

CANNABIS CULTIVATION BOOK

A BEGINNER'S GUIDE TO GROW MARIJUANA
INDOOR & OUTDOOR, AND PRODUCE
MIND-BLOWING WEED AT HOME

LOUIS MURPHY

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Introduction

The marijuana plant has existed for generations. It's thought to have originated in Central Asia, but has expanded its reach to a worldwide scale after a while. Individuals all around the world consume marijuana and their reasoning is basically the same: it will make them feel good.

Humans who have cannabinoid receptors housed within their body which are prepared to bind with cannabinoids located in the marijuana grow benefit from healing advantages for a range of illnesses. In reality, cannabinoid receptors are contained in humans prior to birth, and the ingredients are actually present in a mother's breast milk. Medical marijuana gains merit if you think about your body to be naturally tuned to have interaction with cannabinoids, and much more so if you acknowledge the increasing evidence of advantages to marijuana usage.

Digestion and marijuana is no secret. Encountering "the munchies" is among the most apparent marijuana clichés. Regardless of the foolish connotation, studies suggest the endocannabinoid system basically helps modulate appetite. This is particularly good for the therapy of eating disorders. In reality, research published in the International Journal of Eating Disorders implied that cannabinoids might prove good at dealing with anorexia.

Chronic pain is among the most typical problems that makes physicians prescribe medical marijuana. A recently available survey published in the Spine Journal discovered that one out of five individuals in a Colorado spine facility had been using marijuana to handle their pain. Of those who used it, nearly 90% said it moderately or greatly relieved their pain.

A typical misconception of marijuana is the fact that it has detrimental effects on the mental health. It's feasible that excessive doses of tetrahydrocannabinol (THC) could cause anxiety in certain individuals, as well as many who think it can expedite the beginning of predisposed personality problems, but these facts are yet to be established virtually by any respected studies.

The latest trend in the psychological health field has been investigating human relationship with marijuana. In turn, research has linked cannabinoids to a selection of psychological health concerns. The study catalog continues to be growing.

Not merely has marijuana been associated with the brain wellbeing, cannabinoid receptor activity in the mind prior to birth implies the compounds might be involved in mind growth. Marijuana was connected to the development of new neurons in the human brain, or maybe neurogenesis, and total brain plasticity.

The most probably interesting opportunity programs for medical marijuana is cancer treatment. It has long been recommended to fight the unwanted side effects of chemotherapy, but Oncologists throughout the planet are focusing on trials to find out if marijuana may be utilized for treating cancer itself. Numerous individuals decide to grab the Rick Simpson Oil treatment program in an effort to remedy cancer, but there are lots of diverse techniques of going about the therapy.

There is a reason why they call it Weed. And that is because growing it is not exactly rocket science. You plant a seed in good soil, you water it, you give it light, heat, air and it will yield you a harvest which you collect and process to get you to the final product. Below is a quick overview of the whole process which the plant undergoes during its lifetime from seed to weed.

We have all had that dream of growing the green and then getting dirty green to put in our bank accounts. For some, this isn't a dream, they woke up one day and decided, "Today, I become a pot dealer." And guess what! They did it. They are rolling in the green, while selling their own sticky.

There are a couple different ways to grow your marijuana. You can either grow it inside behind closed doors where only your closest smoking buddies while know of its existence, or you can be more "in your face" by having the nerve to grow it outside for anyone to see. Of course, remember that it is illegal in most areas, so therefore, inside would be best. The only way you will get away with it is if you are growing medicinal marijuana.

Growing your own marijuana is energizing and fun! Homegrown cannabis isn't ideal for the little league storage room aficionado, yet in addition fills in as a worthwhile profession in the domain of mechanical weed ranchers. It is extraordinary for those hoping to create a pay running from low maintenance additional pocket money to a full blasting business, and far better for those hoping to dump sellers with crazy topshelf costs so they can grow their own astounding bud in the solace and protection of their own one of a kind homes. Marijuana growers can grow their own boundless stock of therapeutic

evaluation marijuana for all intents and purposes for nothing!

Growing marijuana is detonating exponentially in prevalence these days. Numerous specialists are alluding to this abrupt spike of enthusiasm as the "green surge". We're on a rising flood of green that is clearing the globe. Presently like never before is an energizing time to bounce directly in and figure out how to grow your very own yields.

An incredible advantage of growing your very own cannabis is that a large portion of the stuff out there that is monetarily grown will be grown dependent on elements of the buds by and large look, and the plant's yield sum. Often the nature of the high is altogether dismissed as it tends not to be a selling point. Business growers will in general accomplish unnatural things to their buds to compel tremendous growth, at the expense of yield and power. In the same way as other mass-delivered business nourishment items, it's increasingly about the look and weight of the item, instead of the hidden quality or medical advantages. Heaps of lethal synthetic compounds go into the generation of blooming marijuana to make them blossom quicker, and produce bigger, unnatural buds that need sap. The highs you can encounter when growing your very own plants is sensational!!

Chapter 1-The History of Cannabis

The history of marijuana use goes further back than anyone would have thought. The plant production dates back centuries. The first written account of cannabis production (allegedly used as medicinal marijuana) is found in Chinese documents dating back to the 28th century B.C.E. And a nearly 3,000-years-old Egyptian mummy yielded traces of THC, Cannabis plants usually have one of two styles of flowers, both male and female, and some plants have both. Male flowers grow along with the leaves in elongated clusters, turn yellow, and die after bloom.

Female flowers emerge in spike-like groups and remain dark green for one month after blossoming until the seed is maturing. Hashish is produced from the resin of cannabis seeds and is more active than marijuana.

The use spread from China to Japan, India, and eventually to East Africa. In India, the plant was known as an herb that could "free us from fear" in one of the Sanskrit Vedic hymns. Ancient physicians recommended marijuana for pain relief but often cautioned against using it too often because it could cause the patient to "see demons." An Egyptian papyrus dating from about 1500 B.C. Mention of cannabis as a valuable means of treating inflammation.

Around this time, the focus started on the intoxicating effects of the herb. Muslims used recreational marijuana as the Koran prohibited alcohol use, but marijuana did not. In India, Hindus celebrated the use of marijuana in a slightly intoxicating drink called bhang, saying it healed a long list of ills, including sunstroke, digestion, and dysentery problems.

The Spanish brought over cannabis to the New World in the mid-1500s. They planned to grow this crop for hemp — durable fibers that could be used for clothing, bags, and mostly for ship rigging. In both Britain and Scandinavia, cannabis was an important crop, since, in hot, salty conditions, hemp ropes were sturdy. To complete the rigging for the U.S. Constitution, it took more than 120,000 pounds of hemp ropes made from cannabis plant fibers.

African slaves were taken to Brazil also brought cannabis with them in the mid-1500. In Brazil, they worked farms and were permitted to grow marijuana crops for smoking.

Marijuana in America

As, in the late 1800s, steamships began replacing sailing ships, the need for

hemp started to wane.

In 1890, hemp in southern U.S. states had been replaced in cotton as a major cash crop, but hemp plants were not cultivated for their intoxicating properties. The number of intoxicants had been minimal on this farm. That began to change in 1910 when, during the revolution in that region, many people fled Mexico, arrived in America, and brought cannabis with them.

In many controlled drugs of the day, cannabis existed as an ingredient, but it was a small percentage relative to the amount containing morphine or cocaine.

Soon after 1910, European and US lawmakers started to prohibit drug use. Next, there was a 1912 Opium Convention and the 1914 Harrison Act that first described the use of cannabis and other narcotics as a criminal offense. By 1925, thirteen countries, including the United States, had prohibited or restricted cannabis. For some purpose, the legislation did not come into effect until 1938.

It was in the 1920s that marijuana started catching on. Some scholars claim it was Prohibition that brought about its emergence. Its recreational use was mainly limited to jazz musicians and show businessmen. "Reefer compositions" became a sensation in the world of jazz. Tea pads called marijuana clubs have sprung up in every big city. Such drug establishments were permitted by authorities as a drug was not illegal, and customers showed no signs to threaten the community or make a nuisance of themselves. Marijuana is not viewed as a threat to society.

Marijuana was described in the Pharmacopeia of the United States from 1850 to 1941 and was prescribed for various conditions, including labor pain, nausea, and rheumatism. Its use as an intoxicant was widespread from the 1850s through the 1930s as well

A U.S. - led the movement in the 1930s The Federal Narcotics Bureau (now the Narcotics and Dangerous Drugs Bureau) tried to depict marijuana as a strongly addictive substance that would make some consumers aggressive.

By the 1950's it was a beat generation product. College students and "hippies" used it in the 1960s, and it became a sign of resistance against authority.

