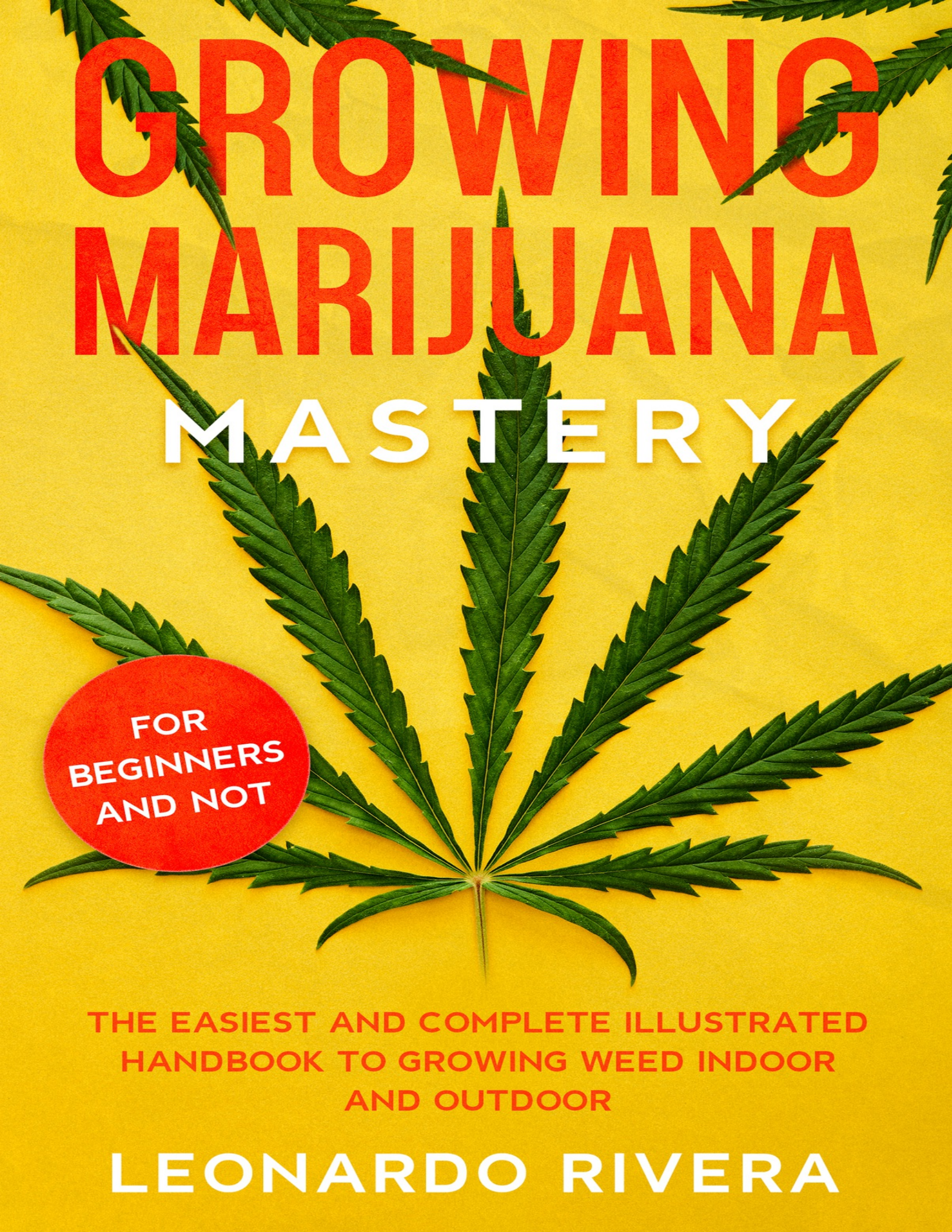




# GROWING MARIJUANA MASTERY

FOR  
BEGINNERS  
AND NOT

THE EASIEST AND COMPLETE ILLUSTRATED  
HANDBOOK TO GROWING WEED INDOOR  
AND OUTDOOR

LEONARDO RIVERA

# **GROWING**

## **MARIJUANA MASTERY**

The Easiest and Complete Handbook to Growing  
Weed Indoor and Outdoor – Your Weed Growers Guide  
With Secrets for Big Bug Harvest



**LEONARDO RIVERA**

## **Abstract**

Welcome reading! Before you begin reading this best-ever guide, know that this book is written by a millennial expert, who have been growing top-notch quality cannabis for his personal use as well for industries. This guide will be informative and detailed enough for you to get rid of purchasing cannabis from the market and begin growing your own high-quality cannabis. I will go through fundamental steps that you need to take to ensure growing high-quality weed.

Keep reading to learn.

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## **YOUR FREE GIFT**

As a way of saying thanks for your interest in my best seller book I want to give you a mini guide that expands your reading experience, in which you will find 7 tips and 25 fundamentals on the cultivation of Marijuana.

Consider it the way to start and win your challenge to big Buds.



[CLICK HERE TO DOWNLOAD IT FOR FREE](#)

# 1

## A BRIEF HISTORY OF CANNABIS AND ITS MEDICAL BENEFITS

### 1.1 Brief History of Cannabis

In 2012, following 75 years of denial, Colorado and Washington State authorized recreational weed with different states gradually following soon. Long before disallowance, and well before the United States, cannabis had been built up, it has been utilized as a vital piece of human progress from its delineation from The Cave artworks of Japan, to its use in internment functions in antiquated China. It appears that our relationship with weed likely begins at the coming of our species and if our endo-cannabinoids framework is any sign, perhaps even before it. Be that as it may, while there is constrained data about cannabis' job in early mammalian turn of events, the proof is abundant across the board, for all intents and purposes, that in all societies, it has significance in materials, medication, and otherworldliness since the beginning. This is the overlooked past of one of the most flexible plants at any point found.



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The First reference material we have with regards to cannabis is the Chinese materia medica composed by Shennong in 2800 BCE

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The most punctual, enduring copy of this book goes back to around 50 BCE. Shennong is an unbelievable figure in Chinese culture and in some portion of a gathering of three kings called “The Heavenly Rulers”, he's said to have ruled over China sometime before recorded history, designing irrigation, agriculture, the hatchet, the hoe, the plow, acupuncture, and customary

Chinese medication while ruling. He is regularly delineated as hung in an article of clothing, of leaves and frequently biting different stems to try different things to explore their impacts on the human body. Shennong was the main pharmacologist in ordering the exemplary of natural medication. Shennong found the therapeutic properties of cannabis, saying it was useful for gout ailment, intestinal sickness, distractedness, up to 100 different things.

