply the whole plant with nutrients

which will affect the overall harvest. By no means should you damage your leaves. They are your powerhouse at this point and you will need them to bulk up your harvest.

TEMPERATURE AND HUMIDITY

At this particular stage, you need to keep the temperature and humidity at the same levels during this stage. If you induce any changes here, you could be telling the plant to go back to the vegetative state and set you back by a few more weeks.

THE FLOWERING

The magic starts to happen when your plant stops growing. Whatever height it has at that point will no longer change. This is because it will now focus on flowering. That's where all of the nutrients will be going from that point moving forward.

Keep the 12/12 ratio of night and day the same for these last few weeks. This is the time your buds will start to grow in mass. Whatever vegetative growth you've seen in the plant during the vegetative phase will now turn into Cannabis-budding energy during this phase.

You will also notice the protective resin forming near the leaves and the buds. You may think that this is a good time to start sampling your buds. This is wrong and you could potentially waste the whole plant by destroying it for a sample.

If you're only three or four weeks into flowering, you're still far off. Your plant may have stopped growing but it's not yet done working. In between the fourth to sixth week, your buds will start to gain more mass and form colas for you.

Keep the new mix of Phosphor and Potassium coming into the plant on a daily basis. Do so in small increments over the period of a few days. You don't want to shock the plant at such a delicate time but you also want to give it everything it needs.

THE RIPENING

If you've done everything right, your pot plant will start looking like the things you see in magazines and Google searches during the sixth to eighth week of the flowering stage.

Despite the amazing changes that are happening to your plant, you should still be on top of things. As your buds start to fatten and ripen, they will start coming closer to each other on the plant.

This is where you start getting your colas. Because of this change in the structure of the plant, you're also going to get a shift in the weight of the plant. This is where you find plants that are swaying to the side and support them with ballasts and piping.

What's important is to keep these plants underneath the light without having any of your would-be colas in the shadows. Those are what you've been waiting for. The last thing you want is to stunt their growth this late in the game by depriving them of sunlight.

Your plant will grow heavy and more resin will form near the colas and the leaves. You will also begin to get that distinct Cannabis smell from mature plants that betrays the product you are farming in your grow area.

It is also during this time that you should stop fertilizing your soil. This is because you're nearing the end of your cycle and the plant will have very little use for anything else left in the soil. It's taken everything it can and is now working on its own.

You will also want to stop fertilizing now, for the plant to start discarding any surplus nutrients and minerals that could affect the quality of your product. Think of it as a mineral cleanse for your Cannabis.

When doing so, simply give your plant filtered water without any supplements during these weeks. This known as flushing. It will help improve the quality of your harvest by taking out anything unwanted from your plants, leaving only THC and CBD.

You'll know you're nearing the end of the flowering phase when the flowers have already closed the distances between them and your pistils are starting to grow a dark red hue.

You will also have to put up with the powerful odor of not just the resin on the plant but the smell of the flowers. Mind you, Cannabis is not something used for its aromatic properties.

If you're growing in a conservative part of the neighborhood, you'll need to deal with these smells by using carbon filters in your ventilation system.

THE ULTIMATE SIGNAL

For the Cannabis grower, the best time comes when more than half of your pistils have turned a full red. This means that the plant has reached full maturity and is ready for harvesting.

The resin you used to notice upon closer inspection is now visible to the naked eye even from a distance. Here, you will see your Cannabis plant in full bloom; a towering multitude of spiky leaves and fluffy colas that are ripe for the picking.

These things should start taking place by the eighth week of the flowering phase. Along with the formation of these colas, you will also notice the leaves turning yellow.

Don't be thrown off by this sign. This is actually a good thing. This means that your plant has exhausted your nourishment and has put it all into developing these colas for you.

If these yellowing leaves are blocking out the light from other parts of the plant or from other plants in the bunch, don't be afraid to cut them off. What you don't want to cut off are the leaves that are still green. Take note, those leaves still have some fight left in them and the plant is still using them to fatten up your harvest.

Make sure to record the date into your journal and compute the amount of time it took for you to deliver that plant from seedling to harvest.

With that journal log, it's time to move on to the best part about being a Cannabis grower.

CHAPTER 8

The Harvest

You've done your research, you've followed instructions, you've bought what was necessary and you've taken care of the plant like it came from you. Now you're looking at a fine specimen of vegetation and all the fluffy colas that are waiting to get harvested. Congratulations! You've earned this reward.

But now isn't the time to get careless. Now, you have usable product that is ready for consumption, but there are a few more things that require your attention.

CUTTING

You've seen the finished product in the jar at this point if you've already consumed Cannabis before. This is part that takes you from the planting into the jar. You'll be surprised to know that there are still a few more labors of love to perform before you can fully enjoy your product.

One of these challenges is cutting the plant. What may sound easy may make the following stages difficult or easy depending on how well you separate what you want from the plant and what you no longer need from the plant.

In order to hack your plant up properly, start with the larger, dying leaves of the plant. Since they're now devoid of nutrients, you'll no longer need them and they will serve no purpose when you're taking the colas to the next stage.

However, if you do have smaller leaves that are still green and are close to the buds and colas, you will certainly want to keep them on the plant when you chop it up. This is because these leaves still have some work to do as you dry your Cannabis and prepare it for curing.

The idea behind proper cutting is to separate your colas from each other into smaller sections that are easier to handle. This is accomplished by cutting off each branch off from the main stem of the plant. With enough luck, each branch you cut off will have a healthy cola attached to it. That's what you want.

Gently lay these branches aside as you go through all your mature Cannabis plants. When handling your colas, never be too rough and eager and forceful.

Doing so will potentially damage the trichomes attached to the branches, affecting the overall level of THC and CBD in the flowers. That is something you certainly don't want to happen when you're so close to enjoying your Marijuana.

DRYING

If you were to light up or grind or consume your colas now as they are, you will be sorely disappointed. These buds are not yet ready for consumption as they have just been separated from the mother plant. You'll need to take out any remaining moisture in them and convert them into consumable form.

This is what drying is for. Dried Cannabis is what you want. When you're this close to having some great product, you cannot afford to make mistakes here as well.

Now that you have a bunch of individual branches with their own colas, attach them to a hanging system. A hanger rack meant for underwear and other unmentionables is a great idea because it has separate clips for each item.

Treat your branches as a piece of underwear that you're letting them out to dry, but you don't want them to dry in the sun. That will just burn the plant and destroy its chemical composition, thereby ruining, and wasting all your effort.

When you've attached all your branches to a hanging system. Check one last time and make sure none of the branches or colas are touching each other. Each to his own at this point. That is how you want them throughout the whole drying process.

When it comes to drying, you want a dark but dry area. You want as little humidity as possible because your goal here is to remove moisture, not introduce more of it to the plant.

You can use your now-unused grow area. Just remove your lights but keep the drapes and the ventilation system. If you're starting a new batch right away, just select a dark area where the smell of the plants and the drying process won't bother anyone. In case you haven't noticed during the cutting, your mature Cannabis has quite the aroma.

Hang your branches and colas upside down from the ceiling of your drying

area. Make sure it's not humid and there is ventilation. Since no heat or light will be getting in, you'll need circulation to take care of the drying process.

You can do that with a simple fan in the drying area. You have to be careful not to point your ventilation system directly at your drying branches and colas. You don't want to blow off all the buds and scatter them like confetti in your drying area. Just make sure that air is circulating around all your branches and that will do.

Leave your branches and colas in the drying area for a few days. In some cases, the drying will even take a few weeks. This is because these plants still have plenty of nutrients left in the branches that have to dry out.

You'll know when the Cannabis is ready when the stems begin to crack when you try to bend them. That's a sign that the branches have lost their flexibility and have turned brittle. That means you've successfully drained the plant of moisture at that point.

CURING

Can you start smoking your dried Cannabis at this point? Of course, but it won't be as good if you don't cure it.

For many enthusiasts, curing is unavoidable. It is sometimes tempting to immediately enjoy your hard-earned colas when they're already in your hands in dried form.

But if you ask any expert, curing makes the difference between a good batch and a great batch. Curing your Cannabis is the final step to help the buds reach their full potency, bringing you the kick you've been enjoying all this time.

The first step to curing is, of course, manicuring your dried colas. Despite having most of the leaves removed from the branches, there's a good chance you still have some smaller leaves in your colas, protecting the buds. Now's the time to separate those leaves with either a small pair of shears or tweezers or even a nail cutter.

Be careful not to immediately throw away these leaf clippings as they also contain heavy doses of cannabinoids. They'll taste different when smoked but can be used to make ingestible which can be included in food. The dried leaves alone are already ready at this point.

When you've manicured your colas, it's time to separate them from the branches. Here, a little perfectionism goes a long way. As the grower, you want to have as little of the branches stuck to your buds as possible. You want to have a pure, branch-free set of buds that are ready for the curing process.

When that's done, you'll have a nice set of dried buds which should now go into mason jars. These are the best curing containers because they're air-tight and can easily be opened.

To get the best effect, don't fill the jar to the brim. Leave some space for air to escape and circulate when you open them. Remember that as soon as you're done trimming off the remaining leaves and separating the buds from the branches, they go immediately into the jar.