The 1970 Controlled Substances Act listed marijuana as a Schedule I drug

alongside heroin and LSD; this indicates that they have a high potential for violence and has no approved medical use. Then, Colombia was the principal supplier. The Reagan and Bush administration's "zero tolerance" atmosphere resulted in the passage of stringent laws and involuntary drug possession penalties and increased vigilance against smuggling at the southern borders. Thus, the "war on drugs" brought with it a change from reliance on imported products to domestic production (especially in Hawaii and California) but still, high-powered marijuana boatloads made their way from Colombia to the U.S. Early in 1982, the Drug Enforcement Administration turned more attention to marijuana farms in the U.S. At this time, the potency of domestic marijuana also increased, doubling between 1979 and 1985. According to the annual survey of teenage drug usage forecasting the Future, more than a decade of marijuana usage decline reversed in 1992. Usage increased until 1997 and has undergone minor rises and decreases since. It never got back to the low point seen in 1991.

Historical origins of marijuana types

There is, in fact, no official scientific evidence that describes the distinctions between marijuana strains Indica and Sativa or even supports the existence of these differences. Nevertheless, amongst marijuana rising and using crowd, they have generally accepted reality.

Historical reasons for the beginning of the Indica plant, also known as Cannabis Indica, exist. It was first described in the late 1700s by French biologist Jean-Baptiste Lamarck. He also mentioned the fact the plants were poisonous. This was different from the normal hemp crops that were then cultivated in Europe because they did not intoxicate the customer. It was considered in Europe during the 1800s to be a medicinal treatment of sorts and is widely used in Western medicine.

Different Varieties of Marijuana

One of the Marijuana plant's many amazing features is that it comes in several different types. Not one form of marijuana is exactly the same, and both male and female types also come in. Some are tall and slim, some are short and strong, and still, others are much less.

The Cannabis plant is also noted for its dioeciously nature, which means it divides into distinct male and female plant colonies. This is one of the reasons cultivators develop problems with male plants entering a growing

space. Aside from male and female plants, growers and cultivators are likely to run into hermaphroditic and androgynous plants (and create!)

Whatever form of weed you eventually choose to cultivate, acquiring some basic knowledge of the variations and differences between the different species, as well as male and female plants, is a good idea. You'll want to understand why you'd like to split them, too.

You will make the best decision about your own growing habits when you know these things. We will cover the three cannabis species here, the role of gender in growing as well as the hybrid breeds and hermaphrodites.

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Marijuana type #1: Cannabis Sativa

Sativa is the sort of weed people tend to want to smoke the most. This plant grows very large, and in some cases, reaches up to 15 feet. While it's not a very thick plant, many growers like it because of how tall it can grow.

Their leaves are long, dainty, narrow, and they are ideal for outdoor growing given their height potential. The seeds are smooth to the touch, with no marks or spots. Do not expect this plant to bloom fast because Sativa takes its precious time, and even changing the cycles of light may have little effect on this.

Sativa is commonly found in places like India, Thailand, Nigeria, Mexico, and Colombia below a latitude of 30 ° N.

Sativa is also used for drying, cooking, and consumption. Although many people either vaporize this strain or smoke, it is the standard for consumers to use it to get high.

Depending on the individual, it can also improve your imagination. It is the pressure you use to be up and busy throughout the day as it boosts your motivation and opens you up to new, fresh ideas. You may love this one if you're an artist of any kind. Sativa is considered to be the two main active ingredients in cannabis with a high ratio of THC to CBN.

Sativa dominant strains in the cannabinoid THC are higher. This makes the use for medicinal purposes less likely, but in Ayurvedic medicine, it is still popular. They also work well to counteract the symptoms of Depression ADHD Fatigue Mood disorders. One positive thing about growing Cannabis Sativa is that it has a shorter vegetative period. Only a few Sativas are bred out there to have shorter flowering periods. If you're from a hotter environment or have trouble holding your rising room temperatures down, then a Sativa could be ideal for you they're ideally able to withstand high temperatures than Indicas.

Marijuana type #2: Cannabis Indica

Sativa takes some time to flower, Indica flowers much faster, and by changing the light cycle to encourage this process can be controlled much easier. In countries such as Nepal, Lebanon, Morocco, and Afghanistan, it is most commonly found above 30 ° N.

The buds and flowers on the dominant strains of Indica will typically grow very close to each other and are more sensitive to the touch than the plants of Sativa. If you want to make hashish, Indica is the plant you'd be selecting because of the amount of resin it produces.

Cannabis Indica has lovely soothing properties, and helps with: Insomnia Alleviating pain Causing muscle relaxation Muscle spasms Relaxing anxiety Headache and migraine relief Growing Cannabis Indica Cannabis Indica is a strain of medical marijuana that is usually higher-yielding, has shorter flowering time, and leaves that are shorter and wider than a Sativa's.

Generally speaking, they are smaller plants, but they can get very bushy. For these reasons, many farmers tend to grow Indicas.

Persons with shorter winters may want to develop in colder climates Indica because of their shorter flowering period. Thanks to their shorter height, it is also easy to grow them indoors when it comes to growing Indicas.

Marijuana type # 3: Cannabis Ruderalis

You'll never hear anyone talking about Cannabis Ruderalis, which is one of the main marijuana types and grows about 20-25 inches in height at a pretty short stature. As with Indica, this plant has very thick leaves. In northern regions of the world, this plant is typically found growing.

Ruderalis has an unusually early and quick flowering period as it grows further north than any other form of weed and thus does not have the luxury of much time to mature before cold weather strikes. Ruderalis is used in auto-flowering development.

One of the reasons you learn nothing about this strain is because highly psychotropic is not known. It is used mainly by breeders and cultivators as a source of extra genetic material. That way, hybrids can be bred which flower early, and some strains can adapt to more northerly climates.

Usually found in the northern hemisphere, is a type of marijuana cultivated primarily for the industrial uses of its derived products from the Cannabis Sativa species. It is one of the fastest-growing plants and was one of the first to be spun 10,000 years ago into a functional fiber.

It can be processed into a variety of commercial products like paper, textiles, clothes, biodegradable plastics, lighting, insulation, biofuel, milk, and animal feed.

Hemp was a cash crop in America before the Marihuana Tax Act of 1937 was enacted since hemp can grow wild in environments where the soil is not freezing in winter and plants burn. Hemp has a low THC level, and is not worth smoking, according to the USDA. I completely agree with THC rates below 0.3 percent.

Hybrid types of marijuana

An enormous number of strains are available in modern cannabis cultivation and breeding. Many years of intense mixing and hybridization across these three primary varieties have created a huge spectrum.

The various mixes all have different characteristics, including running the spectrum of flowering process possibilities, yield, CBN: THC ratios, and disease resistance. In general, a hybrid plant has the function of integrating positive characteristics from different strains together.

The plant height, the length of the buds, the size and shape of the leaves, the

odor, the consistency of the smoke, and the chemical properties themselves are some key differences between Indica and Sativa marijuana types. Indica is usually broad and sturdy, while Sativa is long and small.

Growing hybrids can vary greatly, but they typically have some of Sativas and Indicas 'good qualities. Due to the number of genes that can be found in hybrid marijuana plants, it is difficult to determine a specific height, leaf shape, or other distinctive detail. Yet hybrids are also bred to have higher yields and to be more resistant to pests, which is perfect for farmers. Hybrids are hugely common. Most available seeds are hybrids. Make sure to read the Growth details before purchasing to learn what you should do.

Marijuana seed types

There are a few elements of marijuana plants that are more important than seeds. All begins with the seed, so you will be better off counting the seeds. In other words, you should carefully determine which form of seed you wish to purchase. Let's check out some of the options.

Standard marijuana seeds

Standard seeds are the usual type of marijuana seed that most people have historically grown with, just as they look. These seeds will come with about 50% male and 50% female, so if you grow with normal seeds, you will have to be careful in removing the males.

Feminized seeds of marijuana

These seeds are the ones that contain only female plants. These do not occur naturally-they need to be created to make them all female (which is also the dream of a marijuana grower). Most marijuana growers have the most effective choice to buy feminized seeds.

Auto flower seeds

Seeds which are not photosensitive to auto flower, instead start flowering based on timing. That is to say, they automatically flower. These can work very well to grow all year round, but indoor growers who can already tell when they want their plants to start flowering by controlling the light cycle don't make much sense.

Once the plant is fully grown, you need to start thinking about the time of harvest. Our free little Harvest Guide will assist you in determining the best

time to cut your plants.

Chapter 2-The Benefits of Marijuana

Cannabis can be found in different ways, and cannabis 'health benefits are increasingly increasing, here Tara Leo of Cali Extractions gives us an insight into the plant's diverse benefits. Cannabis contains CBD, a chemical that affects the brain, helping it function better without giving it a high degree of pain-relieving properties along with THC. Both substances can be extracted by short path distillation and improved for use. Cannabis patients can receive the following health benefits:

Chronic pain relief

There are hundreds of chemical compounds in cannabis, many being cannabinoids. Because of its chemical composition, cannabinoids have been related to providing relief from chronic pain. That is why the by-product of cannabis, known as medicinal cannabis, is widely used for relieving chronic pain.