Before this, the plant which the Chinese called "mama", had been utilized for a long time for its fiber creating material, paper, and rope and even in the creation of ceramics. As the Chinese kept investigating the benefits of cannabis, they thought that it was powerful in the treatment of different illnesses like heaving and contaminations. It is, for the most part, accepted to have been utilized in moxibustion practice, in acupuncture, being supplanted occasionally with mugwort.

Around 200A.D., a doctor named Hua Tao turned into the main individual to utilize sedation in medical procedures almost 1600 years before its revelation in the West. Keeping in mind that the Hua Tao recipe for sedation has not made its way into present-day times, its name was Ma Fie San and was a drink that was universally acknowledged to have had cannabis as a segment with different up-and-comers, for example, jimson weed, opium, or datura. Cannabis was one of the 50 major spices in the conventional Chinese medication toolbox. In present-day times, with the flawed legitimacy of its utilization, references to "Ma" in late interpretations of the Chinese clinical course readings just refer to non-psychoactive hemp seeds. However, in times long past, the Chinese were not modest about singing cannabis' praise.

Confucius gathered The Book of Tributes and The Canon of Rites has a specifying verse tuned into the strict ceremonies' practices of the Chinese shamanism, of his counterparts and progenitors. "Ma" is referenced on various occasions all through every one of these assortments. Maybe additionally intriguing, is its regular association with the internment function during this timeframe. Cannabis has been discovered both hand-copied, on a copied seed, blood, and everything in the middle, with copy seeds having been found in Kurgan entombment hills in Siberia and China going back to around 3000 BCE. Almost two pounds of bud were found in the grave of what is accepted to be a Royal shaman in China's Xinjiang area.

In any case, through a system of shipping routes weed found its way around the old world, converging with various societies simultaneously as weed's prominence as a dietary staple, as medication and even the very plant from which attire is made rose.

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China came to be known as the place that is known for its hemp and Mulberry. Mulberries are high in protein iron nutrients and minerals simply like cannabis.

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Cannabis weed silhouette lake hemp green sunset

So, it's no big surprise that the two (hemp and mulberry) were alluded to in this comparable manner. While the oldest written history of cannabis originates from China, it is known to have been generally found in the prolific soil along the streams of the antiquated world. Along the banks of these extraordinary waterways like the Yellow River in China Tigris and Euphrates in Mesopotamia, the Indus in India, and maybe even the Nile in Egypt. Human advancement started to grow also and keeping in mind that it's muddled, the information that cannabis is restorative and psychoactive properties spread. Some proof focuses on traveling clans rising out of the means of Central Asia, for example, the Yamnaya who likewise may have been responsible for the Kurgan internment hills found all through the area.

History specialists accept that these ancestral gatherings with the Caucasus area helped to propel exchange across Asia and Europe, a long time before the Silk Road spreading of the wheel horse taming. Cannabis, or bhang as it is called in India, is referenced as one of five sacrosanct plants in the fourth Veda.

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The Hindu God Shiva is occasionally alluded to as Lord of the bhang.

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There are a few legends that partner Shiva with cannabis, from him causing it, of his assistance with decontaminating the amrita or mixture of life, to it being agitated up from an ocean of milk alongside the holy relic and the moon by Shiva himself. One such legend expresses that Shiva, amidst a contention with his family, departed to the mountains. As he kept on ascending, tired from his excursion in the Sun's sweltering rays, he nodded off underneath an arrangement. When he got up, he was mindful of the aroma, the smell of the planet and chose to taste its leaves. Restored, Shiva collected this ganja, now his preferred food, to take it back to mankind alongside the craft of yoga, a guidance manual for the act of utilizing this holy spice effectively. Thus, lovers of Shiva despite everything expend bhang, ganja, and charas, three conventional arrangements of cannabis right up until today. It is most ordinarily devoured in a beverage known as bhang lassie which is like the mango lassi advocated in the West with bhang occurring instead of mango. This beverage is particularly utilized on holidays, for example, sacred and Shivratri, the celebration of Shiva. Indeed, even in districts where it is unlawful, a special case is made during these specific festivals.

## **1.2 Medical Benefits**

An expanding number of patients are utilizing cannabis for clinical reasons, yet how would we know whether the medical advantages picked up with cannabis merit the additional cost viability as an adjunctive treatment in the treatment of various illnesses. Here I will depict a short diagram of possible therapeutic roles of Medical cannabis in the administration of constant ailments.



Jar of freshly processed cannabis concentrate

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Medical cannabis is a helpful tool from a cost-adequacy point of view for the treatment of chronic neuropathic pain.

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- Medical cannabis is a helpful tool from a cost-adequacy point of view for the treatment of chronic neuropathic pain.
- Judicious utilization of cannabis by standard medical regimes might be especially valuable to patients with chronic neuropathic pain.
- Inhalation is the most ordinarily utilized course of use with the fastest in terms of bioavailability, enabling patients to titrate their portion through versatile smoking conduct. Of the two inward breath choices, vaporization is more cautious and has less poisonous side-effects while the inward breath is a fitting choice for patients requiring quick alleviation for a shorter span.
- Oral: oral cannabinoid use offers a more extended term and a slower bioavailability contrasted with the inward breath, making titration difficult for patients endeavoring



Woman holding a glass cannabis pipe filled with medical grade cannabis.

to accomplish wanted impacts. Cannabinoids managed through the oral course can be taken as pills or blended in with foods, for example, spread, oils, or teas.

- Cannabis can be introduced as a likely choice for people needing alleviation of their symptoms, for example from chronic pain, arthritis, movement disorders, and selective psychiatric disorders. There is no vigorous proof cannabis helps as a treatment for any mental issues. The cannabis preliminary research for acute anxiety, schizophrenia, and posttraumatic stress disorder (PTSD) are still rather preliminary and cannabis isn't standard of care treatment for any psychological issues as of now.
- Oromucosal: Oromucosal (tinctures) cannabinoid use offers harmony between the speed of beginning and length of bioavailability when contrasted with inward breath and oral courses. Oromucosal cannabinoid use is suggested for the indicative to help with spasticity in adults with multiple sclerosis (MS), however, it may likewise be a decent alternative for patients needing fast alleviation for longer lengths, for example, in neuropathic pain.
- Rectal: the rectal course of cannabinoid use, however unprecedented, has been demonstrated to be adequate in patients giving chemotherapy-related sickness and emesis. THC-

hemisuccinate, a prodrug, is conveyed instead of  $\Delta^9$ -THC since it is immediately consumed, having a higher bioavailability than oral administration. Albeit rectal formulations are, as of now, not accessible, they might be of future enthusiasm for patients unfit to endure oral prescriptions, for the pediatric populace, for palliative use, and for patients who are incapable of taking oral medication or utilizing inward breath.