When you've jarred all your buds, you can start the curing process. This simply entails keeping the buds in the jars for about two more weeks. Albeit these two weeks may be agonizing as you're already looking at the finished product, they will certainly be worth the wait.

However, for once a day during this two-week period, be sure to open the jar for at least once for fifteen minutes to give the buds a nice breath of air to increase their potency. You only need to do this once every 24-hour cycle for the two weeks.

Once the two weeks are done, the only time you have to open the jar is when you're going to be sampling the delightful fruits (buds) of your labor.

Here, it's all a matter of personal preference. Your Cannabis is now ready for consumption, selling, display, and sharing as well. They can be smoked and vaporized. If you've kept the trimmed post-drying leaves in a separate jar, they can also be used to create ingestible or sold to prospective buyers that make them.

CONCLUSION

With the completion of the curing process, you're now ready to enjoy your product. Here, it's all a matter of experiencing the Marijuana that has taken you a quarter of a year (or more) to cultivate.

Don't forget to correlate the flavor, drag, effect and amount of yield your first batch makes in your grow log. This will serve as a great yardstick by which to measure the success of the next batch you'll be growing.

From there, the process starts anew. By following the steps in this book, you'll be growing droves in no time. Just keep in mind that you're dealing with a living organism that has needs and desired in order for it to behave in the way you want. The plant doesn't bend to you. You bend to the plant. When that happens, Cannabis happens wonderfully.

At this point, you can begin improving on your grow area. You can expand to accommodate more plants. You can also try new flavors. You can also experiment on making parent plants that produce seeds for you so that you no longer have to look for seedbanks.

Congratulations once again and enjoy your weed!

THANK YOU!

Before you go, I just wanted to say thank you for purchasing my book.

You could have picked from dozens of other books on the same topic but you took a chance and chose this one.

So, a HUGE thanks to you for getting this book and for reading all the way to the end.

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Book - III

How to Grow Marijuana Outdoors

*A Step-by-Step Beginners Guide to
Growing Top-Quality Weed Outdoors*

INTRODUCTION

I want to thank you and congratulate you for purchasing the book, *“How to Grow Marijuana Outdoors: A Step-by-Step Beginners Guide to Growing Top-Quality Weed Outdoors”*.

This book contains a step-by-step guide on how to plant marijuana outdoors, both for recreational use and for business.

Growing marijuana has become one of the most popular hobbies around. Ever since weed has been legalized in most states, many people have considered at one point or another to plant their own weed. Some consider doing it for personal consumption. Others are considering growing this regulated plant as a means of generating supplemental income.

Regardless of your reasons for your interest in growing marijuana, this book is for you. It contains easy-to-follow instruction that will allow you to grow your own marijuana plant. It also contains steps on how to make sure that you get high quality weed from your own plants. This requires careful selection of the strains you use as well as proper cultivation practices.

This book focuses on how you can plant marijuana outdoors, as opposed to using the popular indoor planting system that was prevalent when marijuana was not yet legal in most states. This method is cheaper to start and it is more sustainable to build into a business. If you are familiar with how to maintain a garden, you can also grow pot in your farm or in your backyard.

Let's begin planting your first batch of weed.

Thanks again for purchasing this book, I hope you enjoy it!

CHAPTER 1

The Basics of Growing Marijuana Outdoors

Marijuana, also known as Cannabis, is easy to grow outdoors. In this chapter, you will learn the different factors that affect its growth to ensure that you grow high quality plants.

The needs of a Marijuana plant

- Sunlight

The quality of the sunlight is the best advantage of planting marijuana outdoors. When planting indoors, one needs to make use of artificial light to facilitate photosynthesis. This can be extremely costly. By planting the herb outdoors, its source of light will be natural and it will not increase your electricity bill.

A marijuana plant requires at least 5 hours of sun every day. Keeping multiple bulbs lit for that long everyday will certainly add to your costs significantly. If your spot gets sufficient amount of sunlight every day, you should consider planting outdoors.

- Sufficient water

Since we want the plant's buds and leaves to be as healthy as possible for harvesting, sufficient water is needed to ensure that the plant's growth is sustained. A place with a natural water source is ideal. It will be much easier for you to grow the herb if your planting spot is near a body of fresh water like a river, a stream or a lake.

If this is not the case, you will need to use rain water or the running water from your home. This is not ideal because it may also add more cost to your marijuana production operation.

- Nutrients

Unlike the two factors above, you will have total control over the nutrients that your plant needs. As with all plants, a marijuana plant gains its nutrients from the soil. It then uses these nutrients, together with the energy from sunlight, to produce carbohydrates. A plant lacking from

nutrients will not grow to its full potential.

You can supplement the amount of nutrients in the soil of the growing medium by using fertilizer. We will discuss the use of liquid nutrients in later chapters.

- Growing medium

Normally, the soil is the growing medium for all plants. However, in some areas, good quality soil may be hard to come by. Because of this, many growers have developed their own growing medium over the years.

The growing medium should be able to retain just enough water for the roots to absorb. If the medium does not retain water, like sandy soil, the plant is in danger of becoming dehydrated when the weather becomes too hot. On the other hand, if the medium retains too much water for long periods, the root tissue will begin to become soft and soggy. The outer layer protecting the roots will become compromised and it will begin to rot. This will eventually kill the plant.

Other factors

Your goal when cultivating marijuana plants is to ensure that the environment is conducive for its growth. Before you create a full blown farm, you should ensure that the area where you wish to plant has the right humidity for the plant. You will also need to ensure that the wind is not too strong. Forceful gusts can break leaves, branches and trunks. Planting in an extremely windy area will lead to low product yields.

Pests are also one of the most important factors that you also need to consider. All plant eating insects are potential pests. The soft leaves and stalks of the marijuana plant is inviting to these insects. The flowers are also susceptible to molds and mildew if they are wet most of the time.

These are only some of the factor that you need to consider when planting marijuana plants outdoor. In this book, we will discuss how you can ensure to cover these factors to increase the production of your marijuana farm.

CHAPTER 2

All about the Marijuana Plant

Marijuana is a hemp type of plant that originated in the mountainous areas of Nepal, China and India. There are many species of marijuana but we are interested in the one called *Cannabis sativa*. The value of this species comes from its high cannabinoid content. This is the chemical in the plant that serves as the active ingredient that gives it its magical properties.

When cannabinoids enter the blood stream, the magic of marijuana takes effect. It is a psychoactive drug that creates a feeling of euphoria when it reaches the brain. Humans have been taking advantage of this effect for thousands of years. It was first mentioned in Chinese herbal text dated before 2800 BC. Some of its medical uses are:

- Analgesic
- Anesthetic
- Antidepressant
- Antibiotic
- Sedative

In pop culture, marijuana is most popular as a recreational drug. In small dosages, the plant can decrease anxiety, improve a person's mood and initiate a relaxed feeling. It can also be used to relieve pain, both real and psychological. Aside from these positive effects, the use of the weed in small doses can induce deep thinking. Some artists deliberately use it when working to enhance their creative ideas.

Cannabinoids is present in various parts of the plants. However, it is most highly concentrated in the flower of the plant. Next to the flowers, the leaves contain the second highest concentration of the chemical. Because flowers are not always present, recreational marijuana users make use of the abundant leaves. In this book, we will discuss how we can grow marijuana to harvest its buds.

The Cannabis sativa plant is a great strain to use for recreational marijuana users. Its tall structure gives it more room to grow buds and leaves. Shorter varieties of the plant may be easier to harvest but a shorter stems also means that there is fewer space for nodes to grow. The nodes that grow out of the vertical trunk are where the leaves and the flowers will grow.

Shorter varieties like the *Cannabis indica* also grow wider rather than taller. Because of this, you will need to space each plant wider apart. The number of plants that you will be able to fit in your planting area will be fewer. This is a disadvantage when planting outdoors because it requires you to have an extremely wide planting area.

The only downside of growing the Cannabis sativa is the length of time it takes to mature. Because they grow tall first before flowering, the sativa tend to have longer periods between germination and harvest.

As a species, Cannabis sativa also has less chlorophyll than its cousins. This is also one of the reasons why the plant takes longer to grow. However, they are worth the work because they generally have higher cannabinoid content compared to its cousins. Smoking a joint with pure sativa buds will lead to higher dosage of the chemical going to the blood stream, leading to enhanced effects.

Indoor farmers usually grow both Cannabis indica and sativa strains. The sativa strain has the higher concentration of the chemical while the indica strain is faster to grow. They mix the produce of the two strains together to create a moderate a less potent product.

This strategy will only work if you are only planning to dry the leaves and flowers to be smoked. If you plan on using them as edibles (marijuana products used in food) the sativa-indica mixture may not be tasty. For this purpose, recreational users prefer to use the sativa strain which is generally sweeter.

Planting Marijuana Indoor Vs Outdoors

Most marijuana growers start their hobby or business through an indoor farm. This was mostly done because of necessity in the past decades because growing marijuana was considered a crime. Naturally, everybody wanted to

hide their plantation indoors.

While these people have developed many systems that sped the growth rate of marijuana indoors, it is not yet a perfect system mainly because it is expensive to maintain an indoor plantation rig. Planting marijuana indoors require you to dedicate one of your rooms to it. This will require you to adjust the ventilation of that room to ensure that smell of the marijuana does not permeate to the other rooms in the house. In addition, it will need a specialized drainage system because the cannabis scent in the waste water of the plantation will surely attract pests.