Improves lung capacity

Unlike smoking cigarettes, the lungs aren't affected when consuming cannabis in the form of cannabis. However, a study found that cannabis is potentially helping to improve lung capacity rather than damage it.

Aid lose weight

You will find that the avid cannabis user is not necessarily overweight when looking around. This is because cannabis is related to helping the body control insulin while effectively controlling caloric intake.

Regulating and preventing diabetes

With its effect on insulin, cannabis can only help to control and prevent diabetes, makes sense. American Alliance for Medical Cannabis (AAMC) work has linked cannabis to balance blood sugar, lower blood pressure, and enhance blood circulation.

Fighting cancer

One of cannabis 'greatest medicinal benefits is its contribution to the fight against cancer. There is a strong deal of evidence that cannabinoids can help fight cancer or at least certain forms of cancer.

Helps treat depression

Helps treat depression without most people even realizing they have it,

Depression is fairly widespread. The cannabis end cannabinoid compounds may aid in stabilizing moods that may relieve depression.

Shows promise in autism care Cannabis is known for calming down users and controlling mood. This will help autistic children who undergo regular violent mood swings to control this.

Regulate seizures Research on CBD has shown that it can aid in managing seizures. Continuing trials are underway to assess the influence of cannabis on individuals with epilepsy.

Mend bones

Cannabidiol has been linked to helping repair broken bones, and the cycle has been expedited. It is also helping to reinforce the bone in the healing process, according to Bone Research Laboratory in Tel Aviv. This would make the bone easier to crack in the future.

Helps with ADHD / ADD ADHD and ADD

Helps with ADHD / ADD ADHD and ADD individuals to have difficulty concentrating on the tasks at hand. They appear to run into executive skill and attention issues. Cannabis has shown success in encouraging concentration and helping people with ADHD / ADD. It's also considered a better alternative to Ritalin and Adderall.

Glaucoma

Glaucoma care results in extra pressure on the eyeball, which is uncomfortable for the disordered individuals. Cannabis will help to reduce the strain on the eyeball that offers some temporary relief for glaucoma-individuals.

Alleviate anxiety

While it is widely accepted that cannabis induces anxiety, there is a way around that. Using cannabis in a controlled dose and correctly, will help relieve anxiety and calm users down.

One of those affected by cognitive degeneration is a gradual progression of Alzheimer's disorder, Alzheimer's disease. Cognitive degeneration is virtually inevitable when we age. The end cannabinoid of Cannabis contains anti-inflammatory drugs, which counter the inflammation of the brain that leads to Alzheimer's disease.

Dealing with arthritis-related pain

Cannabis is more widely sold as creams and balms that are used by arthritis-bearing individuals. THC and CBD also allow sufferers to deal with the pain.

Helps with PTSD symptoms PTSD

Helps with PTSD symptoms PTSD affects not only veterans but any person who is going through a trauma. When cannabis is legalized, it is researching the effect it has on helping to treat people with PTSD. Cannabis helps to monitor the reaction to the fight or flight, avoiding overdrive.

Helps offer relief for people with multiple sclerosis

Multiple sclerosis can be debilitating, and cannabis is known to help. Multiple sclerosis leads to painful contractions in the muscle, and cannabis can help to relieve the discomfort.

Reduces adverse effects related to hepatitis C and improves treatment efficacy

The hepatitis C cure has many side effects, including nausea, fatigue, depression, and muscle aches. In some hepatitis, C sufferers can last for months. Cannabis can help reduce the side effects of the medication, while at the same time making it more successful.

Inflammatory bowel disease treatments

Individuals with Crohn's disease or ulcerative colitis may find some relief with cannabis use. THC and Cannabidiol are known to help improve immune response while also communicating with cells that play a crucial role in the gut's function. Cannabis helps seal off bacteria and other compounds that cause bowel inflammation.

Helps with Parkinson's disease-related tremors

For those with Parkinson's, cannabis disease can help to minimize tremors and pain while also helping to encourage sleep. This has also demonstrated development in patients 'motor skills.

Chapter 3- Types of Cultivation: Indoor – Outdoor

There are two methods for growing cannabis as you probably know by now. There is the outdoor growing method and the indoor growing method. Each method has its own advantages, disadvantages, drawbacks and leaps. There are a lot of things to consider in choosing which one would work for you. Keep in mind that the right way is subjective and depends on what you are looking to achieve from this adventure.

Unlike purchasing marijuana, when you are growing on your own, you are immediately faced with a lot of options. You can choose to grow your cannabis indoors or to do it outdoors. Both are great options for growing your cannabis and can get you a really good harvest. The major difference between growing indoors and outdoors is the work you have to put in to make the environment suitable for the plants. If you are growing your plant outside, you would not need half the amount of effort that you would put into the farm if it was indoors.

Growing indoors requires that you have to create artificial lightning among other things to enable you turn the environment into one suitable for your plant. Growing your plant outside may require you to do some background work but it would be of a different sort from when you are growing indoors. In the same manner, the harvest that you would expect can be totally different as well. You want to have a blast while growing your cannabis? Then, you should keep reading.

Outdoor Cannabis

Growing cannabis outdoors will cost you a lot more than if you were doing it indoors. As much as you would need to create lightning setups that support indoor growing, doing it outside will require a different preparation phase that can cost you a lot more. When you are growing outdoors, you will be able to cut out the cost of electricity because your plants will make use of natural sunlight to grow. In spite of this, experts say that you can get a better quality of marijuana if you grow indoors. This is because you can control the environment. When you grow outside, much of what your plants need will be out of your control and all you can do is adjust them to suit what is naturally provided. Even this has its limits.

With growing indoors, it's a different game altogether. Outdoor growing allows you to work with one big crop of marijuana at once. There's really no

tag on the quantity that your grow tool, which is likely soil, can carry. Another good thing about growing outdoors is that you can get help. Depending on the size of the area where you will be growing cannabis, you can hire people to help you with it.

Indoor Cannabis

It is possible and often preferable to new growers to plant and tend to their marijuana indoors. Regardless of which method you choose for growing your marijuana, you would need a great deal of investment into the venture to kick off the process and do a good job with it. Indoor growing entails some monitoring. You have to do what it takes to make the environment conducive and to keep it updated with the trends. Indoor growing is great for most people starting out because you have a great deal of control over the process. You can control your growing process and give your plant all the care that it needs. You can even do this in a way that jump-starts its growth as soon as is possible.

When you are growing outside, the growth of your plant depends on nature. When you are doing it indoors however, it depends on what you feed your plants and how conducive you make their growing environment. Some growers have found that this control helps them get a potent yield than if they had grown their cannabis outside. The cannabis strains grown indoors also come with an awesome flavor that growers definitely love. Growing your cannabis indoors allows you to introduce higher levels of carbon dioxide (CO₂) than your plant could get outside. This results in bigger buds with higher levels of THC that you would find more difficult to achieve if you were growing outdoors.

That is not to say that growing cannabis indoors is a smooth sailing affair though. Complications can arise during the process. What indoor cannabis growers suffer to tackle the most are mites. When you are growing your cannabis outside, you would find natural predators to help you destroy them. Wasps, ants and ladybugs can help you get rid of the mites without any effort on your part. Since the mites love the cannabis plants, indoor growing isn't enough to deter them. And in this case, the predators won't be there to help you eat them up. You will have to resort to using pesticides and insecticides to keep them at bay. The problem with this is that there are increasing concerns about these methods of control in the marijuana community. Indoor

growers are left with a dilemma of precisely how to control mites from destroying their plants.

Chapter 4- Marijuana Legalities & Safe Use

No book on the subject would be complete without discussing the legalities of growing cannabis. I am not recommending that you break the law and you should check what the laws are relating to cannabis in your local area. These laws are changing all the time and you should keep abreast of them.

The legality of marijuana varies between countries. In many countries possessing any cannabis is highly illegal. For example, in some Arabic and Far Eastern countries possessing this plant will land you in jail or worse.

However, as governments are becoming more enlightened (and desperate for tax money) so they are starting to decriminalize possession of small amounts of cannabis for personal or medicinal use, which is, of course, is then taxed. Go above that limit and you are entering criminal territory, so you need to ensure you are aware of the laws where you live. In some areas, you are even allowed to grow a small number of plants legally.

Notably in the USA states such as California, Washington, and Colorado have legalized cannabis for medicinal purposes and Colorado even permitting it for personal use. Other countries like Holland and Switzerland have legalized and regulated it, though be aware of the rules in each country and state.

Cannabis is being legalized for medicinal use in several countries such as Canada, Israel, and the Czech Republic. In these areas with a proper prescription you are entitled to buy marijuana from an approved supplier, though be aware the industry is heavily regulated with plenty of checks in place to avoid fraud or buying too much.