- Topical: topical cannabinoid administration has been considered as a treatment for glaucoma. In any case, because of its high lipophilicity, transport of  $\Delta^9$ -thc across watery layers in the body is a rate-restricting advance. Yet it can be defeated using  $\Delta^9$ -thc prodrugs bringing about improved entrance into the front eye, decreasing intraocular pressure.



Woman using cbd balm

Some other medical uses of cannabis, which are at various phases of research, for treatment of:

- Multiple sclerosis
- Movement disorders

- Parkinson's disease
- Tourette's syndrome
- GI disorders
- Inflammatory bowel disease
- Anorexia
- Nausea and vomiting
- Pain
- Acute pain
- Chronic neuropathic pain
- Non-cancer-related pain
- Cancer-related pain
- Headaches

### **1.3 Extraordinary Considerations**

Even though there are some encouraging helpful utilizations of Medical Cannabis in the treatment of a few conditions laid out, a careful comprehension of patient history and explicit patient sub populaces presenting in different states ought to be considered. These inconsistencies are discussed in detail below.

After multiple spinal cord injuries and surgeries, cannabis helps Katie to live a full life and not be trapped by her pain. She grows (legally) and supports the cannabis community actively and always with a smile.



- Mental health
- Schizophrenia
- Cognition
- Post-Traumatic Stress Disorder
- Cannabis and pregnancy



Cannabis infused chocolate bars

Smoking cannabis during pregnancy had no immediate impact on maternal wellbeing, or postnatal issues; be that as it may, increased maternal iron deficiency was accounted for. Since cannabis use during pregnancy noticeably affects youth dreariness, doctors ought to unequivocally exhort against its recreational use during pregnancy. Pregnant ladies who won't, or are

unequipped for halting cannabis use, ought to be urged to get it from endorsed sources where the specific measure of cannabis utilization can be checked.

## 1.4 Conclusion

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Cannabis presents as a suitable elective treatment choice for patients who have epilepsy, development issues, and pain disorders.

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Cannabis presents as a suitable elective treatment choice for patients who have epilepsy, development issues, and pain disorders. For people with MS, GI issues, anorexia, and cerebral pains, further research is required to improve our understanding of the impacts of Medical Marijuana (MM), and become educated while considering the approval concerning MM use. For patients who are younger than 25 years, pregnant, or present with a background marked by emotional well-being and substance use, practice caution and stay away from MM approval. In general, MM is an energizing field of learning and curiosity, and the various scope of receptor articulation in the human body offers numerous remedial advantages, yet extra exploration is required for a stronger comprehension and portrayal of the instrument of activity of MM to accomplish maximal helpful viability.

# 2

## **DIFFERENCE BETWEEN INDOOR AND OUTDOOR CULTIVATION**

Developing cannabis is a fun and compensating experience, yet it is additionally tasking and takes a specific measure of time and cash. For a first-time grower with restricted assets, an indoor grow for cannabis is presumably an excessively expensive alternative to an outdoor grow.

Fortunately, a little outdoor nursery can yield a lot of valuable cannabis. If you approach a radiant spot in a private yard or even a gallery, porch, or housetop, you can effectively cultivate cannabis.

As an enthusiast of growing cannabis, I will share with you some important differences between indoor and outdoor cultivation techniques of cannabis.

### **2.1. Basic Requirements to Grow**

Let's understand some of the basic requirements for cannabis to grow. Like every other species on earth, it also has some basic requirements where it can grow in its best form, I'll not go into the details of those requirements in this section but will outline those basic requirements as they are necessary in understanding the basic differences between indoor and outdoor growing.



Indoor Cannabis Facility

- First, It needs a perfect growth medium in the form of soil that contains perfect nutrients i.e., nitrogen, phosphorous, and potassium, and pH in the range of 5.8 to 6.5.
- Secondly, If the soil lacks the nutrients or it is short of those essential nutrients then fertilizers can be used with expert opinion and caution.
- An optimal heat source is one of the basic requirements of cannabis growing. 75-86F is the best suitable temperature for the best outcomes of the crop.
- The light source is important, either in the form of natural light or an indoor illumination source.
- The humidity of the soil is important, dry soil will result in a slower, limited growth of cannabis
- Adequate judicious use of water when the soil is visibly dry promotes the best growth of cannabis.

## 2.2 What Are the Differences?

As we now know the basic requirements for our all-time favorite cannabis species, now we come to the difference between indoor and outdoor growing.

Cannabis growing is interesting as well as rewarding and it is dependent on so many factors that it is extremely difficult to predict the outcomes of the crop without the knowledge of outcome determining factors. In this part of our book, I will go through some of the most important and predictable differences between indoor and outdoor cannabis cultivation.

So, let's begin!



Cannabis plant

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Developing cannabis outdoors isn't as straightforward as simply tossing a few seeds in the ground and trusting them to develop. To guarantee a decent crop, outdoor cultivators ought to do some examination breaking down the neighborhood soil, setting up the site, and contemplating proper nuisance control techniques and a lot of care.

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Every strain of cannabis is unique and each of those strains behaves differently when grown in different environments. Some strains prefer to be grown indoors and some strains grow very well outside.

Here, before going into the details of the differences, I should also remind you that your crop is very much dependent on the level of care that is given to it as well as the experience of the grower. A properly grown indoor plant can outperform a not so well grown outdoor plant and vice versa. So irrespective of the indoor/outdoor comparison, taking proper care of your crop is also important.

We have an abundant choice of strains that have been specifically designed to be grown indoor, outdoor and in greenhouses as well. This type of luxury was not available in the ancient agricultural environments and cannabis was grown in outdoor settings for thousands of years. Initially, it was only used as fiber and food, and later, it was used for its psychoactive effects. It was only hundreds of years later that people tried growing cannabis indoors and this was the time when differentiation of different strains of cannabis began.

Initially, they observed that Sativa strains were difficult to control in terms of size as well as the flowering period, while Indica strains were much easier to control in terms of size but they grew slowly and had a shorter flowering period. Thousands of observations like this resulted in the development of the current strains of cannabis.



Sativa green

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With our current understanding of cannabis, it can be grown in any part of this world irrespective of the indoor and outdoor setting.