Aside from this, the electricity requirement of providing artificial light to the plants will also affect the cost of production. The marijuana plant needs at least 5 hours of light every day for 4 to 6 months. In addition, the number of hours per day with sunlight correlates to the size of the buds and the overall health of the plant.

The ventilation also needs to be turned on 24-7. Having no air circulation in the room will cause the plants to rot. It will make the plants susceptible to fungal infection as well as formation of molds in areas with lush vegetation. The buds are especially susceptible to mold attacks as will be discussed in future chapters.

Outdoor planting significantly decreases the cost producing marijuana. Planting outdoors gives the plants access to natural light as well as better ventilation. If the soil is of good quality in your area, you will no longer need to resort to artificial growth medium like hydroponic systems.

An indoor plantation will cost you up to a couple of hundreds of dollars every month. The biggest expenses will be in the starting months when you need most of the initial materials that you will need for the plantation operations.

Most of these materials will no longer be needed in the beginning of the lifecycle of the cannabis plant when planting outdoors. All you need is a seedbed and a place where it will not be disturbed.

You can then buy the rest of the things that you need as the need arises. You don't need to buy the pots until you are sure of the number of plants that have sprouted from the seeds.

By planting cannabis outdoors, you will be able to plant from germination

to harvest in less than \$50. Most of the cost will go to the purchase of the seeds and the soil nutrients.

Planting outdoors though, do post some risks. If your neighbors know that you are planting marijuana, they may report you to the authorities. Even though it is legal in some states, it is still a regulated substance nationwide. To make sure that you will not get in trouble for planting and growing marijuana, make sure that you get all the permits needed to grow medical marijuana in your area.

CHAPTER 3

The Life Cycle of the Cannabis plant

There are probably a thousand varieties of the cannabis plants. Each one is unique in its cannabinoid composition, its resilience to pests and its preferred growing conditions.

It is important to learn the uniqueness of the cannabis plant that you get to make sure that you can adjust your treatment of the plant accordingly. To understand cannabis growth outdoors, you should first learn about its life cycle.

The Cannabis Life Cycle

It is true that a cannabis plant's lifecycle varies depending on its strain and its species. However, the ones that have adapted to grow in the upper hemisphere all follow the same pattern that allows them to survive. To make the process simple, let's divide the entire cannabis life cycle into two stages, the growth stage and the flowering stage.

The growth stage refers to the part of growth characterized by the rapid increase in size of the plant. For the sativa variety, this period of growth is where the plant grows tall fast. This is also the period when most of the leaves of the plant start to grow. This stage starts with the germination stage:

- Germination stage

The germination stage refers to the start of the cycle when the new plant sprouts from the seed. This happens during the spring, when the soil starts to soften up and the sun is shining to nourish newly sprouted seedlings. For indoor growers, the germination stage can start anytime. However, because we are focused on growing cannabis outdoors, we will follow the life cycle of the plant as it coincides with the weather. By the end of spring, the plant should already be 2-4 feet in height covered all over with its signature leaves.

- Summer Growth Stage

The summer is when the cannabis will grow the fastest. The extended periods of sunlight will give the cannabis all the light it needs to create the nutrients it needs for maximum growth. It is by this time when the plant will reach its maximum height. The height will vary depending on the variety. However, the Cannabis sativa has been known to grow up to two and a half meters tall.

- Flowering stage

The flowering stage of the cannabis is the beginning of the second part of the cannabis life cycle. This usually begins when the days begin to become shorter in the end of the summer months and the beginning of fall.

It is in this stage, when you will first see the sex of the plants. Only the female flowers will show buds. If you wish to keep your plants from becoming pollinated, you might want to separate the male flowers at this point so that you don't accidentally pollinate the buds that you want to harvest.

In this stage, female plants need to be pollinated for their flowers to be fertilized. Only then can they develop seeds. For growers, this is the best time to harvest the weeds.

At this stage, the buds of the cannabis plant begin to show and develop into flowers. The buds may start showing early, four months after germination. Once the buds start to mature, you can now start harvesting them and process them to create the weed that we all know and love.

- Death of the Cannabis plant at the start of winter

When planting outdoors, we cannot prevent the death of the cannabis plant when winter comes. For this reason, it is important to have at least a few of your plants pollinated so that you will have more seeds to plant the following spring. Pollinating your plants also gives you the opportunity to mix and match different strains of cannabis to create your own strain.

Some types of cannabis that were bred to grow in tropical countries do not die off in the winter. Instead, they continue to grow as long as there is enough sun and the temperature does not freeze them. These strains however, are difficult to cultivate in the northern hemisphere climates.

CHAPTER 4

Learning about Cannabis Seeds

Aside from the factors already discussed in the previous chapters, the seeds for your cannabis farm will also determine the quality of plant that you create. If you want to create good quality plants you will need to get your seeds from the right sources.

When marijuana was legalized, long time growers had a great advantage because they have already developed varieties of the plant that have fast growth rates and higher flower and leaves production.

The rest of the producers however, are slowly catching up. With the industry expanding into the mainstream, the types of the seeds in the market are also increasing. If you look for the certified growers in your area, most of them are only selling cannabis as a dried product and not as seeds. Most growers do not necessarily want people growing their product on their own.

The easiest way to find good seeds is by extracting them from the products that you get from your supplier. The flowers that come with the packaging will sometimes include cannabis seeds. You can then use these seeds for your first crop. You will need to trust the seller regarding the strain that they are selling you. When buying for example, you could tell the seller that you want a purely sativa product that you can use for cooking. By specifying the type of product that you want to get, you increase the chance to extract the right strain.

With marijuana becoming accepted in the community, there are more online shops that are selling seeds and selling them to be delivered in any part of the world. Before we discuss how you can get these seeds, let us first talk about reproductive mechanism of the cannabis plant.

The reproductive process of the cannabis plant

Cannabis is a unique plant because each plant can be identified as male or female plants. The seeds that you see in the plants of a Cannabis bud are a result of the reproductive process that involves a male and a female cannabis plant.

If you want to maintain plants for harvesting, you mostly want female varieties of the Cannabis sativa strain because they are the ones that produce the tasty flower buds.

To maximize profits, you want to keep the flowers of the female sativa plants unfertilized. Unfertilized sativa plants tend to produce more buds and they tend to become taller, giving it more room to grow leaves and buds. It is also important that you keep male plants away because they may cause accidental fertilization of the female plant. This will affect the amount of bud production of the plants in your farm.

On the other hand, if you want to experiment in the cross pollination of various strains of the plant, you may want to get your hands on as many sativa and indica varieties that you can get. By including male plants in your marijuana garden, you should see many of the female plants bloom and produce seeds. The production will decrease but it will provide you with more seeds to cultivate.

Identifying Good Marijuana Seeds

When buying seeds, you want to make sure that you are getting mature ones. The seeds in the products sold in the market are usually immature because the buds are harvested prematurely. The processing of the buds may also affect the quality of the seeds. The drying process for example could expose the seeds to extreme temperatures that it could not withstand. Freezing could also do the same to the seeds.

Nevertheless, if you do find seeds in a bag of weed, harvest it and you could try growing it. When looking for them, try looking for brown seeds. They are round and they have the appearance of being pulpy. You want to avoid wasting your time with green seeds as well as with extremely small seeds. Ideally, you should take the large brown round seeds you can find in the batch.

When processing a bag of weed for the seeds, you want to first separate the seeds buds from the dried leaves. Focus on the buds that have not been broken up. If you do find these in the bag, you could then check just below the bud. Seeds in a sativa strain tend to be found below the flower buds. They are usually found near the nodes that attach the buds to the stem. Finding just one bud with mature seeds will be enough to get you multiple seeds to try to grow.

Purchasing seeds

The surest way to get good quality strains though, is by ordering them from a certified grower. While good quality weed seeds may cost more, they are certainly worth the money. By purchasing from a certified grower, you will build connections with a community member who can show you the ropes of growing weed legally in your state. They may even provide you with valuable information regarding the specific strain of the seeds you are about to buy. If you can find a store or a person to buy from, always choose that route.

Purchasing weed seeds online

The second option if you don't have marijuana seeds sold in your area is to buy from online retailers. You will find a lot of sellers for weed seeds online. However, since marijuana is still a regulated substance, make sure that you are purchasing seeds from an organization or a person who can legally distribute the seeds.

Processing the seeds for planting

If you do find seeds in the batch of marijuana products, you can separate the seeds from the buds by using small scissors to separate them from the plant. If the seeds are too few, you can just pick them off individually to extract them from the product.

As with other plants, the seeds tend to be covered in a pulp tissue when they are still immature. This tissue gives it its green color. When the seed matures, it no longer has this tissue and looks brown even when it is still attached to the plant.

CHAPTER 5

Starting your Outdoor Marijuana Farm

Farming weed for profit can be a lucrative business if you can beat other people who are also interested in the business. While Marijuana is legal in many places in the country, it is still a regulated substance. This means that you will need the proper certification from your state if you want to create a sustainably growing business.