The penalties for breaking the law regarding marijuana will vary from country to country. In some, if you are caught you may just get a slap on the wrist and it confiscated. In others, you will be fined and in the stricter countries you will be imprisoned, even for the smallest amount and the prisons in those countries are most unpleasant. In some of the Asian countries, you can find yourself sentenced to execution for possession or sale of cannabis!

The plant is best known for its psychoactive properties. The names of marijuana and cannabis more often than not refer to its use to get you high. For industrial use, it is more commonly referred to as hemp.

Despite being illegal, cannabis became a big part of the hippy world in the 1960s with many people enjoying the relaxing and mind-expanding properties of it. Many musicians of the era were, quite obviously, using cannabis or other illicit substances when they produced their songs.

Today, campaigners across the world are working towards the legalization of cannabis believing it can become a viable source of tax for governments and that it would reduce policing costs. Legalizing cannabis would also knock a significant hole in the finances and activities of the gangs and criminal organizations that currently smuggle it. In California alone it is estimated that at least \$15 billion worth of cannabis is sold each year, meaning the state governments would rake in well over \$1 billion in tax each year.

Attitudes are changing to marijuana across the world and people are becoming much more tolerant of it. Laws are changing all the time as people realize that, in many cases, the laws make a big fuss about nothing. However, when cannabis is legalized other laws need to be in place relating to driving under the influence and so on.

Over time we will see cannabis becoming legal in more and more areas, particularly as governments realize the profits to be had from taxation and how it will reduce policing and other costs.

Just remember to check the laws locally before you start growing to ensure that you do not inadvertently get yourself into trouble.

Safe Use of Marijuana

People from all walks of life use cannabis and for the continued legalization of this substance, it has to be used responsibly and safely. Because it can alter your perceptions, affect your reaction time, and have a sedative effect you need to be responsible in your use of it, particularly if you wish to avoid trouble with the law.

In a social setting or at home, using marijuana is perfectly acceptable because you are not going to harm anyone. Used properly as part of a responsible and balanced lifestyle it can have a positive and beneficial effect. Like anything though there is a chance to abuse or misuse marijuana and you need to be careful not to step over that mark.

For the governments who make our laws to be convinced that they should legalize marijuana, the common stereotypes of “stoners” needs to be dispelled. We all must show that cannabis can be used responsibly and with minimal harmful effects.

When you are using marijuana be aware of where you are and whether it is appropriate to be using this substance. You have to use your common sense here because your judgment can be impaired by it, which could endanger you or other people.

You should also know how marijuana affects you and remember that different strains of the plant can have different effects on you. If you know that it normally makes you tired or extremely relaxed, then you don't want to be using it when you need to be alert and focused.

Some people are tempted to use marijuana as an excuse for not getting things done or for their lack of self-control or achievement in life. If you are doing this then you need to consider your use of marijuana as it is not having a positive impact on your life.

If taking it gets in the way of you fulfilling family or personal responsibilities or obligations, then you need to either stop using it completely (which is easier as marijuana is not physically addictive unlike tobacco and alcohol) or limit your use to after you have completed the tasks at hand. Marijuana can be a great reward for you after a hard day's work or you may decide you only use it at the weekends or for special occasions.

Unless you are a medicinal use of marijuana you should never use it before

school or work as it will affect your ability to function. In some companies, it could be a dismissible offense and it can get you in a lot of trouble at school. An employer would not expect an employee to turn up drunk to work and they likewise do not want to see someone turning up stoned.

However, what you do in your own time is completely up to you and again you need to use your common sense as to when to use marijuana.

You should never drive, operate machinery, or use anything that could cause harm to yourself or anyone else if it gets out of control or you make an error whilst high on marijuana. This could be fatal, and you need to ensure you are perfectly safe before you do any of these. Just as you wouldn't drive a car drunk you should never drive one when high. Test your sobriety by standing on one leg to test your balance which will help you determine whether or not you are impaired. Also, smoking marijuana does not sober you up when you are drunk, as some people seem to think!

In some cases, marijuana can affect you in peculiar ways with certain prescription drugs. If you are taking prescription drugs, then you need to keep an eye out for any possible contraindications. You may have to either stop using marijuana or speak to your medical professional about changing the types of prescription drugs you are taking. You should never stop taking your prescription drugs without your physician's advice.

You should also listen to your friends and family because they are best placed to notice whether marijuana is hurting your life. If they tell you that it is damaging your life, then reduce your usage or get help.

You also need to keep any stores of marijuana safe and away from minors as if they get their hands on it you can find yourself in serious legal hot water! It could also be considered dangerous for them. Make sure that you have your supply somewhere secure and out of the way.

Rules For Staying Out of Trouble

Don't smoke in your car

This is the most common way for people to get busted for marijuana use as the smell is contained and will be very noticeable. If you must transport your marijuana then put it in the trunk, out of sight, and in an odor-proof container like a glass jar.

Never sell marijuana

The penalties for selling can be harsh and you never know if the person you are selling to is a police officer or will report you.

Don't grow unless legal

Unless you are in a state that permits you to grow marijuana does not grow it as you are breaking the law. If it is legal then keep within the legal limits as you don't want to go over what is considered legal for "personal use".

Never smuggle

Don't even consider crossing an international border or even getting on a plane with marijuana as you will end up in serious hot water. The penalties for drug smuggling are harsh and long-lasting.

Don't use in public

Use your marijuana at home or in friends' houses. Using in public may well be illegal and you could encounter problems with your safety when you are under the influence.

Drug Testing Tips

More and more companies are insisting their employees are regularly or randomly tested for drugs. This is common in several industries including construction, driving, and others where being under the influence of drugs could be a health and safety risk. Failing a drug test will usually end up with you being fired without question.

For some jobs, you can find that you are tested for drugs before you are even hired. Whilst many people consider this to be offensive, it is the employer's right to test their staff, and often it is to prevent future problems. If someone is high when operating a crane, they could put a lot of lives in danger and potentially open up the employer for lawsuits. If you are taking marijuana for medical purposes, then you will have a certificate or prescription that you can show to your employer.

If you are facing a urine test, then you need to abstain from using marijuana for as long as you can before the test. How long this needs to be will depend on how often you use marijuana. Occasional users need to abstain for up to five days, regular users need from one to three weeks and heavy users will need between four and six weeks to get it out of your system. During this time drink a lot of water to flush your system. You can also buy a home testing kit to check to see if you will pass the test.

Make sure that you do not submit your first urine of the day for a test as it is the most concentrated. Taking a B vitamin complex will help add color which can help.

However, drug testing is very advanced, and it is there for a reason ... for safety. Therefore, if you are in a job where drug testing is required you need to ensure that your use of marijuana is limited to times when it will not cost you your job.

Chapter 5-Which Seeds to Choose?

One of the most important decision you will have to make is what seed you should choose. The growing process is not crucially dependent on your choice of seed. However, as you probably understand, different seeds comes with different properties and as a cultivator one should acknowledge this. If you are searching for a seed then I recommend Seedsman. They have been selling cannabis seeds online since 2003 and are considered as one of the most trustworthy and reliable online seedbanks in the world. The company sell their own brand of seed – Seedsman, but also stock 1500 strains from over 80 seedbanks from every corner of the globe.

Germination

Simply put, germination is the process where the seeds sprout and the shoot or root emerges. Cannabis plant takes around 12 hours to a maximum of 8 days to germinate where conditions of moisture, darkness and warmth are met. These conditions trigger the expansion of the embryo found in the seed, and later the seed cracks open. Then a small embryonic root is produced and it begins to grow downwards to mark the start of the seedlings stage. If you want to accelerate the process, you can soak cannabis seeds between wet paper towels, in wet peat pellets or cup of water. Peat pellets can work well since you can plant both the saturated pellets and the seedlings directly to a pot or other medium.

Seedling Phase

This phase starts after the seed coat splits and the root and shoot are exposed. It basically lasts from 1-4 weeks. At this stage your cannabis plant is vulnerable to conditions such as excess humidity, warmth or light intensity. To care for the seedlings, only use compact fluorescent lights that generate very little heat. Do not use MH and HPS as these increase transpiration, which eventually dries out the seedlings. Within 4-6 weeks, the crop should produce identifiable sex characteristics, and here you should eliminate the male plants. Return the female cannabis crop to vegetative state where you allow 6 hours lights-on period.

Vegetative Phase

In this stage, ensure you grow the crop for about 1-2 months indoors but with enough nutrients supply to facilitate growth of leaves. To find out whether

the crop is in its vegetative state, check whether the crop has produced 7-8 sets of true leaves. But if growing an auto flowering hybrid, the crop omits this stage and heads directly to pre-flowering stage. Most varieties require 1-2 months to mature and it is then easier to establish the sex of the crop through its physical size. The females are shorter with more branches and its flowers grow in panicles. You should remove the male plants to avoid pollination which can inhibit production of seeds.