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We now have a huge collection of strains that can be grown in the setting of our choice and you can get those from the market with ease. Even if you have an outdoor strain, you can grow it inside with little bit modification to the environment. But I would advise you to select strains that best fit your environment to get the maximum output in terms of quality as well as quantity. Some of the major differences between indoor and outdoor strains of cannabis are enlisted below.

When we describe the size of the plants, we shouldn't forget that outdoor cannabis plants are almost always bigger than the indoor plants, and the difference of size is evident not only in buds but also in the stems, which are much larger in the case of outdoor grown cannabis.



Next Green Wave Cannabis Macro Photo // Garlic Grove Strain

1. When properly cared for and grown in proper nutrients, indoor-grown cannabis plants have small and dense buds in comparison to the big and coarse buds of outdoor-grown strains.

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The trichome thickness is ordinarily more inadequate on sun-grown nugs than ones grown inside.

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2. Trichome thickness is an obvious sign when endeavoring to separate indoor development and outside development. Since indoor buds are smaller, closer to their light source, and in an entirely controlled environment, they ordinarily rank extremely high on the trichome thickness scale. So, while inspecting a faultlessly becoming indoor nug, everything that can be seen are like glinting precious stones with next to no plant material being noticeable. Sun-grown nugs, again, are commonly bigger so those trichomes would have to work a lot harder to cover the whole surface of an outside bud. Furthermore, sun-grown plants are exposed to components which can harm trichome advancement. So, the trichome thickness is ordinarily more inadequate on sun-grown nugs than ones grown inside.
- 

One of the most critical visual qualities that can be determine sun-grown cannabis versus indoor-grown cannabis is the shading. Sun-grown cannabis will, in general, have a hazier tint when all is said in done

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3. One of the most critical visual qualities that can be utilized to determine sun-grown cannabis versus indoor-grown cannabis is the shading. Sun-grown cannabis will, in general, have a hazier tint when all is said in done.
4. If the cultivar produces green blossoms, the sun-grown nugs will be a more obscure green, potentially inclining towards earthy colored if not restored accurately, while the indoor buds will be a more splendid, more distinctive green.
5. If the cultivar produces purple blossoms, the sun-grown buds will turn a profound, striking purple while the indoor nugs will remain lighter shades of purple (except if the strain's hereditary qualities produce dull purple buds in any condition.)
6. Another obvious difference is the shading on the base of the blossoms. Buds grown outside quite often have a light earthy

colored shading encompassing the tail at the base of the bud. For the most part, the minuscule bracts at the base of the tail will be a light earthy color also. Indoor buds are typically brilliant green (or purple) throughout.

7. There is a far-reaching legend that sun-grown cannabis is less powerful than indoor-developed cannabis. That is simply false. The devoted ranchers at Sunna Ra Acres have busted this legend unequivocally. Throughout previous years, they have been leading a “one next to the other” trial. Two clones are taken from a similar mother plant and studied; one grown outside and the other grown inside. They've executed this trial with an assortment of strains and each time the plant that is grown outside under the sun brings about a generally higher, more complex cannabinoid profile. That implies higher in CBD, higher in THC, and so on. Their analysis has demonstrated that the sun encourages the plant's actual potential and uplifts its restorative force.



Home grown organic cannabis

8. In the case of terpenes, which are found in many other plants

such as lavender or beer hops and modulate your high and influence the effects of the cannabis on your endocannabinoid system, their profiles are increased by the sun. In Sunna Ra Acre's numerous long periods of experimentation, they have discovered that if two indistinguishable cannabis plants are grown, the plant that is grown outside will have a higher level of terpenes. At the point when these two plants are smoked, the thing that matters is truly recognizable with the outside of the plant being significantly tastier and more sweet-smelling than the inside. So, terpenes are unstable, which

9. means they will dissipate without legitimate drying and relieving forms. Nowadays, many indoor cannabis growers take more prominent consideration in their last phases of drying and restoring because they yield far less and their item moves to start with one indoor room then onto the next, giving more control through the procedure. New outside producers versus prepared open-air cultivators may ignore the progression of legitimate drying and lose their high-terpene profile accordingly.

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Those cultivating cannabis outdoor are pulling in 5, 10, or 20 lbs. for each plant while indoor cultivators are pulling in 0.5, 1, or 2 lbs. for every plant

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10. While this class is abstract and doesn't generally apply, truly, open-air cultivators invest less energy cutting their last item than indoor producers. This commonly has to do with the measure of bud collected, outside producers are pulling in 5, 10, or 20 lbs. for each plant while indoor cultivators are pulling in 0.5, 1, or 2 lbs. for every plant.
11. Cutting mass measures of weed per plant would take weeks, however a major full-time team would be required. So, the final product is typically a looser, leafier trim employment — particularly because outside plants are leafier all in all. So, while not generally material, you can regularly recognize the distinction between outside and indoor pretty quickly by investigating the trim employment.
12. Going through every one of these attributes (with some give and

take) while examining the many buds accessible to buy at your neighborhood dispensary, will assist you with differentiating the sun-grown cannabis from the indoor grown. On the off chance that you are sufficiently fortunate to find a similar blossom grown both inside and outside, it is astonishing to smoke them next to each other and look at the flavor profiles versus pack advance. Indoor normally has a better pack bid while sun-grown has the better flavor profile — it's everything about what you're searching for in your day-by-day smoke.

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Having all this said, I would like to share, that you can grow virtually any outdoor strain of cannabis indoors and vice versa. What matters the most is the care and time invested in the care of your cannabis plants that affect your outcome.

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# 3

## VARIETIES OF CANNABIS

A numerous wonderful aspect concerning the Cannabis plant is that it comes in a wide range of varieties. No two types of cannabis are equal, and they likewise come in both the male and female assortment. Some are tall and thin, others are short and bold, and still, others are a lot smaller. All strains of cannabis come from the Cannabaceae group of plants. A few specialists consider that Cannabis Indica and Cannabis Sativa are the two-principle subspecies, albeit a few people think they are completely separate and unique species.

To make a strain, cultivators select an assortment of attributes to create the effect they need. This is a comparative procedure to how breeders select specific attributes in canines. Individuals regularly portray cannabis strains as being Indica, Sativa, or Hybrid. Hybrid alludes to a strain made by crossbreeding both Indica and Sativa strains.

Cannabis exists in numerous assortments and sub-species. Cultivators and ranchers have, for some time, been reproducing various assortments with specific attributes to make hybrids and explicit strains. Every cannabis strain has an alternate convergence of the cannabinoids tetrahydrocannabinol (THC), cannabidiol (CBD), just as different mixes. Growers develop the plants to have a specific look, taste, and effects on the client and brand them as needs be.