Approaching pro-marijuana groups is one of the best ways to start when starting your farm. These group meet-ups and free classes to newcomers to smoking weed. Their goal is to increase awareness of the regular American to the effects of using Marijuana. Their cause humanizes marijuana users in the eyes of the regular person.

For your own farm, your goal is to learn as much as you can about the legal aspects of growing marijuana. Most of the organizers of these groups are already planting for their own consumption and even for business. By participating in these groups, you will be able to sign up to legally grow marijuana in your community.

Step 1: Finding a spot for your weed

Finding a location for your plants is probably the second most important decision you need to make, next to choosing the right seed variety.

When finding the right spot, you want to look for a place that gets a lot of sun. As with starting any type of garden, this is the topmost priority. When you find a spot like this, it's time to plan the other aspects that make it a safe place to plant weed. The second most crucial factor next to sunlight is water. You want an abundant supply of it but you want it to drain easily. Places that are easily flooded will not work because the water damage will destroy the root systems of your crops.

Next, look into the plants already in the property. The presence of other plants will affect the growth of the marijuana crops. You also need to ask around if people around the area are also planting male marijuana varieties. If many people in your area are already planting marijuana and they have the male variety, your female variety may accidentally become fertilized and your entire batch will be ruined. Knowing these things in advance will save

you a lot of time and money in the future.

Step 2: Germinating the seeds

The early stages of weed growth are probably the most crucial. Any disturbances in this stage will result to negative effects in the physical characteristics and the production capacity of the plant. To make sure that all your seeds grow in the optimal conditions, you should grow them in a separate greenhouse.

Growing the seeds of the marijuana plant is just the same as with other plants. You will need ample supply of soil and a container that will allow transfer of the root system easy later on. Plant each seed separated from each other. The depth of your hole should be around the size of your thumb. Put the seed in the hole and water it for the first time. Seeds remain in dormant state until certain factors are present in their surroundings. These factors include water and nutrients needed for growth. The marijuana seeds follow the same principle, once you water it for the first time, it will start to germinate.

In this process, it is important to ensure that the seed gets enough water. You will need to water it at least once a day at this stage, depending on how hot the weather is. The quality of the soil is not yet crucial at this point. If you don't have good quality soil in your area, the ones commercially available in garden shops will do.

Important: Make sure that you place the seed beds in their proper place in the garden before watering them for the first time. Ideally, seeds in seedbeds should not be moved after they have been watered the first time. The loose soil in the seedbed may move, damaging the juvenile roots and young leaves that first come out of your marijuana plant.

The first sign that germination is successful is the emergence of the two first leaves from the seed. Regardless of how you positioned the seeds in the hole, these two young leaves will choose to spring upward or against the pull of gravity. The goal of these two young leaves is to start the photosynthetic process as soon as possible, for the growth of the plant. Below the surface, you do not see it, but the root system is also taking its shape. While the marijuana plant may seem like a small shrub in the surface, its root system actually has a wide reach. Your seedbed should be able to house its roots for a couple of weeks but after that, you need to transfer it to a wide pot.

When planting a handful of seeds, you should remember that some of them will not grow. It is normal for a certain percentage of seeds from a seed packet not to grow. You should record the number of seeds that you got from a certain source and the percentage of the total that grew. At least 70% of the seeds from a good seed source will grow into plants.

You should also start taking notes of the variety of the cannabis. Most states nowadays require certified marijuana growers to record all the production activities on the farm. Aside from complying for the requirements of the state, you will also be able to gather data about the value of the plants in your care. Take note of the potency of the plant, its rate of growth and its yield in terms of the amount of cannabis buds that you got from each plant (by weight).

Step 3: Transferring your weed to the correct container

Planting in soil may seem like the logical choice for most gardeners. However, since this is your first time, it is wiser to start planting in pots for now. People planting pot outdoors for the first time usually underestimate the external forces that may work against their production yields. A pest infestation for instance, will make an entire batch of trees useless. An exceptionally rainy year on the other hand, may cause the buds to grow molds. The best way to react to these types of dangers to your plants is by relocating. If one area of your property does not work out, you could simply transfer them somewhere else. This strategy will only work if the plants are potted. If no area in your property seems to be working out, you can also convert your outdoor farm into an indoor one. You can just plan to make another indoor one in the next spring.

Planting in the soil also means that your farming will have to stop when winter comes. Potted plants on the other hand could be transferred to a greenhouse when the weather becomes too cold. This will allow you to continue growing your plants and producing weed all year round.

The size of the container is of the utmost importance when transferring your pot from the seedbeds to their long-term containers. A large pot that can contain 2 gallons of growing medium is enough to keep the plant going for two years.

Ideally, the pot should be its final container. Once you transferred the plant to its final container, you should let it be to make sure that the roots settle in

and the plant does not experience any more stress. When the plant is no longer stressed, it can focus all its energy in expanding its root system and growing.

Planting directly to the ground is a good option if you already have a lot of seeds and you are already familiar with the strain that you want to grow. Planting directly to the ground will allow the plant to freely grow its roots. The wider the reach of the roots, the more nutrients each plant will be able to absorb. This will lead to larger plants with bigger yields.

This method is only advantageous if you have a wide lot to work with and you have the resources for a large scale farming operation. If you are planning to plant less than 20 trees on the other hand, there is no need for you to plant directly to the ground.

Step 4: Arranging the plants in your garden

The spacing of the plants is also important to make sure that the leaves and the buds get enough air. If any part of your plants does not get enough air, it is highly likely that that part will grow molds or mildew. This will ruin their quality and may also make them unsellable.

Spacing also ensures that all the leaves in a marijuana plant are exposed to the sun at least one point of the day. The leaves are designed to adjust their positions to reach the sun. However, if the leaves are covered by other leaves from other plants, that leaf will not get enough sunlight. For some types of strains, the leaves become yellow and eventually wither if it does not get enough sunlight.

The ideal spacing for your plants will depend on the variety that you are planting. The Indica variety for instance tends to grow wide, which means that they require more space. Putting 7 to 8 feet between plants should be enough for this species of marijuana. The Sativa variety on the other hand grows tall. You can plan more of this variety in a small lot area. A three to five feet space between your plants should be enough to ensure that all leaves become healthy.

Step 5: Developing a water system

An efficient watering system is required for a large scale marijuana farming operation. The best solution will depend on the scale of your operation. If you only have a handful of potted weed spread evenly in your garden, you have

the option to water them manually every day. Every time you water your plants, you also have the opportunity to check on the growth of your plants. This cannot be done with larger farms because it would take hours for a person to manually water hundreds of plants. However, if you do plan on planting hundreds of plants, you will need an efficient system on how water them.

The sprinkler system is one of the more popular methods available today in the market. In this system, you only need to attach the sprinkler head to the hose head. The water system can be timed so that it waters the plants at the same time every day. This system however, works best if the plants are planted direct on the ground because any excess water will go directly to the ground.

In a potted plant system however, the water from the sprinkler needs to hit the plants first so that the excess water will flow down to the root system. Because most of the water in this system ends up in the ground and not in the pots where the roots is located, this system is not very efficient.

The drip system is a modified version of the sprinkler system and it works better for potted plants both your nursery and your farm. In this watering system, you allow thinner line of water host to pass over the top of the pots. In each pot, there is an opening that allows a small amount of water to drip directly to the growth medium of the plant. With this system, the majority of the water used in watering, comes in contact with the roots, making it a more efficient system.

Maintaining your Garden

Marijuana is a pretty resilient plant. It will not die easily even in harsh environment. However, as the plant's environment worsens, its production yield and quality also suffers. The maintenance tasks that you do are mainly for ensuring that the plants in your farm are producing high-quality, cannabinoid rich and tasty weed.

Here are some of the things that you need to do to ensure the quality of your weeds:

1. Removal of unwanted plants

If regular weeds grow in your pot, their root systems will compete with

that of the Cannabis. They may stunt the growth of your crops.

Most people think that they will no longer need to deal with weeds as long as they use a prepare medium instead of regular soil. As long as you are farming outdoors though, there is always a chance that new weed seeds will be introduced to your pots.

They could be added accidentally by people passing by. The seeds of the weed may attach to their shirts and transfer to the pot. Insects and birds are also common vectors of weed seeds. Animals that eat weeds carry their seeds around. They are introduced to your pots through animal and insect droppings or through physical transfer.

While weeds will appear, they will not be as numerous as compared to planting directly to the soil. With potted cannabis, there is no need to use chemical weed killers because this will also have an effect in the wellbeing of the ecosystem of your garden.

The best option against them would be to handpick the weeds off the ground. When doing so, make sure that you remove the root system together with the stem. As long as the root system is intact, the weed will just keep growing back.

2. Checking for pests

Aside from weeds, you should next put your attention to keeping your crops pest free. The Sativa variety is a sweet-smelling plant, making it enticing to both insects and animals around your area. You want to prevent these creatures from eating away at your crops.

There is no way of knowing the pests that will attach your Cannabis plants in advance because they vary from one region to another. You can check your plants regularly to make sure that you don't have a pest infestation in your hands.

One of the advantages of planting using pots is that you will be able to remove any plant with advanced infestation from the rest of the plants. This will prevent the spread of the same pest to the rest of the Cannabis stock.