At this stage, allow 18-24 hours of light to facilitate faster growth; which means the plant may not require a dark period. Also add in fertilizers with high potassium and nitrogen content alongside other micro-nutrients. As the crop becomes hardier you should decrease the strength of fertilizer by using those with other micro-nutrients.

Pre Flowering Phase

This stage is also referred to as the stretch and it basically takes 1-14 days. With light cycle comprising of 12 hours of darkness, most plants grows rapidly and double in size within 10-14 days. The crop should produce more nodes and branches; and start to produce the structure for the flowering parts. At this stage, you should note bracteoles starting to form, which are the nodes where the branches meet the stems.

Flowering Phase

For pure Indica strains, the flowering phase takes around 6-22 weeks. During the flowering phase, reduce the light supply unless you are growing the auto-flowering strains. Without pollination, the females should begin to produce buds that comprise of white resin glands that have high content of THC. It is crucial to inhibit pollination or fertilization of the plant to maximize the production of resins which contain the active ingredient. Furthermore, pollination results in production of seeds which make the yield to be of inferior quality.

As fewer hours of darkness can slow down flowering and longer hours lower yields, a 12 hours dark period should work well. Be aware that the flowering hormone is inhibited once the plant is exposed to light thus allow at least 8 hours of darkness each day. 1-2 weeks after you reduce the photoperiod, the flower starts to form, and should within 5 weeks double or triple in size. The flowers in cannabis plants are also referred to as bracteole and are actually

the most prized part of the crop. Five weeks into flowering, the buds also increase in weight and size.

Light, a Crucial Necessity

Light is a vital necessity for the proper growth of any plant, but when it comes to Marijuana, the importance levels are heightened because it is known to be a highly photosensitive plant. What this means is that the strain requires a specific schedule of lightening to head their flowering stage. The light supply has to be uninterrupted (constant) and consistent, or else it will confuse the plants.

For healthy Flowering and vegetation, marijuana plants require over twelve hours of light per twenty-four hour period.

If you have chosen to grow your plant indoors, then you can easily control the supply with the use of timers. With the legalization of cannabis cultivation in most countries, varying options of growth lights have been made available into the market – specifically for the process of indoor cultivation of Marijuana. When it comes down to it, all you have to do is pick a lighting system that works best within your given space, which you can operate smoothly and obtain without causing any financial hiccups for yourself.

Different Types of Growth Light

There are many choices for growth lights between natural and artificial, and some of them are;

- Sunlight
- Compact fluorescent light bulbs
- Fluorescent lightening (T5/T8)
- LEC (CMH) grow light
- LED grow light
- High-Pressure Sodium (HPS) and Metal Halide (MH) The quantity of light you provide for your plant determines how fast it grows. For instance, if an indoor cultivator gives their plant 18-24 hours of light daily, it keeps the plant in the vegetative state while reducing the light to 12 hours per day and

keeping the plant in total darkness during the last 12 hours will launch the plant into the flowering state.

Use of Alternative Light Sources

When cultivating Marijuana indoors, due to a relative lack of sunlight, a cultivator has to make use of electricity to achieve photosynthesis instead. Using electricity means he has to use artificial light. Three types of artificial light sources can be used: HID, CFL and LED

- **HID (High-intensity Discharge):** This type of light is best used for auto-flowering. It aids faster growth and takes a shorter time. 400W and 600W bulbs are the most suitable for the cultivation of cannabis plants indoors. They should be placed between 30-50 centimeters above the plant canopy. That much distance is necessary because this light source radiates a lot of heat, which could thereby damage the plant foliage.

- **CFL(Compact Fluorescent Light):** This light is a more practical choice in the cool white spectrum in comparison to a high-intensity discharge lamp.

Compact Fluorescent Light is cool and can be placed close to the plant without it damaging the plant foliage. CFL is more effective during the seedling and vegetative stages. Micro-Growers mostly use CFL due to its relatively low cost and coolness. CFL is not very active during the flowering stage as the plants need a higher intense illumination than the CFL can supply.

- **LED (Light-Emitting Diode):** LEDs are the latest light systems and are the most costly available. They are not too familiar with Micro-Cultivators due to the cost of acquiring them. The bright side is that they do not generate harmful heat and are economically efficient in the long-term. Hanging distances vary depending on the manufacturer's instructions.

Managing the Marijuana Plant

As mentioned above, once the plant starts to flower, it can grow in size greatly. By the end of the 4th week, plants that had remained short and bushy being only 2 feet high begin to flower. The flowering stage causes the crop to surge up in height and stretch as more buds and flowers forms. Therefore, one of the challenges you will face as a marijuana grower is to control the height of the plant especially in Sativa strains or Sativa mix, as these tend to

grow up to 8 feet!

It is important to point out that you should not wait until the plant starts to flower in order to trim as doing so can significantly lower your yields. Thus it's recommended to trim the non-auto flowering plants when 1-2 weeks to vegetative phase. This should give the crops enough time to recover and for the auxiliary buds to extend up.

Let's see what trimming is all about and the role it plays:

Trimming your Marijuana

Trimming is seen as a way to increase the health, strength, and yields of the marijuana plant. If not trimmed, marijuana normally grows into the shape of a Christmas tree, which makes indoor growing such a big problem. If your ceiling is 8-10 feet high, you'll have height restrictions since you should maintain the crop at least 1-2 feet away from light reflectors.

With the 6-foot space available, you need to trim the plant to facilitate it to grow bushier and denser. The practice can yield more branches, a rounder canopy, and help turn side branches into a cluster of the main branches. Once you trim, you eliminate extraneous sucker branches and stalks that don't get enough light, yet suck down nutrients and block air flow.

The earliest trim should be when the rooted clones or cannabis seedlings have developed at least four sets of true serrated leaves. Here you should cut on the newest growth at the top of any particular stalk using either a scalpel, trimming scissors or razor blade. After trimming, it's advisable to wait for 1-2 days for the crop to heal and then foliar spray using 5.8 pH foliar solution to sustain growth. Later into maturity, you can do extra rounds of trimming to help control the shape and ideal height of the plant.

In order to trim, locate the terminal bud of the marijuana plant, i.e. the actively leaf-growing appendage. When trimming, only cut the terminal bud taking care not to damage the lower leaves or even the stem. This makes the plant to grow two buds upwards and outwards, which helps maintain the bulk of the plant. After locating the terminal bud, trim it cleanly using nail scissors or a set of shears, but ensure it's a 45-degree cut. Be aware that straight cuts can make the plant collect moisture and debris.

You should also know that Sativa strains might require a second top trim to help maintain them within vertical confines of the growing room. The

continued topping during the vegetative phase may help increase yields since topped plants are more exposed to overhead lights. As trimming is closely linked to topping, let's try and understand topping to.

Topping your Marijuana

This refers to the removal of the main shoot that is located on the central stem. Topping is important in that it facilitates growth into a bushy and denser plant that has many shoots as opposed to a plant with one main shoot.

Normally, the center of growth control is based in the main shoot referred to as apical meristem. This shoot sends the suppressive hormone to the auxiliary shoots and this helps prevent rapid growth, in what is called *apical dominance*. Though it might not completely hinder growth of other branches, it receives most of plant energy and can suppress productivity.

Once you cut the main shoot, communication between the shoot and the leaves is interrupted, and this stops apical dominance altogether. Its role is assigned to the remaining shoots and this makes them to grow rapidly and attain great size that helps the plant develop a bushy appearance. The practice of topping can help the plant get enough light especially for indoor marijuana growing. However before you cut the top shoot, ensure that your plants have enough secondary shoots to sustain growth.

Furthermore, a plant can undergo a "state of confusion" until it can recover from such a loss. The vegetative growth only resumes after other dominant shoots are determined in a process that may take a few days. Keep in mind that some marijuana plants may experience stunted growth but within a week, you should expect normal growth. To prevent any stunted growth, only top plants after growing for 2-4 weeks since removal of the top shoot corresponds to loss of photosynthetic tissue.

Just like trimming and topping, it is also necessary to prune your marijuana plants. What does this involve? Let us learn more about pruning

Pruning Marijuana

Leaving the marijuana plant to grow uninterrupted can result into many branches than it can support. Extra branches mean that a lot of energy is wasted and flowering is delayed as the plant attempts to supply energy throughout its entire parts. Therefore, cutting the extra branches together with the weaker branches can facilitate the healthier branches to produce high

quality buds.

Those buds on the lower branches that get little light might end up as buds that never truly mature and hence should be cut at early stages. Failure to cut them makes them stretch for the light and this reduces the number of buds as the plant wastes energy on building stems.