Right now, writing about the effects of various cannabis strains comes overwhelmingly from an individuals' encounters. Although specialists are considering the effects of an assortment of cannabis strains on a scope of ailments and there is, as of yet, far to go here.

Numerous growers crossbreed specific cannabis plants to grow new strains with explicit attributes. Specialists recommend that there are more than 700 strains of cannabis.

One of the most significant qualities of a cannabis strain is the THC content. A few standards exist on naming each strain, yet numerous growers don't name their product per these guidelines. Regardless of these orders, hybridization and crossbreeding have implied that individuals can't tell

precisely the amount THC is in a specific plant by just taking a gander at its physical highlights.

Continue researching to become familiar with cannabis strains, and which are the most mainstream and easy to find.

Different types of cannabis are available in the market which includes:

- Cannabis Indica
- Cannabis Sativa
- Cannabis Ruderalis
- Hemp Cannabis

### **3.1. Cannabis Sativa**

This plant grows quite large reaching up to 15 feet in some cases, leaves are long, dainty, and narrow. Considering their high potential, these are perfect for outdoor growing. The seeds are soft to the touch with no spots or markings on them. Do not expect this plant to flower quickly because a Sativa takes its precious time and even shifting the light cycle could have little effect on this. It also can enhance your creativity depending on the person. This is the strain you use when you want to be up and active during the day since it raises your energy and opens you up to fresh new ideas. If you are an artist of some sort, you may love this one.



Canapa Sativa Siciliana from campi Molino Crisafulli, in Caltagirone (Catania) - Italy

Sativa is known for a high ratio of THC and CBD, the two active primary cannabinoids. In Cannabis Sativa, dominant strains are typically higher in THC than CBD. While this makes it less likely to be used for medicinal purposes, they also work well to combat the symptoms of fatigue, mood disorders, depression, and much more.

### 3.2. Cannabis **Indica**

It is a more solid strain in comparison to Sativa but it does not have the height a Sativa can achieve. Generally, it grows between 3 to 6 feet tall, is a bushy plant with round healthy leaves, unlike the Sativa. However, they both have marble-colored soft seeds. The attributes and height indicate a short plant is perfect for indoor growing.



Legally grown outdoor Indica Plant "Black Cookies"

Additionally, it flowers much faster and can be influenced much easier by adjusting the light cycle to promote flowering. This species is most commonly found in countries like Nepal, Lebanon, Morocco, and Afghanistan. If you want to make hashish, this weed is a stoner's favorite since it is more likely to make you sedated and put your entire body into a state of relaxation. It also often contains more CBN (another cannabinoid). CBN is the aged form of THC. There may also be a fair amount of CBD in it. This will surely take you where you want to go, far and beyond just a regular high with its qualities and helps with insomnia alleviating, pain, inducing relaxation of muscles, muscle spasms, calming, anxiety headache and migraine relief and much more as the compounds all work together.

### 3.3. Cannabis Ruderalis

You will rarely hear anyone talking about Cannabis Ruderalis, which is one of the primary varieties. It is usually pretty short-statured, growing between 20 and 25 inches in height similar to the Indica strains. This plant has a very thick foliage. This plant is usually found growing in the northern regions of the world. Ruderalis has an extremely early and fast flowering cycle because it grows further north (it is found in countries such as Russia) than any other type of cannabis and so it doesn't have the luxury of spending a lot of time to mature before cold weather hits. One of the reasons you hear a little about

this strain is because it is known to be highly psychotropic. Its high content of CBD (Cannabidiol) is making it progressively famous as rearing stock for medicinal uses.



Ruderalis is intriguing in the way that it blossoms dependent on age as opposed to the light cycle. This is called auto-flowering. This implies that regardless of whether or not it is developed inside under 24 hours of light, it will consequently begin to deliver blossoms on its hereditary calendar. So, when it is crossbred with an Indica or Sativa they will probably cauliflower and have a higher CBD content. Ruderalis is additionally very impervious to harm by creepy crawlies or plights. Cannabis Ruderalis and its hereditary/health advantages have radically changed the way geneticists and seed reproducers are creating strains. It is one of the least utilized base hereditary qualities to date which is quickly evolving industry wide. It is used primarily as a source of additional genetic material by breeders and cultivators. That way hybrids that flower early can be bred, and certain strains can be adjusted so that they grow better in northern climates. Hybrids in modern cannabis cultivation come from breeding. There are a huge number of varieties available resulting from many years of intense mixing and

hybridization that have created a huge spectrum of these three primary varieties.

### 3.4. Industrial **Hemp**

Industrial hemp, or hemp, is typically found in the northern hemisphere and is a variety of the Cannabis Sativa plant species that have been grown specifically for industrial use. It is one of the fastest-growing plants and was one of the first plants to be spun into usable fiber 10,000 years ago. It can be refined into a variety of commercial items including paper, textile clothing, biodegradable plastics, paint, insulation, biofuel, food for animals.



Close up of hemp plants inside a greenhouse

Hemp was a cash crop in America until the passage of the 1937 cannabis Tax Act. According to the research, hemp has a low THC content and isn't worth smoking. Additionally hemp is federally legal as long as it does not surpass a THC content of 0.3%, whereas cannabis is still federally illegal.

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Now while these different types of strains are available in the industry, we'll learn here that the differences may not be as great as you may initially think.

Indica, Sativa, Ruderalis, and Hemp cannabis have different looks, different morphologies, but the actual difference between these plants may not be as great as you may think.

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### 3.5. Differences in the Varieties You Should Know

I'm going to make you familiar with some Sativa and Indica strains. Sativas, in general, are going to be something that you want to use during the day for a more active, more focused high. We've got the strain Super Sour Diesel, which is a high THC Sativa and the Strawberry Satori's, both great and usually provide a euphoric, energetic high as opposed to the heavy Indica, like the strain Triple X, which you might want to smoke right before going to bed as it might be heavily sedating. As we've discussed, CBD is the second most commonly found compound in the plant next to THC and will help target pain, provide alleviation and could help with sleep. Something like the Harlot Zoo is going to have little to no THC, whereas the strain Harlequin is going to have a little more of a balanced midrange such as 6-7 % THC and maybe a 10 to 15% CBD. Then we've got the many hybrids in between, like a Cherry Pie, which also has a lower THC. This one came back at 15% THC, which would be a good place to start if you are new to cannabis or haven't smoked in awhile, as opposed to going with something that has a 26% THC content. One of my personal favorites is the strain Strawberry Satori, which I hope you're going to start seeing around in town a lot more because of the clarity it provides. Again, it has an active, focused high as well as nice fruity smell and flavor. A strain like Goji OG has a beautiful structure but it's not going to have a pungent smell whereas all of those previously described have a very heavy fruity flavor.