The pests can be found in three parts, the stem, the leaves and the buds. Most beginner growers make the mistake of ignoring trunk pests because

they only care about the leaves and buds. You should not take this approach though, because any attack on the trunk will also have a long term effect on the ability of the plant to produce healthy leaves and buds. We will discuss pest removal in detail in future chapters.

3. Have a contingency plan if the weather does not cooperate

It is also important that you know what you will do when the weather turns sour. Even if you live near the equator where there is optimal sunlight for the cannabis plant, you will still have the danger of hurricanes and similar natural events that may damage your crops. Because of this, you need to have a plan B in case bad weather threatens to harm your crops.

Ideally, you should have an indoor planting area ready. You can build one with the profits you make with your crops. The odds of you needing to use your indoor planting tools are low. However, it's better to have one and not need it than to need it and not have it.

The indoor planting facility should include a water system, enough overhead ultraviolet lightbulbs and a ventilation system to allow fresh air from the outside to enter. The ventilation system is crucial in making sure that the bulbs do not overheat.

4. Find the optimal number of plants that you can manage

The more plants you have, the more work it will require to manage your garden. Even if you have unlimited space to use for planting, you will not be able freely plant as many trees as you want because of the limitations in the number of hours that you can put to each day in maintaining your garden.

To make sure that you don't waste your effort and your time, try to identify the optimal number of plants that you can take care. You will need to check the trees every day for pests and diseases. This task alone will require at least 40 minutes of your time each day if you have 20 trees in your backyard.

On a normal outdoor farm, one person will be able to take care of 20-40

marijuana trees. This will require you at least one hour of work every day to maintain the garden. If you want to produce more plants, you will need to add more time gardening each day.

CHAPTER 6

Choosing a Growing Medium

The growing medium refers to the type of soil or soil substitute that you will use in your marijuana plant's pot. With all other factors being equal, most growers in an area would compete in increasing their crop yield by modifying the growth medium of their plants.

If you are considering growing your pot outdoors, chances are that you have a source of good quality garden soil. Garden soil is probably the best option for you since it can be free and it does not require a lot of preparation. If you can get it for free, you should certainly choose the garden soil in your area.

Using Garden Soil

Since you are just starting out, it is ideal for you to start with garden soil. Garden soil is the natural medium for planting and you are more likely to experience success in your first tries with this growing medium.

It's best to collect garden soil just at the start of spring when the snow has melted and the ground is all soft. At this point, you should start to see all the spring plants begin to sprout out of the ground.

When collecting soil, you want to take it from the part of your property where there are a lot of decaying leaves. If your area is near the woods, you can also take your garden soil from there.

You will need to assess the quality of the soil before you collect it. Sandy soil will not work for cannabis because it is unable to hold on to water. You will know if the soil is too sandy if you can see the individual sediments of sand, pebbles and rock. In contrast, you also want to avoid soil with extremely high clay content. Clay-rich soil contains extremely fine sediments of absorbent soil. When mixed with water, the clay becomes compact, preventing the water to escape. With a clay soil, there is a good chance that the roots of your cannabis plant will rot because of prolonged exposure to moisture.

The best soil type is a cross between the sandy and clay-rich types. It should also contain humus or broken-down organic materials. When you clean your garden and you shred all the leaves, some of the dump of shredded leaves is left to decompose in the soil. This, and other organic materials in your garden like sticks, twigs, and dead roots, break down to become humus. Humus contains a lot of organic materials that a growing plant needs. It is an essential part of the garden soil mixture because the nutrients of these organic matters eventually transfer to the soil as its components decay. It is also an important agent for retaining just enough amount of water for the plant to use.

Garden soil Additives

Aside from the garden soil, you also have the opportunity to find a good soil additive that you can add to the ground to be absorbed by the roots of your cannabis plant. Together with good soil quality, the soil additives will help in hastening the growth rate of your plant as well as improve the potency and taste of your plant.

Here are some of the possible soil additives you can add to your cannabis pot soil:

- **Compost**

Compost is the easiest type of soil additive to find. It is mostly sold in farms as well as in garden shops. Compost refers to processes organic matter, designed to provide added nutrients and minerals to the soil. By adding compost, the gardener can significantly improve soil quality and add beneficial bacteria that may contribute to the improving the pot soil in the long term.

In the beginning, you may need to buy the compost for your first batch of planting. However, as you improve your gardening process, you can start making your own using organic waste around the house. To do this, you will need a collecting bit of all organic lifestyle wastes inside the house. Here are some of the things that you can include:

Vegetable shavings

Paper wastes

Decaying wood

Grass clippings

Decaying leaves

After collection, you will need to cut up the materials to increase the rate of decomposition. By cutting up the materials into many pieces, you increase the surface area that the bacteria can attack. You will need to shred leaves and break twigs and wood.

To hasten the decomposition cycle, you will need a composting bin where you can put all of the cut-up organic material you collect. The composting bin available in your local gardening store will serve. When buying one, make sure that the bin is big enough for the estimated amount of compost that you will process at one time. It should contain holes that serve as entry and exit points of air and as drain for excess water. You will also need to turn the contents of the compost bin regularly to make sure that they are exposed to air. The compost bin should allow you to easily do this.

After four to six months of composting, you should already be able to use the contents of the compost bin for your next batch. You could choose to use them for the next planting season.

- Drainage material

Drainage material refers to a layer material that you add to the soil that allows exit of water from the pot. Without a proper drainage layer, the clay part of your garden soil may block the holes of the pot that serve as drainage.

The best type of drainage material for you will depend on the materials available for you. If you live near the beach for instance, you can choose to cover the bottom part of your pot with sand. This will ensure that the water will always have areas to exit from. If you live near the river on the other hand, you can also use a combination of sand and pebbles. Pebbles and pea shingles are also good drainage materials because they allow the roots of the cannabis plant to take hold and create an anchor. This does not happen with sand because the sediments are too small.

- Water retention material

If the quality of your soil is subpar, you may need to add more additives for water retention. If the garden soil in your area is too sandy for instance, the soil will dry too fast in the summer months. Ideally, you want to add a water retention material to your pot soil mixture to increase the water retention properties of your soil.

For countries in North America, the best option would be to use peat moss. Peat moss is abundant in the bog areas of Canada and the US. They are available commercially and they work well as a water retention material and as a compost material when they begin to decompose.

In the southern areas of the US, peat moss may be in low supply because they mostly come from the north. If there is a low supply of peat moss in your area, you can also use rice husk, which is usually free in rice processing plants or coconut coir. Both of these materials tend to add a level of acidity to the soil. Since cannabis prefers a slightly acidic soil pH, you should have no problem growing them in these materials.

To use these materials, you simply mix them your garden soil. They act like filler materials. When newly added, they act as a medium for water retention. Through the months, the bacteria in the soil will interact with the materials and begin to break them down. This releases nutrients back to the soil that the plant can absorb and use for its own growth.

- Liquid Nutrients

You can hasten the process of growth and flowering with the help of liquid nutrients. Liquid nutrients refer to commercially available products that can be added to the soil that act as fertilizer for your plant. Unlike adding compost, liquid nutrients do not need time to settle in. They can be absorbed by the plant as soon as they are added in.

Since cannabis is used for both its medicinal and culinary value, you want to be careful in choosing the brand of liquid nutrients products you use because they may affect both the potency and the taste of your produce.

Aside from the brand names, liquid nutrient products vary according the concentration of their content. When looking at the bottle of liquid nutrients, you want to check the concentration of three specific chemicals: Nitrogen (N), Phosphorous (P) and Potassium (K). Together with water, these three nutrients are the most important factors absorbed by the plant from the soil.

The NPK ratio is usually shown in big bold characters in the bottle of the liquid nutrient. They are usually represented by three numbers separated by two dashes (-).

Example: 5-5-5

The first number stands for the amount of nitrogen in the mixture in relation to the concentration of the other two nutrients. In our example above, there is an equal amount of nitrogen, phosphorus and potassium in the mixture.

The needs of the cannabis plant for these three nutrients change as it moves along in its life cycle. For most strains, the needs for nitrogen are highest while the plant is still growing. At this stage, the cannabis plant will only need a moderate amount of phosphorus but a high amount of potassium. In the first two months of your plants, you want to find a brand with the following concentration:

High in Nitrogen – Medium to Low Phosphorous – High on Potassium

When you do find one, just follow the instructions on how you can add it to the soil. They can be added by simply mixing the solution with water and watering the soil with it. You will need to follow the instructions as to how often you should apply the solution to the soil for optimal effects.

You will know when the plant enters the flowering stage when it stops developing new leaves and branches. When this happens, the plant will put most of its energy and the resources it absorbs on developing buds. At this point, you want to change the liquid nutrient that you use. As the plant starts to develop buds, its needs for nitrogen decrease. At this point, you want to transition to a liquid nutrient brand with high phosphorous content. The plant will still need a lot of potassium. You want to look for a brand with the following concentration:

Low in Nitrogen – High Phosphorous – High Potassium

You will find these liquid nutrient brands targeted mostly for flower growers. This will increase the bud yield of your plants as it transitions from growth to the flowering stages.

Using a hydroponic system

A hydroponic system of growing plants refers to using any growth medium other than soil. Some people for instance, suspend the plants over water.