You should also cut branches with long internodes, which is the space between nodes as well as branches positioned lower than the main shoots. Such branches often receive less light and may find it hard to grow appropriately. However, you don't have to remove the leaves in what is called defoliation in a bid to increase production of buds. Since fan leaves serve as a location for photosynthesis, removing them inhibits the plant's ability to produce energy and discards the energy already stored for future use. If leaves tend to hinder light, simply tie or tuck them under the canopy to ensure light reaches more bud sites.

As you trim and prune, take care not to severely wound the plant as this can trigger a hormonal response, which causes it to prefer defense to growth. Once wounded, the plant secretes jasmonic acid, which slows down the growth in a bid to heal the plant. Therefore, trim the plant gradually in the flowering phase as opposed to cutting down all growth at once. Though some plants may respond well to extreme pruning required in cases plants are packed too close to each other, it's better to keep it at minimum.

When to Harvest

The cannabis plant is basically harvested when around 50 percent of its tiny droplets of resin have turned amber in color from the usual cloudy or clear appearance. If you harvest the crop too early, it is likely that the buds are premature and do not have the full effect of a ripened flower cluster. On the other hand, late harvesting may mean that the psychoactive THC compound may get oxidized and go bad. Such a product may make users or smokers feel ill.

After harvesting, ensure that you cure the harvested flowers well; otherwise, they might grow molds and drop in quality. To cure the flowers, hang the buds on the racks for drying and later store them in mason jars.

Now that you know the growth stages of a cannabis plant, let us now look at the guidelines you need to follow to ensure maximum yields.

How to Protect Your Crops from Pests and Fungus

Every cultivator dreams of optimal yields of huge buds from their cannabis plants. Sadly, the presence of pests and fungus such as; *Fungus* can hinder this outcome. Here are little things quite as horrible as investing so much time, money, and effort into the healthy growth of your cannabis plant, only to meet uninvited guests of the annoying kind that feeds on your precious plants.

However, there are many ways to protect your plants from this pest.

Among mites and other critters, there is a common cannabis pest known as the fungus gnat, and you will be given ways to deal with it effectively.

What Are Fungus Gnats?

They are tiny, dark gnats with short lifespans that bare a resemblance to small flies. If there is an infestation currently occurring, you will be able to see

them hopping around on the soil. Unlike other marijuana pests, the interests of fungus gnats do not lie in the flowers or leaves of the plant as they inhabit the soil. Instead, the larvae nibble on the roots, resulting in damages.

Due to the importance of the root system for healthy plant growth, a fungus gnat issue could be problematic.

Fortunately for everyone, fungus gnats are not the most horrific pests you could encounter. If you possess mature plants that have a root system in good health, the gnats might be more of an annoyance and less of a catastrophe. However, they pose a severe problem to the young plants and seedlings, and if a massive infestation is left unresolved, it could also be a problem for bigger plants.

To defeat your enemies, you must understand them first.

Fungus gnats usually occur as a result of over-watering your plants. They can almost always be seen as an indication of excessive moist conditions in your growing space or room.

They have relatively short lifespans and develop through four simple stages: *egg*, *larva*, *pupa*, and *adult*. While in the larvae form, they feed for two weeks and later pupate near the surface of the soil. After about 3–7 days in the pupal stage, the adult gnats will emerge and live for around eight days. Generally, it would take about 3-4 weeks for an adult to develop after it is laid as an egg. The fungal spores are pretty much everywhere most of the time, making it easy for them to breed, as long as they have moist conditions and organic matter to consume.

What Do Fungus Gnats Do To Cannabis Plants?

Even as they gnaw at the roots of your plants, they are not interested in eating it. What they are after is the decaying organic matter and the fungus contained within the soil.

When the levels of organic matter reduce or is depleted, then the gnats become a problem. They also cause damages to the root hairs and the tender roots of the plants. Some symptoms of an infestation of fungus gnat are;

- When the roots obtain damages, plants will display various signs of infection, including wilting, yellow leaves, drooping, and spotting.
- Symptoms of the plant lacking sufficient nutrients can occur (leaf

discoloration, sickly growth, etc.) despite the presence of correct pH and proper nutrients.

- Seedlings become weak, fall over, and eventually die.
- Stunted plant growth and disappointingly low yields.

How to Destroy Fungus Gnats

In a different light, fungus gnats could be seen as a good thing, as they let you know when issues arise with your watering habits. And they can be spotted relatively quickly, only making getting rid of them somewhat easier;

- Water the plant less frequently: The first and most crucial step would be to revise your watering regimen. Give the soil time to dry out between watering sessions, and all will be well. Often, the pests simply go away.
- Implement yellow sticky traps: These can be gotten from your local garden stores and placed around the plants.

They will attract the gnats and them. This method might not completely eradicate the fungus, but it will at least serve as an indicator of their presence.

- Neem oil: If you happen to have a pest infestation, the use of hardcore chemical insecticides are not necessary.

Neem oil can aid you in getting your infestation under control. It also makes an excellent preventative measure.

Simply apply it to the top layer of your soil for treatment, and it will eliminate the larvae.

- Blow air over the top of the soil. You can use a simple standing fan to blow air across the soil gently. It will aid in drying out the soil faster and get rid of the gnats for good.

How to Prevent Fungus Gnats

Prevention is always a better option in comparison to treatment. This is why you should look at ways to prevent the infestation of gnats in proper time before they become a problem.

- Water the plant less frequently! As mentioned earlier, you need to be mindful of the amount of water that is given to your plant. The ideal growth conditions for fungus gnats consist of a warm and wet environment, and

excess watering only provides them with that. Give the soil a day to dry out.

- Cover up the soil. Since the fungus gnats breed and dwell in the soil, you could cover it up with gravel, sand, or even perlite to keep them from getting comfortable. You should note that while this method might prevent the gnats from popping up, your plants might still contain excess water.
- Sterilize the soil before use. In some cases, you simply cannot prevent bugs from coming up, for example, if they were already present within the soil. As a precaution, sterilize the soil first. This can be done by pouring some soil in a flat, oven-safe container (maybe like a baking pan) and cover it up with foil. Use a meat thermometer to monitor it as it bakes for about half an hour at 82–93°C. Ensure that the pots you use as well as your environment are clean as well, reducing the risk of infection from diseases and pest infestation.
- Consider using an alternative growing media. If you discover that your cannabis plants are constantly *bugged*, you should probably consider cultivating in a different medium. When you grow Marijuana in perlite, coco, or hydroponically, pest infestations are usually less likely.

Why grow your own cannabis?

Cannabis is illegal because of its potential of being abused. High tendency cannabis is capable of inducing an addiction if not smoked responsibly. Many governments have therefore banned the substances.

But it is fine to grow your own cannabis if you wish to put it to medicinal use.

Here are some of the reasons why you should grow your own cannabis.

Time saving

It is quite important for those depending on cannabis for health purposes to have some at their quick disposal. This is not possible if they rely on others to bring them the plant. The best thing in such a situation is to grow your own plants. It is quite easy to do so and will allow you to have plants all in different stages of growth.

Cost effective

Growing your own cannabis plants will ensure that you save on quite a bit of money on a monthly basis. You need not have to pay the dealer his fees. The cost per gram of the product will also considerably reduce.

Peace of mind

Growing your own cannabis plants will ensure that you remain with a peaceful mind. Forget having to contact a dealer and going through all of that hassle. All you will have to do is walk over to your balcony or growing room and snip off some fresh plant to decarboxylate and start using. You do not have to worry about getting caught for it.

Consistency

Growing your own cannabis plants will ensure you remain with a consistent supply of the weed. Having different plants growing in different stages can help in remaining with enough cannabis at all times.

Control

Growing your own plants will allow you to exercise control over its quality. You might not have the same control over whatever cannabis is given to you by the dealer. It will be possible for you to enhance the quality output of the plant by using good quality fertilizers and remain with good yield.

NOTE: Growing your own cannabis means you will have easy access to it and so must be cautious to use it responsibly.

Chapter 6: How to clone cannabis plants

What are Clones and Why Use Them?

In cannabis cultivation, a clone refers to a plant that is a replica of another plant. While the words “clones” and “cuttings” may be used interchangeably, it is important to note a slight difference between them. Cuttings refer to the cut-off parts of a mother plant, intended for rooting. Clones, on the other hand, are the already rooted cuttings taken from mother plants.

Cannabis clones are products of asexual propagation of a single, female, mother plant that has been carefully selected and bred for this purpose. Cannabis clones develop from stem cuttings of a mother plant that is replanted to redevelop roots and a shoot system, before growing into a new, healthy plant. With clones, the chances are higher the offsprings are going to have an exact chromosomal copy of the parent. That means a precise DNA material transfer is made and this manifests in the observable traits of clones such as the ability to resist pests and pathogens, and resilience in case of less-than-adequate growth conditions.

The most common type of cannabis clone is created via a plant cutting, but tissue culture is also a viable method used by some commercial researchers.

Why use clones?