As a disclaimer: different morphologies allow classifying on this basis and that's typically what was used to classify them into different categories. However, the *Phenotype* does not always match the *Genotype*. The backgrounds of some plants are not always well known due to the blending of genetics and while general characteristics are presented, please realize that plant behavior may not always match the cannabinoids. This is due to the lack of shared knowledge between researchers and general public. For example, due to federal illegality in the United States, the general public does not realize that there are many studies and research completed of the cannabis plants, whereas in Israel, studies are completed and published frequently,

allowing for a better dispersal of information.

Much of this traces back to the underground market having an abundance of “control” on the product. Now I think legal advancements have opened up the market for more varieties. Two plants by the same name may not be the same genetics. We're getting into something that may look initially the same but when observed under the microscope and during scientific testing, we're seeing some great differences that do occur. So, we would think the plants would be accurate and consistent during current times but without genetic markers being tracked, there is a high chance of mix-ups occurring just from grower error, with the possibility of misinformation being spread for the purpose to protect breeders as well. There are two factors at play: pride contributes to the fact that these names aren't necessarily directly matching up. Our names when defined will often describe the structural morphology of the plant, while not taking into consideration the chemical profile of the plant, creating inaccurate correlation. The same strain from two different suppliers can have vastly different chemical profiles. Sellers will often say when you find a good strain, stick with that supplier but this is not a long-term solution. This variability presents a huge challenge especially for the medical market and as a result, many have chosen to go with known names rather than the actual same material. They think they know exactly what they're getting every time. So, what does this mean? That means do not trust that the name matches a clearly defined set of effects. You should know that pure strains will ensure a consistent chemical profile regardless of the starting material. Extractions can be found in purified products which reduces variability compared to the use of the flower. Databases are being constructed so future understanding of cannabis will become a lot easier. However, the general characteristics of the three main types of cannabis will be presented here along with some concerns about those classifications.

### **3.6. Origin of Cannabis Indica**

Cannabis Indica has its origin in neighboring countries of Pakistan and Afghanistan where climates are colder with shorter seasons. The plant has short and stocky leaves. Short and stocky leaves in general lend to be more conducive to indoor growth where space is often extremely limited. Due to its morphology, these dense plants with broad leaves lead to heavy production with the possibility of four to six crops per calendar year. Indicas are often

marketed as offering relaxation, decreased nausea, pain and it is good for nighttime use.

### **3.7. Origin of Cannabis Sativa**

The Sativas origins are found more towards the equator where the climate tends to be warmer and the days longer. The average daylight is stable over the year, which is why Sativas are thought to originate near the equator. Morphologically, these are considered to be the giraffe of the Cannabis plants. These have long and thin leaves, the opposite of the Indica. They're physically the biggest of the three varieties due to the fact that they can have more continuous growth cycle. They look bigger in appearance and grow up to 15 feet tall and produce higher yields. Because it sometimes takes a little bit longer to get to this stage, so it comes at the cost of sometimes longer flowering times.



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Specialists propose it is difficult to determine the categorization of a cannabis plant by taking a gander at its tallness, expanding, or leaf appearance. The best way to know the concoction creation of a cannabis-determined item is to break it down in a biochemical measure.

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# 4

## CHOOSING THE RIGHT SEEDS

We all know the magical effects of cannabis but have you ever wondered about the origin of the cannabis plant? How do the growers ensure the quality of the plant? How do they make sure that the crop remains consistent with our expectations as the grower? The story begins with the selection of the seed. This is where you should be proficient enough to have a firm understanding of the different types of seeds and their qualities. By knowing their desired qualities and characteristics, you can ensure that you achieve your desired qualities from your crop.

### 4.1. Basics of Cannabis Seeds Selection Process

Cannabis plants can be either male or female—likewise called "dioecious". In these types of plants, just the females produce the buds. These are the buds we consume for our usage, either recreational or medicinal. As far as reproduction is concerned, you need the male plant to pollinate the female plant which then produces the seeds which are then stored and used for the next crop. After pollination, female plants produce seeds, and the plant starts dying once the seeds get mature. Those seeds then either grow into the next mature plant if dropped in the soil or they are collected for their various uses.



Rolling a paper with weed

#### **4.2. Use of Clones for Commercial Purpose**

Sometimes commercial users will plant seeds of different strains and then use the clones from the best plants they get from those seeds. They use these clones for commercial production. But for the first-time growers, it is best to choose the top-quality seeds which are hard, dark stained and they result in the best outcome for the grower. The selection of a Sativa or Indica strain or Hybrid strain is very much dependent on the personal choice of the grower, which is ultimately influenced by the end-user of the crop either for recreational purpose or medical usage.

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Sometimes commercial users will plant seeds of different strains and then use the clones from the best plants they get from those seeds. They use these clones for commercial production.

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In this part of this book, we will let you know how you can enjoy a good growing season with a perfect selection of the seeds. We will also make sure that at the end of this unit, you have the answers to all your questions regarding the selection of seeds as well as protecting the seeds which you

want to keep for your next crop to duplicate your current success.  
Let's begin.

### **4.3. This is What You Should Know**

As we are going into the details of the seed selection process, you should not forget that these seeds develop in the flower of a female plant which is initially pollinated by a male cannabis plant. In the end, all you want is a crop that doesn't have any male plants due to the fact that it is the female plants that will produce all the buds you require. For this purpose, you have to select feminized seeds because this will help you achieve your goal of a quality crop. With the use of regular seeds, which have not been feminized, your crop production will end up with 50% of its potential.

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You should know that flowers are only produced by female plants, so we advise you to select feminized seeds and don't try to test your luck by going with regular seeds that have not been feminized.

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### **4.4. Significance of Choice of Strain**

Because of reproducers and cultivators who have worked cautiously for a considerable length of time, there is a wide range of assortments and strains of cannabis. Before choosing seeds, be certain that they contain the hereditary qualities you're after. While selecting the seeds, you may be confused only because you have never done it before, or you are seeing the seeds for the first time. I'll describe a few factors that can help you in the selection process.

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The seeds you select should have a hard shell and should be dark in color with the brown tan. You should never select soft, and light-colored seeds.

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You must know that pattern on the seeds is an important difference between Indica and Sativa strains. Seeds of Indica strains are larger with stripes compared to Sativa seeds which lack stripes and are small in size.