Other growers use materials where the roots can cling to like coconut coir. Cannabis has been proven to grow in these growth mediums as well.

While growing in soil is the best option to start for beginners, you may eventually want to start experimenting with different hydroponic systems to improve crop yields in one planting season. Here are some of the advantages of using this system:

- If successful, the hydroponic system can increase bud yield per plant

Because you can adjust the amount of nutrients that come in contact with the roots in this kind of growth medium, you will be able to manipulate the bud yield of the plant. Any change in the nutrient concentration in the water where the roots is suspended will take effect immediately.

- Cannabis grow faster in this type of system

In the hydroponic system, the plant has direct access to the water where the nutrients are suspended. This free access to the nutrients allows the plant to suck in more nutrients as it needs to. Normal plants do most of the absorption when the soil is watered. A plant in a hydroponic system always has access to waters and the nutrients. This allows the plant to absorb its needs whenever it requires moisture and nutrients. This leads to faster growth of the plant. Some growers even report more potent produce using this system.

- You will be able to control the exact amount of liquid nutrients you introduce to each plan

The hydroponic system is also more efficient than planting in soil, in terms of the amount of liquid nutrients used. When planting in soil, most of the liquid nutrients you use in the soil is not absorbed by the plant. Instead, it is washed away by future watering of the soil.

In a hydroponic system, the nutrients are in the water. You can either spray it directly to the roots or you can suspend the roots in water with the nutrients. Either way, you will be in total control of the amount of nutrients that the roots come in contact with.

- You will no longer need soil

This system is best used in areas where good garden soil is scarce. With this system, you will be able to grow many plants with minimal amounts of garden soil. You will only need the garden soil in the germination stage. After that, you will no longer need more soil for the rest of the lifecycle of your plants.

Disadvantages of planting using a hydroponic system

- Exposed roots may be susceptible to pests and diseases

Probably, the biggest disadvantage of the soil-less system is the exposed roots. The exposed root system gives this system most its positive qualities. However, it could also lead to diseases where in the roots may become overly exposed to the water or to the air and begin to rot. Any damage in the roots can become infected and the root system may begin to rot. When this happens, your cannabis plant may not survive until its flowering stages.

- System difficult to set up, even for experienced gardeners

There are multiple websites online that will teach you the different ways on how you can start a hydroponic planting system. Even with all the instructions however, it's a lot more complicated than planting directly to the soil. The system requires you to handle juvenile plants that just came out of their seeds to be transferred to your preferred hydroponic system method. If one is not careful at this stage, crucial parts of the plant may become damaged, killing the plant before you can even start making it grow.

Even growers who already have experience planting in soil will have difficulty transitioning to the new system because of the uniqueness of each hydroponic process. The process of learning may cost you a few plants each planting season. If you planted these plants in soil, you may have increased your yield with no considerable additional costs.

- It costs more if you already have garden soil available in your area

This brings us to the last disadvantage of using this system, it may cost a lot. People who use this system often do it indoors back when growing pot was prohibited. If you can get a permit for planting marijuana in your backyard, you can now start with minimal costs by planting in soil.

As the supply of pot increases with the increase in supply, fewer people will be able to afford hydroponic systems because the profits for selling pot will no longer justify the use of an expensive system. Instead, more people will begin planting using garden soil and abiding by the seasonal life cycle of the plant.

Because of these disadvantages, we highly suggest that you start using soil as your growth medium. You may choose to start learning a different hydroponic system every season, when you have more seeds to spare or when you have used up all of the usable space available in your planting area.

CHAPTER 7

Know your Garden Pests

Dealing with pests is probably the most annoying aspect of growing marijuana outdoors. Because we plan your cannabis outside, you will not be able to protect your plants twenty-four-seven against insects and microorganisms that may damage their buds.

Before we can discuss the different types of solutions for pests, let's first talk about the different pests that may attack your cannabis plants:

1. Aphids

Aphids are small insects that attack all varieties of cannabis. Some varieties have wings while others don't. While their adults transfer from one plant to another, their larvae stay in one plant in the many stages of its life cycle.

In small numbers, they are difficult to spot because they mostly hide under the leaves. However, in large numbers, they may affect the health of the leaves and some may even attack the buds. If left unchecked, the aphids will also affect the quality of the produce of each plant. The healthy leaves will turn yellow and some may even wilt. Because the aphids suck on the juices that come out of the leaves, they also affect the cannabinoid concentration in the leaves when harvested.

Aphids can also mold growth in your plants, especially in the buds. The aphids excrete a sweet liquid that attracts other insects like ants. However, when not consumed, they are often left in the leaves to rot. Outdoors, the plants are exposed to mold spores in the air. If there is an accumulation of the excreted liquid in one part of your plant, the opportunistic molds like the dark-colored sooty molds may form in your plants. When these molds are not removed, they may damage an entire bud or even your entire plant.

To check for aphids, look for white or lime colored dots under each leaf. Because the most common type of aphid that attacks cannabis plants are green, they can be difficult to spot for beginner growers. Just check your plants every day for all types of pests and you should be fine.

How to prevent/remove aphids?

Just like with any garden pest, the best defense against aphids is vigilance. You want to keep track of all your plants all year long to make sure that they do not have these pests under their leaves or in the nodes in the trunk.

Even if you do find them, the best solution against them is to attack them while they haven't done any damage yet. In the beginning, they will stay under just one leaf and create a colony. As their number increases, some will migrate to other leaves and even to your other plants to form more colonies.

When you first see aphid nymphs, you should take action fast. Nymphs are juvenile versions of the aphid adults. While adult aphids may look black, red, green or yellow, the nymphs are all white. When you see these pests, remove the potted cannabis from the group first to have a closer look at the other leaves.

You should also check the other plants surrounding the infected one if they also have an infestation. If you spot the pest near harvest, it's best to harvest the mature buds and leaves for processing to prevent them from being infested by aphids.

In case it is not yet ready for harvesting, the best option is to cut off the leaves with the aphids to prevent them from developing into adults and creating more eggs. If you already see adult aphids when inspecting your plants, there is as good chance that you already have eggs waiting to hatch. In this case, your best chance of keeping the plant alive is by keeping the numbers of the pests low. If you can keep the number of the aphids low, you will be able to keep the health of the plant at peak condition to produce buds and to produce more leaves.

In the case of a full blown aphid infestation, you may need to use anti-pest products to significantly decrease their numbers.

2. Scale Insects

Scale insects or barnacles are small insects with a hard armor that is virtually impenetrable against predators like spiders and ants. The hard armor, usually round, protects the soft insect inside. They can crawl from one spot to another, for better feeding positions. Because of this defensive advantage, they are often growing in large numbers. Just like Aphids, scale insects suck the juices and nutrients from the stem and the stalks of the leaves. They are well camouflaged, with their scales blending with the color

of the base they are attached to.

They also tend to avoid being exposed to the sun, preferring to stay in the nooks and crannies of the bark of the plant. This makes them difficult to spot especially when there are only a few of them.

A few scale insects will not affect the health of the plant that much. However, if left unmanaged, they may end up weakening your plants. You will know if the scale insects in your plants are starting to increase in number when they start to become visible. These scale insects start out as small dots that are barely visible to the untrained eye. As they stay undisturbed though, they tend to increase in diameter, making them more visible to predators and gardeners.

It is possible to prevent scale insect infestation by making sure that all parts of your plants get a decent amount of sunlight daily. This way, you only need to check the parts near the base of the plants which are less likely to be reached by the sun.

You can manually remove them using a toothpick or a similar tool. However, if you have multiple plants infected by this pest, it's best to use organic pest control products.

3. Molds

Molds are also a common problem for marijuana growers. Molds appear when a certain part of the plant remains wet for long periods. When planting outdoors, this usually happens among plants that are located in shaded areas.

Aside from moisture, molds also require a certain part of the plant to lack air circulation. This may happen when a part of the plant is facing a wall or any barrier that may prevent air from flowing. The lushness of the vegetation also contributes to the growth of molds. The more leaves and buds bunched together in an enclosed space, the higher the chances of molds growing.

One of the most common and devastating forms of mold infection in cannabis plants is called bud rot. As the name suggests, this type of mold festers in the buds of the cannabis plant.

This type of infection starts with the molds forming in the base of the leaves just below the flower buds. This part of the plant is especially susceptible to mold growth because it usually retains a lot of moisture.

When the bud rot begins to become severe, the leaves just under the buds tend to discolor fast. While regular leaves take months to become yellow and wilt, a mold-infected leaf can turn from green to yellow, overnight.

When this happens, it means that the molds have reached the core of the stem. As the infection progresses, the molds will affect the buds, making it look rotten and black. The usually green buds will start to turn black. The areas inside of the bulb will form black feathery structures created by the molds. It will look moist and in extreme cases, the bud will begin to fall apart.

4. Leaf eating insects

Gardening outside also exposes your plants to a variety of leaf eating insects. Grasshoppers and similar insects love marijuana leaves. Even a family of just a few grass hoppers can eat the leaves off an entire plant in a matter of a week. They will keep eating the available vegetation in your garden until all the edibles has been eaten. Only then will they move on.