There are some reasons why cultivators and home growers alike prefer clones to seeds.

- Cannabis is a heterozygous plant that frequently produces a wide variety of genetic material in offspring during sexual propagation. While this may engender variety, it can also cause unwanted surprises that you will do better to avoid.
- Clones take less time to mature. If time is of the essence, cloning is your best bet. You don't need to wait for your seed to germinate and then sprout. With clones, you are jumping directly into the deep end.

- Clones also save money and prevent uncertainty. It may take more than four weeks to determine the sex of a plant developed from a seed. With clones, however, you can save unnecessary expenses incurred in caring for plants that may grow to become unwanted by you. Imagine wanting a female plant only to discover the seedling you have been tendering for a month is male.
- Clones also give you the chance to experiment and study the effects of varying factors on your cannabis garden. That will give you an edge in subsequent growing seasons.
- Importantly, cloning gives you a chance at a repeat experience. It means you do not have to admire a particular strain once and then, puff; it goes away. No, you can use cloning to preserve the best traits possible in your cannabis for as long as you want.
- Furthermore, cloning helps keep your cannabis farm self-renewing. Usually, a cannabis plant dies off at the end of its flowering cycle. With cloning though, you get to prolong the lifecycle by stopping development at the vegetative stage. This also means that you have the base input for your next farming season. You also get to save cost by not having to spend on seeds next time around.

Increasing Success Rate of Cloning

It is simply cut a part of the mother plant, plant in the soil and watch it germinate into an entirely new plant. However, the process can provide some challenges and be difficult to master. The process itself starts from the selection of the right mother plant. If your mother plant is sickly, its clones will inherit that weakness as well. Therefore, you must pay attention and find fortune, to be able to pick an incredible mother plant, one with all the unique characteristics you want and less undesirable traits.

Furthermore, the clones to be replanted aren't always strong. They require tendering and careful attention if they are to survive. If this isn't done, then

the chances of a failed cloning process increase.

Here are some other pointers to help you maximize your odds of success in cloning your cannabis plant.

Avoid cloning sick plants

When you have a mother plant, you're excited about, chances are you'd want to clone it. But if it's sick at the moment, you might get confused about what to do. Do you go ahead and try to get a cutting from a clean part of the plant? Yes, you can give that a try but it is risky, and the chances of succeeding are narrowed. While this strategy may work, the odds that such a weakened clone would survive are much dimmer than average. Even if it does survive for a bit, it will need to fight hard to stand a faint chance of surviving. These factors significantly increase the odds of failure. Therefore, it is best and prudent you go for healthy plants instead.

Use sterile instruments for your cuttings.

Infectious agents abound everywhere, even on the shears that you use to make your cuttings. Therefore, you need to be sure it is sterile before you use it. If you cannot get a new pair of shears for cutting each time, then at the very least, distinguish the shears you use to cut clones from the ones you use to prune other plants.

Stop giving nutrients until you've transplanted your cuttings.

Hold off on the nutrients until after your transplant is completed. Do not overload the fragile cuttings with nutrients they can't even absorb yet. At the very least, you need to give them a few hours to two days to develop their first roots. If you keep pumping nutrients into the soil when they do not even have the roots to absorb them, then, they may find it hard to thrive when they do eventually get those roots.

Clones vs. Seeds

One of the first things you'll need to decide on when starting to grow cannabis is whether to start from seed or clone. One of the first things you'll

need to decide on when starting to grow cannabis is whether to start from seed or clone. Choosing between clones and seeds is without a doubt a landmark decision. I will not attempt to announce a clear winner between clones and seeds;

Benefits of using cannabis seeds

- Seeds sprout plants that possess a taproot. Taproots give rigidity and strength to plants.
- Since clones are replicas of their mothers, it can be deduced that they would most likely inherit the bad traits of the mother plants, if any. Using seeds cuts out this possibility, as each is unique in genetic composition and chemical architecture.
- Seeds provide a wider variety of outcomes than clones.
- If for some reason you do procure seeds but don't want to put them to use immediately, you could store them guaranteed that they would still be good by the time you are ready to use them. Seeds have a longer lifespan in contrast to clones, and can usually be stored safely for a long time.

Some of the disadvantages of growing cannabis from seeds include:

- A grower invests quite a bit of time before they know if the seed is male or female.
- Seeds are very delicate after they pop. It doesn't take much to kill them. This can be a huge issue for new growers who are still just trying to figure things out.
- Germinating seeds is a skill that not everyone possesses. It takes experience to master.

Drawbacks of using clones

- Clones lack a taproot. Instead, they grow secondary roots also known as a fibrous root system. Many cannabis growers believe

that a taproot makes the plant stronger.

- Being replicas of their mother plants, cannabis clones may carry diseases and pests from their mother plants.
- Clones have a limited shelf life. Therefore, you either have to see them through to the end or watch them wither and die.

Basic Steps to Cloning

There are several methods of taking cuttings from your selected mother plant. Successful cloning requires the highest standards of cleanliness, and care. Clones are sensitive to their environment. Harsh conditions such too much heat and too much light will increase death rates.

Step 1: As I earlier asserted, the most important step in the cloning process is to make a choice of the mother plant to take cuttings from. Once this is done, you are set for work. Get your sharp razor ready (or a pair of scissors, whatever the case might be). As earlier mentioned, using a razor is recommended because they exert lower pressure and are less likely to damage the mother plant. Using the razor, make a clean cut of a branch off the mother plant. The choice of branch should be made considering factors such as health and vigor. Only the healthiest branch(es) should be cut. While making the cut, make sure to cut at an angle, that is, make a diagonal cut of the branch. The cutting angle could be set to anywhere between 40 and 45 degrees, in order to secure a larger surface area for faster rooting. Care must be taken while making the cut to ensure that the mother plant is not damaged in any way. After making the cut, you must immerse the cutting into the water immediately. This should be done for all cuttings.

Step 2: Now, you have your cuttings ready for planting. The next step is to examine your cuttings to make sure they are appropriately structured before proceeding to plant. If there are too many leaves or little branches on your cuttings, you should remove some of the leaves and cut off the little branches, so that your cuttings will fit into the planting medium perfectly. Now, apply the rooting hormone to your cuttings. You must ensure that there are at least 2 to 3 leaves on each cutting above ground level, and 2 sets of trimmed nodes below ground level.

Step 3: Now that the rooting hormone has been applied to your cuttings, dip

them into wet, treated grow medium. The setting can be achieved with distilled water. Using an object with a blunt end, make a half inch incision in the growing medium. This allows for root structures to emerge and grow optimally.

Step 4: The next step involves watering the rooting medium. Carefully apply water to the rooting medium until it becomes moist. You must take great care while watering, to ensure that you do not over-water and damage your baby clones' roots. Note that you need to keep your clones moist all the time. You must avoid allowing your clones to get dry at all cost, especially in their infancy. At this young age, conditions must be kept at optimum so as to increase the chances of survival and wellbeing of your clones. You might consider placing them under a humidity dome, in order to keep them moist always and prevent drying.

Step 5: Like other conditions necessary for optimal development of your clones, lighting conditions must be strictly controlled and religiously monitored. It is recommended that you place your clones not more than 24 to 30 centimeters from a fluorescent bulb, while giving them 18 to 24 hours of daily light consumption.

Step 6: Watch your clones fervently for the next few days. Under excellent conditions, roots should begin to develop with 7 to 8 days, and by two weeks, the root architecture should have completely developed. Once this is achieved, you can begin the transplanting process.

Step 7: Examine the root structure of your clones. Clones that have brown, damaged roots should be set aside. Clones exhibiting this sign typically grow very slowly and weakly. However, there have been reports that roots that developed a brown, wilted presentation early on went on to gain strength and grow normally. To this end, roots appearing brownish in color may be allowed 5 to 6 days to restore rigidity. If they fail to normalize after 6 days, then it is advised that clones with such roots are removed from the garden.

Step 8: You may dip your clones into Vitamin B1 before going on to plant them, as this substance is proven to help stimulate root development.

As clones are genetic mirror images of their respective mother plants, the act of cloning allows you to select and maintain certain desirable qualities or characteristics of a mother plant, at relatively low costs. Cloning is an easier

way of growing cannabis, compared to growing from seeds; this means you can all the desirable traits you want while sustaining a high yield. However, if you are new to cloning, the process may not go all smooth and easy the first time, it takes knowledge and experience to master the art of cloning.

Chapter 7- Harvesting, Drying, and Curing Your Marijuana Buds

Congratulations! If you have reached this chapter, then there are good odds that you have used the information in this book to successfully grow some marijuana! The good news is that your buds are done. The bad news, however, is that you cannot smoke them just yet. First, you must dry and cure your marijuana buds to make them the perfect moistness and maximum potency for smoking.