### **4.5. The Quality of Cannabis Depends on the Genes**

We want a cannabis strain that tastes good, smells great and it should be potent. You will need to find the strains of cannabis with the best genes to get all these qualities from your plants. Even after the selection of seeds from a strain, you will have to keep in check multiple factors that play a role in the outcome of your plants like environment and level of care.

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For a first-time grower, it is very important to select the best quality seeds or clones to get the maximum benefit from the cannabis plant. Proper selection of the best quality seeds will help in the outcomes of current crops as well as future ones. Experienced growers usually have better crops compared to first-time growers, even while using the same seeds because experienced cultivators have already made a choice for the best strains and they also keep the seeds for their next crop. They are very much familiar with the origin of the seeds which helps them take better care of their plants.

Presently, let us take a gander at a couple various hereditary assortments so you'll have a superior understanding of which seeds to plant. A strain of cannabis contains a hereditary outline with specific attributes that are used to create distinction in a crop when presented to explicit, certain natural factors, a procedure that characterizes one plant's qualities (like THC value) from another.

4.5.1 As we know, the Cannabis Sativas, which are tall and thin plants, produce a better crop outcome than Indica strains. The THC content of this plant makes you high and inspires you for creative thinking.

4.5.2. On the other hand, Cannabis Indica results in bushy short, fat plants that mature much faster than their Sativa counterparts. But as we know, the crop outcomes are small and the use of this strain will make you relaxed, sleepy, and lethargic.

4.5.3. Auto-flowering Ruderalis strains are used for crossbreeding to increase the THC levels of the strains. They are not as potent as Indica and Sativa. Their flowering cycles are not dependent upon light schedules and

they typically have fast growth cycles.

4.5.4. Last but not least, the Hybrid varieties are the result of crossbreeding between the basic varieties of Cannabis. They are either Sativa dominant hybrids or Indica dominant hybrids. These hybrids have different qualities when compared to their parent strains and these are produced to get the maximum desired results of either getting high or for medicinal use.

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The cannabis experience is diverse for each client, even among the individuals who devour a similar sum and strain as others. A mix of feelings might be felt by those ingesting comparative strains in a similar amount. For example, suspicion, lethargy, joy, happiness, and clarity might be felt.

Perhaps the trickiest thing about cannabis is that the correct blend of phytocannabinoid needed for the best high is elusive. Indeed, even researchers with their long periods of examination and ability, can't determine the ideal combo. Why would that be the situation? To some extent, because every individual is extraordinarily different, which means the high can't be measured; it varies wildly person to person. This makes it difficult to demonstrate the relationships between synthetic mixes, high, quality, or type.

Once you have selected your seeds, you can grow them to diversify the genes of your seeds. For this purpose, male cannabis plants are used. Place your male and female plants near each other and shake the male plant. In this way, you can pollinate the female cannabis plant. Shaking of the female plant after pollination will help in the proper distribution of pollens to all parts of the female plant. After pollination, seeds will be produced by this female plant in about six weeks.

## **4.6. Have You Ever Heard About Sensimillia?**

If not, let me tell you about it!

Sensimillia is high-quality cannabis. It is distinguished from other cannabis strains in that this type of plant matures without pollination. The term itself originates from the Spanish language and it means "without seeds". The most important fact that you should know about Sensimillia is that it cannot be grown outdoors due to fear of it being pollinated from male plants which can do so even from a mile or so. Here I should emphasize that it is particularly important for the grower to make sure his crop is safe from pollination. The specific reason behind this is because of the outcome we want from our plants. We want them to make buds rather than seeds. Although seeds are very much important from an evolutionary point of view, they are not important from a commercial point of view. We want our plants to produce more and more buds that can be used for consuming. And this is where Sensimillia have their place as they produce only buds because of their lack of pollination.

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The most important fact that you should know about Sensimillia is that it cannot be grown outdoors due to fear of it being pollinated from male plants which can do so even from a mile or so.

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Industrial scale production of cannabis is not very beneficial from a commercial point of view as most parts of the plant are wasted because they do not contain THC, which is the most in demand aspect of the crop, and cannabis is the only natural known plant that supplies this. Due to this drawback, Scientists all over the world are looking for alternate sources of CBD, THC, and other cannabinoids that are typically obtained from cannabis. CBD can be obtained from hemp, but as we've discussed hemp is a derivative of cannabis. They are looking to achieve more cost-effective, easy, and reliable methods to get these chemical compounds from microorganisms and genetic engineering. Scientists are hoping to get their desired quantity of chemical compounds from other sources which are only present in trace amounts in cannabis plants.

Currently, most of the indoor growers are utilizing clones for cultivating the cannabis plants but I would suggest you start with the seeds as they are the ones that produce taproots. Taproots help in better absorption of nutrients from the soil, which is very much important for the crop, especially when grown outdoors.

A huge collection of seeds are available in the market when compared to the rather limited supply of clones. The use of seeds to grow cannabis will better help you to achieve your desired results whether it's for medicinal or recreational purposes. As we know genes play one of the most important roles in the achievement of your desired results from the cannabis strains, we should also remember that these also play a role in the health, life, and growth of the plants. The selection of seeds with the top, or best, genes help you attain your desired outcome from the crop as well as seeds for your next crop.

#### **4.7. Why Are High CBD Seeds Getting So Much Attention?**

CBD is the part of a larger group of chemicals collectively known as “Cannabinoids” which are found in cannabis strains. For many years, researchers have been describing the medical benefits of CBD for the treatment of various diseases and conditions. Humans have been using cannabis for years for its THC content, the use of which makes them high, but now the demand for CBD components is increasing due to its medical potentials. The chemical pathway for the production of CBD is quite different from the THC production and many countries in the world are giving legal permissions for the growing of strains that are high in CBD or Cannabidiol.



Hemp seeds

With the increased interest in CBD over the years, many strains of cannabis hemp are being genetically modified to increase their CBD levels while

actively decreasing THC value. The resulting plants have low THC (though some occasionally have a high THC content but these would not be classified as hemp) and they have a large increase in CBD, taking it to above a 3 percent value. Seeds that result in strains with a high value of CBD are readily available in the market. You can avail them, but most commercially purchased seeds don't guarantee you the resulted value of CBD value. For that purpose, you have to carefully select and grow a previously proven strain's seeds or clones.