Most people will ignore one or two grasshoppers. This is a big mistake. Grasshoppers follow a circular lifecycle. If a small amount of grasshoppers this year successfully feeds and breed, their offspring will come back again the following spring in higher numbers because they have found an area that can provide them with the nutrition they need. You want to get rid of them as soon as you see them.

Caterpillars and other leaf-eating larvae can also cause a lot of damage to your plants. Unlike grasshoppers, these animals do not move on when the food has been consumed. Instead, they will eat as much as they can to grow and to store enough energy for their pupa stage where in they transform from their larvae stage to their adult stage. A normal butterfly for instance, could lay 10-20 eggs on one plant. Some of these eggs will not hatch while other will be eaten by predators. The ones, who do survive though, will start eating the leaves off of your marijuana plants.

While leaf eating insects may also be beneficial to the environment, they can wipe out your entire batch of weed. You want to remove them as soon as possible. For non-flying insects, like caterpillars, you can simply handpick them off your cannabis plants as soon as you see them. For flying insects,

you may need to protect your plants using physical barriers as well as organic chemical solutions.

5. Rust mites

Rust mites are extremely small organisms that create a shiny sheen on the surface of the leaves of the cannabis plants. The edges of the leaves also tend to curl and turn brown.

Rust mite infection is difficult to identify because they are too small to be seen by the naked eye. You will only be able to identify the infection through the signs and symptoms seen in the leaves.

If left untreated, the rust mites can suck out all the nutritional juices from the plant. When this happens, the plant will become weaker. Plants with serious rust mite infection are usually not strong enough to produce buds.

6. Fungus Gnats

The fungus gnat is a type of fly that is fond of laying its eggs in the soil of the marijuana potted plant. You will often see this in plants that are grown indoors because the soil dries slower in this type of planting system. However, it can also be found in plants grown in outdoor gardens especially with plants whose pot is shaded by other plants. In this case, the soil in the pot do not dry completely between watering, making it conducive for the growth of the fungus gnat larvae.

You will know if the cannabis plant roots are infected by the fungus gnat larvae if its soil is always wet even after hour since the last watering.

STRATEGIES AGAINST PESTS

Making a physical barrier around your plants

If you want to keep outside pests from reaching your plants, you should consider putting up a physical barrier around it that would prevent adult insects from reaching your plants. If you are down south where the weather is near to that of a tropical country, you may create a net structure around your nursery and your planting areas. The net will act as an insect barrier that will stop them from reaching your plants. While this may take some time to set up and they may require you to spend more money that just purchasing

insecticides, this strategy will allow you to plant organic cannabis.

In places with cold climates, planting cannabis should start in the spring. If you want to continue to plant until winter, you should be prepared with a greenhouse or a room that can be converted into one. Most insects will not be able to survive beyond the fall. They either die after laying their eggs or move on to warmer regions.

A physical barrier is also important if you do not want your female cannabis plants to start fertilization. If there are people planting the male variety in your neighborhood, insects may accidentally cross pollinate the plants, robbing you of your harvest. The upside is that you get a chance to get more seeds for the next planting season.

Keep the garden clean

One of your best defenses against pests is a clean environment. Mold and fungal spores tend to start in the damp and dirty areas of the garden where there is enough moisture and there is not enough circulation and sunlight. When molds and fungi are allowed to fester in these environments, their spores can fly off and attach to the moist parts of your plants.

To defend your plants from these threats, make it a habit to clean your garden. Cut the grass short to make sure no trash is hidden underneath the brush and remove any grass cuttings or fallen leaves. Ideally, you should keep all the organic wastes for composting. This should be done properly in one corner of your backyard, in an enclosed composting bin, away from the rest of the plants.

Also make sure that your plants get a lot of open space, where the wind can move freely in between each plant. If a certain plant grows too many leaves, remove some of it to prevent the plant from growing molds. Air allows all parts of the plant to dry even during rainy weather. Trimming your plants will limit the occurrence of molds and root rots.

Create a platform for your plants

If you put your plants directly on the ground, this will make it easier for pests from the ground to reach your plants. Snails, slugs and root boring worms can all crawl up your plants with no problem.

To prevent these pests from damaging your crops, you can create a platform for your plants, just to separate their base off the ground. You can use simple crates to serve as platforms. If you have the resources, you can have special pot containers made for you by your local carpenters. Ideally, you should just use the types of materials that are available to use in your area. The point is to keep the plant separated from the soil, to make it harder for snails and slugs to crawl up your plants.

Using sticky-paper

Sticky paper is effective in dealing with flying insects like gnats and grasshoppers. Using this can also work against beneficial insects. Ideally, you should only use this method if there is a swarm of flying pests in your garden.

Treating infected plants

Now we have discussed the preventive steps that you can take against pests when planting your cannabis outdoors. In the next section, we will discuss what you can do if you do find pests in your cannabis plants:

1. Create an isolation area

The first step after finding a specific type of pest is to identify it and to isolate the plant where it has been found. Some types of diseases like molds and root rot are isolated. They will not spread unless identical conditions are also carried out on other plants.

Most of the pests that you will encounter however, easily transfer from one plant to another. Aphids for example, are usually carried by winged adults from other gardens to your own. They may also transfer to other plants if the one they are occupying can no longer provide for the colony.

To prevent these types of pests from infecting healthy plants, you should separate infected plants as soon as you identify them. You should have an isolation area there you can process the infected plants without endangering the other plants in the garden. You can also create a physical barrier in your isolation area so that any flying pest will not just fly out of your plant when you disturb it.

2. Identify the proper method of removing the pests

For pests that are few in numbers, you can easily manage them by

handpicking them. If you see a lone grasshopper in your garden, there is no need to be alarmed. You can easily get rid of it by picking it up and throwing it outside of your physical barrier.

For the types of pests that are too many to manage, you may need some of the solutions that will be offered later on. In small numbers, you can remove them by using soapy cloth and water. However, as their number increases, you may need to spray your solution, rather than apply it manually.

For pests and diseases that affect the inner tissues of the plants, you will need to cut off the infected parts before they spread to the rest of the plants. An example of this would be rotting caused by molds. The molds in the inner tissues of the stem may spread throughout the length of the plant. By cutting the infected area, you will allow the plant to recover and grow new parts that it lost in the infection.

Cutting some parts of your cannabis plants is also important in allowing air and sunlight to reach the lower parts of the plants. Keeping all parts of the plant aerated and providing each leaf with access to sunlight will keep it the overall plant healthy and it will grow to create buds.

3. Pressure spraying

A pressure spray is extremely useful in removing insects off of your leaves. For pest types that are too many to hand pick, you can simply use the pressure spray to force these pests off your plants.

You can get handheld pressure sprays to remove pests physically using only water. By doing so, you will be able to separate the pests from the plants, without introducing a chemical that may affect the smell and the taste of your cannabis produce.

To use the pressure spray effectively, locate all the pests that you wish to remove from the plant. Since the pressure spray will throw the pests all over the place, you may want to isolate the plant first, away from the other cannabis plants, before spraying. This will ensure that any pest that jumps off the plant will not transfer to your other plants. Pressure sprays are effective for dealing with pests that can be separated physically from the plant. It is also effective for pests that form colonies like aphids.

4. Chemical solutions

Together with using pressure spraying, you could use organic chemical sprays to remove pests that cannot be removed by hand. Ideally, you should only use this strategy if you have no other choice.

When choosing to use a chemical solution to your pest problems, you should consider that it is possible for the chemical to affect the potency as well as the taste of your cannabis produce. Make sure you consult the cannabis community in your area if there are non-chemical solutions to your pest problems.

If you do decide to push through with this method, try the less poisonous solutions first. For instance, a plant with an aphid problem does not necessarily need a string insecticide. Your plant will survive with an insecticidal soap. These products are only applied on the surface and they can be washed off when the threat is gone.

You can also make use of organic alternatives like neem tree oil extract. You should use this sparingly though because some brands of neem tree oil are said to affect the taste of the cannabis buds.

CHAPTER 8

Harvesting your Farm Produce

The last stage of the planting season is the harvesting. At this stage, you will need to examine your plants if their buds are ready for use. Most experts can time their harvest just by looking and smelling the buds. However, since you are a beginner, we will discuss the different factors that you should be looking for when examining your cannabis buds.

When inspecting your plants, consider how well they are growing relative to their neighboring plants. If one of the plants is not growing fast enough, analyze the factors that may have contributed to its slower growth. The rate of growth of a cannabis plant also affects its potency. The fastest growing plants in your batch are expected to enter their flowering stage sooner than the others. These plants have more time to let their flowers mature, accumulating more cannabinoid in the process. You want to use these plants as your basis for harvesting. You may even need to harvest these fast growers sooner compared to their slower growing counterparts.

Looking out for the harvest

To know if the batch is ready for harvest, you need to check some parts of the plant. Here are some of them:

Method 1: Check the hair-like structures in the buds

The hair-like structures in the bud, also called the pistils, are one of the indicators to check if the plant is ready for harvest. In a young bud, the pistils tend to be straight greenish or yellowish white. When you see these colors in the pistils of your buds, you will need to wait for a few weeks more to allow the buds to mature before harvesting. This indicates that the buds of your cannabis plant do not contain a lot of cannabinoids yet. In addition, they tend to be too small at this stage to be harvested. The buds tend to become bigger and more dense when you let them mature.