Signs That Your Plants are ready to Harvest

You will know that your cannabis buds are ready to harvest by paying attention to the pistils and the trichomes. The pistils are the hairs on the outside of the bud. You should aim to have at least 50-80% of these hairs an amber/brown color before you harvest. You will also want your trichomes to change color. These will be clear as your plant is growing. When your plant is ready to harvest, either half will be milky-colored and half will be amber or all the trichomes will be milky colored.

You should also be aware that you can change the way that your bud affects you by changing the harvest time. When you harvest earlier, you have more of a Sativa effect on the body that allows for a thoughtful, in-your-head high. If you are seeking for a body high like you would get from an Indica plant, then you will want to wait to harvest until a little later. You can experiment with harvesting times on the same strain of bud until you find what works best for you- then stick to it!

Harvesting and Drying Your Marijuana Buds

When you are ready to harvest your buds, you will need a sharp pair of scissors. You can either cut the plant above the roots or cut off the buds individually, leaving a few inches of stem below them so you can hang them. Once you have cut all the buds off, trim the leaves. You can save these in a separate area if you plan on using butter, hash, or another byproduct later, but leaving them with your marijuana can lower the quality and give your bud a harsher taste.

Take the buds and use a string or another system to hang them in a cool, dark place that is relatively dry. You will want them to dry until you can easily snap the buds off the stem when you apply pressure. If they are not ready, they will only bend.

Curing Your Buds

Once you have dried your marijuana buds, you are still not ready to smoke if you want the highest quality. The key to high quality is getting the perfect balance of stickiness, without the marijuana getting too dry. Remove the excess stem from your buds and place them in a mason jar or another airtight container. Place them in a cool, dark area for at least 2 weeks, but no longer than one month. Open the container at least once per day, being sure that any moisture in the container is released. Moisture can cause mold growth and ruin your entire harvest, so use caution and be sure that buds are dried thoroughly before you attempt curing them.

Chapter 8-Mistakes To Avoid

Timing the Growth Cycle

Sowing the seeds in late May or the first week of June provides the plants the perfect amount of time to complete their growing cycle in the least amount of time while producing the maximum harvest. After the summer solstice, days start becoming shorter.

Not Being Observant

Pests are an issue but they can be spotted and dealt with. However, this means that you need to be vigilant. Walking into your growing room and turning over a couple of leaves is not enough. Although checking every single leaf of a big crop is not possible, you do need to check a good quantity of them and do so every day. This, along with paying attention to hygiene can help to ensure your crop is successful.

Lighting

The problem is in balancing the amount of light each plant gets without overheating them or having the lamps close that it burns their leaves.

It is impossible to state a set distance that is acceptable, there are too many variables involved. The power of the lamp, type of lamp, and even the size of the growing area all need to be considered.

As a basic rule of thumb, you should be able to hold your hand just above the leaves without feeling like its burning. You can even use a thermometer to check the temperature at the top of the plants. It should be 28 – 29° C (82 – 84° F). But don't forget, the closer the light is to the plant the fewer the number of plants it can look after.

Spraying

A common problem, mold, is caused by the conditions being too moist. This attracts the bacteria which create mold and allow it to spread rapidly. Most growers realize the importance of controlling temperature and humidity, but many still use a spray option to water their plants. Spraying the leaves will dramatically increase the chances of mold forming, which will damage your harvest.

Leave Your Plants Alone!

Once you have set your feeding, watering, light, and pest control schedules there is no reason to disturb your plants. Just like humans, plants can become stressed and this will have a detrimental effect on their growth and your harvest. Your plants are capable of growing well with the measures you have put in place. After all, cannabis is still a weed.

Panicking

People who are new to growing marijuana can be panicked by the sight of dying leaves and start creating radical changes to their systems. It is normal for low-level leaves and those on the outskirts of the light to change color. They can simply be removed, leaving the plant to flourish. Instead of panicking when something doesn't appear right, pause, take a look at this book, and then take the appropriate action; if any is needed.

The Root

The fundamental element of a productive and healthy plant is a well-developed root ball. This is a good reason why you should consider re-potting your plant regularly. You will be able to verify that the roots are starting to grow through the bottom of the pot, signifying that the roots are growing well. A healthy and large root ball is essential to ensure the flowering buds all have the nutrients they need.

Low-Level Cold

If you've fitted a thermometer to the top of the plants and established that they are just the right temperature you have only completed half the battle. Heat rises, this means that the floor can have a much lower temperature than the ceiling. Your plants might be warm at their tops but have cold roots; leading to a slowing of nutrient uptake and potential damage to the plant! Monitor the temperature at the bottom of the room and consider adapting your heating system to ensure the temperature is even across the room. Additional low-level heaters and fans can help to ensure the temperature is consistent from the top to the bottom of your plant.

Rushing It

If you push your plants to flower too early, then you'll have less of a yield that you hoped for. You will also notice it is not as potent as it could be! This is a common rookie mistake and one that you are not likely to make twice.

But, one thing that experienced growers do is to attempt to dry the harvest quickly. The quicker it dries the earlier you will be able to use it.

However, if you use artificial means, such as a hot air blower, to dry your harvest you will increase the levels of chlorophyll. This will destroy the potency and flavor of your harvest. Also, if you rush to wrap your product then you are likely to do it before it has fully dried out. If there is more than 20% humidity in it when it is wrapped, then you'll experience mold and bacteria growth.

Starting Too Big

It should be obvious that there are many factors to consider when growing marijuana. No one can get it all right on the first attempt; even if you buy every piece of state-of-the-art equipment available. High-quality equipment can only be used in conjunction with knowledge. This is why it is better to start small, learn, and build your setup as your growing skills improve. Trial and error make a better grower and is how many of the strains were discovered!

Listening to Everyone

Everyone has an opinion on growing marijuana, whether they grow it, use it, or don't even know what it looks like. This is a problem. Even the most advanced growers can only provide general advice on your set-up; because

every setup is different and you'll need to learn what works for you, your space, and the strain you are growing.

If you try listening to everyone, you'll get conflicting advice and probably give-up when your new hobby could be so much more. Use this book and don't be afraid to experiment; it will make you a better grower.

Conclusion

In growing marijuana, know some of the mistakes that more experienced marijuana cultivators had committed when they first began. The following may help you avoid problems in the course of your hobby. Do not talk to anyone. Talking about growing your marijuana is a no-no. Keep your hobby to yourself.

Be prepared. When you grow marijuana, you may face uncertainties that can overwhelm you. You should consider the plants' needs like nutrients, water, carbon dioxide, and light. You should also be prepared for other matters like lack of nutrient quality, bug infestations, and insufficient carbon dioxide amounts. Have a contingency plan in case your plants manifest negative signs.

Window growth is not enough. Sunlight is the perfect light source for any plant. However, growing your plants indoors and using the window as your only source of light doesn't cut it. Marijuana plants need as much light, and even sunlight is not enough. If you're growing them indoors, buy lights.

For each period of growth, excluding the flowering period, you may want to utilize a fertilizer with a higher nitrogen concentration than anything else. When your plants are in the flowering stage, you should use a fertilizer with more phosphorus.

Growing cannabis in a nursery is comparable here and there to growing different yields, for example, ornamentals and vegetables. Cannabis, like most plants, requires the correct plant supplements, the right measure of water, and the fitting amount of light to stay sound. A controlled domain, such as a nursery, enables growers to meet these necessities by giving the capacity to control encouraging, light levels (daylight or artificial), mugginess, temperature, and so on.

Numerous cannabis growers need to light for the full sun because there might be seasons of the year where they should have their light-hardship framework shut; however, they will at present need a 12-hour light cycle. This often occurs because of a light contamination statute. Numerous urban communities and regions have exacting zoning rules or guidelines concerning light contamination. Cannabis structures can be dependent upon extra prerequisites (smell control, road permeability, security, etc.) that can be incredibly expensive if not represented in the underlying undertaking stages.

Don't over-prune. Pruning a plant does encourage growth, and you may have heard that more pruning means more growth. It may be true, but you don't have to prune down a marijuana plant in its entirety. You may only weaken it or even kill it if you prune your plant too much.

Don't root-bound the plants. You may not know that marijuana roots grow fast. When the plants are placed in a container, the roots usually line the container's walls and go down to the bottom. If your container is too small, your plants can get root-bound, and they can die. Carefully transfer the plants to bigger containers after they have manifested accelerated growth.

Don't panic. The problems that occur when growing marijuana plants are from mistakes that can be avoided or reversed. If the plants begin to wilt and some leaves turn yellow, for example, it could be because of a missing nutrient. Some leaves will just die off either because of natural processes or lack of light. Generally, it does not indicate a greater problem.

Educate yourself. You will make fewer mistakes if you are well informed. Other people make the most mistakes before you start to grow it, so know their mistakes and learn from them.

So, what are you still waiting for?

It is time to get those pretty hands dirty, and after a couple of months, you will be smiling all the way to the bank!

Best Wishes!

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