As the bud matures, the hair-like structures become darker. Some look red while other strains will look orange. Not all of the pistils will mature at the same time. Instead, only a few will turn red or orange at a time. You want to harvest the buds when at least half of the pistils in the buds turn dark red or orange. At this point, the plant should have enough cannabinoid to be potent

enough when smoked but it will not be too strong that it will only cause the user to sleep.

If you want to inspect the plants in detail as it matures, you may also use a magnifying glass when inspecting the hair-like substance in the buds. This will give you an idea of how the pistils change in color. Your knowledge of how the process happens can guide you when assessing the buds in your future harvests.

If you picked up some special strain of cannabis, it is best to ask your source of the strain how to assess if the buds are ready for harvesting. For some strains, the general rule does not necessarily apply. Some indica-sativa hybrids for instance, have their pistils remain white even when their buds are already ready for harvest. For special strains like this, you need to rely on the source of the strain to tell you the tell-tale signs that the buds are ready.

Method 2: Inspecting the Trichomes

The first method of harvesting relies solely on the ocular inspection of your buds. In the second method, we will need to use a magnifying glass to inspect those trichomes. This method is more accurate when aiming to harvest buds with the right amount of cannabinoids for smoking or for use as cooking ingredients.

Trichomes refer to a plant structure that looks like tubes in the surface of the buds and leaves. Some people may refer to these parts as resin glands because they excrete a liquid that closely resembles the sap of other plants.

When checking the trichomes of a given plant, you want to check if their shape starts to resemble that of a microscopic mushroom. It should contain a stem and a ball on top. The stem may be green to translucent while the ball on top should look translucent with a liquid inside it.

The strain will determine the exact size of the trichome of the plant. The smaller they are, the more difficult it will be for you to see them. For some strains, you will need to use a handheld microscope to check the maturity of the trichomes in your plant. If you have a camera with high-powered lenses, you may also use that to take a closer look at these parts of your buds.

If you see that many of the trichomes are maturing, this should be a sign that your bud is ready for harvesting. For mature trichomes, the translucent parts begin to look milky. This milky consistency indicates that the

cannabinoid in the plant is accumulating, increasing the potency of the buds.

You are trying to avoid buds whose pistils look ash colored. This is a sign of a matured bud and it is no longer viable for harvesting. These types of buds have extremely high cannabinoid content, making them dangerous to be used even just for smoking.

Preparing the plant for harvest: Flushing

Sometimes, the types of liquid nutrients we add to the soil tend to have an effect in the taste of the end product of the cannabis. This is particularly true when planting outdoors in soil because the liquid nutrients tend to stay in the soil longer compared to the water suspension in a hydroponic system.

Before harvesting, we can actually remove the strong taste of these liquid nutrients by using the process of flushing. Flushing refers to the method of using only water to feed the plants a few weeks prior to harvesting. Ideally, you should only do this when you have seen the evidence that the buds are mature and are ready for harvest. If you do it too early, the excess in water will dilute the cannabinoid content of your plants and lessen the potency of your harvest.

If the buds are ready for harvest, all you have to do is to water the plants daily with pure water, without adding the usual liquid nutrients. If you used garden soil as your growth medium, the plant should be flushed at least a full week prior to the harvest. Shorter flushing treatments could be applied to plants in hydroponic medium.

Why do we need to flush?

Most people will complain that flushing does not do much in terms of the quality of the weed. Marijuana users who are not smokers tend to say that they do not feel the difference of a flushed bud from an unflushed one. Some say that even that taste is not affected.

The taste and smoothness of the weed can be determined when it is smoked. Flushed weed tends to cause lesser amounts of coughing on users. In an increasingly competitive pot market, the smoothness of your buds can be the difference that makes your product better than the others.

Now that your buds are ready for harvest and they have been flushed, the next step is to actually harvest the buds from the plant. When harvesting the buds, you can either use a cutting tool or remove the buds by hand. It does

not really matter how you remove the buds as long as you cut them cleanly. The only reason for you to actually use cutting tools like shears is for presentation purposes. If you are planning to sell your product, you want the cut to look straight and clean. This does not necessarily affect the potency of the bud. Buyers however, tend to associate good quality buds to ones with a clean node cut.

If you are farming marijuana plants for profit, your buds will also look good if you cut the entire upper part of your plant that contains all the buds. If you let your buds mature, you should see multiple groups of buds in the upper part of the plant. Some of them may even branch out to create more buds. In this case, it will be easier for you to trim and process the buds if you cut an entire foot below the bud of the marijuana plant.

Aside from the removal of the buds from the plant, you may also need cutting tools for trimming the plant excess leaves off of your bud. High quality marijuana buds contain few leaves. The leaves that surround the buds tend to have lower cannabinoid content. Avid pot users have associated the buds that come with many leaves with low quality. Since pot is now mostly sold by the gram or pound, the cannabinoid value of a pound of buds with leaves is significantly lower than those that are purely made of buds. If you want your product to be associated with good quality pot, you want to trim your buds before selling them.

You want to trim the leaves off the buds right after harvesting them and before curing them. This will make it easier for you to separate the leaves from the bud because they are not hugging the bud yet. This is often referred to as wet trimming because the leaves and the buds are still moist when you trim the excess leaves off.

This process also hastens the drying process. After you harvest the buds and trim the excess leaves off, you will need to hang them to dry before curing them. In areas with no sun and with low humidity, it may take long for the dense buds to actually dry. By trimming the leaves off, you will be able to hasten the drying process in preparation for the curing of the leaves.

Summary of the process for harvesting:

1. Cut a foot below the lowest bud
2. Put on gloves to avoid the resin from coming in contact

with your skin (they are difficult to remove)

3. Use your hands to remove the excess leaves that are separate from the buds
4. Use a trimming scissors to remove leaves close to the buds
5. Hang the buds to dry on the excess stem

Drying and curing

The weed sold in health shops has been processed to preserve their long term potency. To turn your harvested buds into the store-worthy product, you need to know how to cure your buds.

Curing is more than just a preservation technique. Here are some of the reasons why people cure their marijuana buds:

1. Cured buds tend to increase in potency
2. Cured and dried buds tend to cause less coughing when smoked.
3. Curing prevents the growth of molds and bacteria that may cause the bud to break down
4. The process removes the fresh grass smell from the bud that causes some people to feel nauseated when smoking
5. It may reduce the psychoactive effect of some excessively potent strain
6. It gives the harvest its dry wrinkled look that most people have associated with weed
7. It enhances the smell of the buds, making them more appealing to possible buyers

Now that we know what curing does to your buds, let's discuss how to apply the process to your plant:

1. Hang the harvested and trimmed buds upside down to let it dry slowly (5-10 days)

2. Once the buds are dry, separate them from the stem and place them inside wide-mouth mason jars

3. At this point, the buds still contain moisture. You want this moisture to evaporate on its own. Check the buds every day if it still stays moist.

4. If the buds are still moist, spread them out in baking pans to let them dry in the air.

Do not try to hasten the drying process with artificial methods. This will remove a lot of the benefits of curing your buds. Some processes like heating (with a microwave for example), can cause the harvest to have a bad taste and smell. This could ruin your entire harvest.

If the buds are completely dried, the next step is to keep them in the Mason jar for curing. This method allows the dried cannabis buds to cure while preventing it from decaying. To do this, you will need to keep the mason jars with the buds in a room with humidity of 60-65%. The lack of moisture will prevent any bacterial or mold growth inside the jar.

It is also recommended to put a label on the mason jars with the harvest details. This will allow you to keep track of your curing process in case you are curing multiple batches of harvests at one time.

After each week of curing, open each jar to check if they are moist. If the buds feel moist, this may mean that it will require more time to dry. Just take it out of the Mason jar and let it dry in room temperature. Keep the dry ones in the Mason jar and allow them to continue curing.

The smell should also give you clues on how the curing is doing. It is common for some buds in the bottom of the jar for example to be neglected when checking. Even if you miss some moist buds in the bottom of the Mason jar, you will still be able to tell if the curing is doing well through the smell. As you cure the buds, it should begin to develop the rich cannabis aroma. Any other smell means that the cannabis buds may be wet and may be interacting with microorganisms. A strong ammonia odor is a common sign of bacterial growth. This usually happens when one of the buds in the Mason jar is still moist. You can undo the damage by aerating the bud some more to dry it out.

You can continue the process of checking for moisture and curing the weed. After 6 months of keeping the buds in a mason jar, the curing process should be over. At this point, you should now have a product worthy for long term storage. If you want to keep your product for months, you can transfer them to a vacuum sealed plastic bag. This will preserve your cured buds and limit bacterial growth and decay. You can just take them out when you are ready to use them or sell them.

CONCLUSION

Thank you again for purchasing this book!

We certainly hope that this book helped as you were planning your marijuana garden.

Being one of the pioneers of the medical marijuana production industry, you have an opportunity to earning big. The next step is to start planting and experimenting with different strains. If you can create your own strain of marijuana with increased potency, you will be able to outdo your competition in the market.

Now that marijuana can be legally grown, there is no need for you to waste money in growing marijuana indoors. Invest in an outdoor farm and you will experience better yields at low costs.

Thank you and good luck!

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