#### **4.8. Factors That Result in High-Quality Seeds**

Various factors that play their role in determining the quality of the seeds are its genes, its maturation level, its storage conditions, and its strain. While the outcome in terms of yield depends most importantly on your decision to grow either indoor or outdoor, seeds that are bought from inexperienced breeders who cross the female plant with a random male plant and then sell it to you, will result in non-satisfactory outcomes. Mature seeds that are properly stored in a dark cool place for not more than 18 months do not get affected by fungal or bacterial pathogens, and this results in superior quality plants.



Hydroponic cannabis seedlings

#### **4.9. How to Make the Final Selection?**

As we have arrived at the point where we know how to select the cannabis seeds and which factors you should keep in your mind while selecting, here I

will describe some of the factors that ultimately determine your selection of seeds.

- Your Growing Environment
  - Your growing environment does make a difference when choosing the seeds. If you want to grow outdoors or indoors, in a balcony or your lawn, in a pot or soil, whether you live near the equator or the temperate region, these all factors that play a role in your selection of the seeds.



Canapa Labirint strain outdoor growing in daytime

- Local Laws
  - You need to check your local laws to determine if they allow you to do any outdoor growing, or any growing at all, before you make a selection of growing to keep you safe from legal issues. For example, in Washington, D.C. you are permitted to grow up to 6 plants with only 3 being mature at one time,

whereas in the border state of Maryland, you are not allowed to grow any plants at all even though Maryland enjoys a medical marijuana market.

- Cost-Effectiveness of the Seeds Which You Select
  - Much of the cannabis world is either Sativa or Indica, and your selection of Sativa or Indica or hybrids are to some extent influenced by the cost of the seeds you choose. Your choice of Indica or Sativa is your personal choice, and it won't make a difference in your plant's yield if you stick to proper care of your crop. Hybrid strains have a different price range compared to their parent counterparts.
- Growth Yield
  - If you are in an area where the height of the plants is not a legal issue, you should select strains that grow as tall as possible to give you the maximum yield. Even if your area has legal rules concerning height, you can help your plants grow sideways to abide by the rules of height. Your selection of top-quality genes does make a



Cannabis plants growing

difference here, so you should select the strains that grow bigger. Your choice of seeds with better genetics can help you achieve about a 50% increase in your crop value. In this way, you get the maximum benefit from your hard work.

- Future Use
  - While growing the cannabis plants, one thing you should keep in mind is the maximum yield as well as the THC value because that will ultimately have an impact on your crop's value. The selection of a strain has minimal value if your selection is based on your personal choice of the taste and aroma that you want out of your crop.

#### **4.10. Want to Preserve the Seeds?**

In the end, if you have luckily gotten your desired strain and you want to grow it again at a later time, you have the luxury of storing the seeds from your current crop. To store the seeds, there are some basic rules that you have to follow.

1. Keep them in a dry place
2. Avoid direct sunlight exposure
3. Use them within 18 months of storage
4. Maintain their storage at room temperature. If it is too hot or too cold, this is not a favorable environment for the storage of seeds and will result in a decrease of shelf life, as well as the quality of the crop resulting from those seeds.

# 5

## FINDING THE PERFECT LOCATION

Our journey of the learning process of cannabis growing began with the basic understanding of cannabis and its uses. Then we learned some of the most important factors between indoor and outdoor growing. After that, we learned about the varieties and the importance of the selection of seeds for growing those varieties. At this stage of learning, you should be able to make a better decision about your cannabis growing as you are familiar with all the basic armament required to achieve the best results out of your cannabis plants if you grow them.



Next Green Wave Nursery

When you think of growing your cannabis plants, you need to decide on a location. Thanks to scientific research, you can now grow cannabis in any location, in any part of the world, in any environment. All you need to do is to adjust your location per the demands of the cannabis plants that you are growing. And this is the way you will get the maximum beneficial results. Your location can be outdoor, it can be indoor, and it can be in the soil or it can be in the pots. It can be in natural soil; it can be in the soil which you get from the market. What matters is that you should have an understanding of

the choice that you are going to make, and you should also know the outcomes of making that choice. If you have chosen an indoor location, then you must be taking care of the crop from an indoor point of view, from beginning to end. If you are going to grow outside, you should know the management protocols for the outdoor crops. Let's look at some of the basic requirements for cannabis to grow. Like every other species on earth, it also has some basic requirements that will enable it to grow in its best form. I won't go into the nitty gritty details of those requirements in this section but I will outline those basic requirements as necessary for helping you make the best decision in choosing the site for your next cannabis crop.

I will go in a synchronized manner, so we will learn about site selection and the factors that affect it and then we will take a look at some of the most basic requirements of our cannabis crop. These factors will be the most important for determining a grow site for cannabis, whether outdoor or indoor.

## **5.1 State Laws Do Have a Role**

I would not doubt saying that your local laws are one of the most important contributing factors in your decision of site selection for your crop. Site selection starts with your local laws. If you are fortunate enough to live in an area where it is legal to grow cannabis, then options are limitless. You can select virtually any favorable site.

But wait!

You shouldn't assume that local laws are the only important factor in your outdoor site selection. There are plenty of other important factors making their way into your decision making. I would follow a formal path and share with you all the important factors to consider when you are going to choose your site for the cannabis growing. If you are fortunate enough that you are in a state where it's legal to grow cannabis for personal use and you can grow cannabis in any outdoor space, it is simply determining where you will grow while also keeping in mind the other factors that I will describe later. But if your local laws don't allow you to grow cannabis for your personal use, then your option of site selection for growth is dependent upon you wanting to not be caught while growing. There are different outdoor sites that you can choose from that I will describe later, and we will discuss the pros and cons of every site in detail.

## **5.2 Number of Plants**

After local laws, the 2<sup>nd</sup> most important factor in your decision making is the number of plants that you want to grow. A heavy chain smoker can consume five to seven large female plants, at most, within a year. So even if you are a heavy smoker and want to grow enough to use for a complete year, you only need 5 to 7 plants and I would advise you to grow a small number of plants as a beginner. For a small number of plants, your options for site selection increase.

## **5.3 So, What Can Make a Site Perfect for Cannabis Growing?**

In a perfect scenario, taking into all considerations, your site should be near a riverside, soil full of nutrients, away from the sight of the people and law enforcement agencies as well as thieves! You might ask, why not your garden as the best ideal place to grow?

Let me tell you!

Indeed, growing in your garden is always ideal. Your plants are in front of your eyes. You are caring for the plants and watering them per their requirement. You are taking care of them from being stolen. You can know exactly when they need more nutrients. But you should remember that they are in front of your visitors. Cannabis plants have a very pungent smell which can alarm your neighbors and if you are reached by investigating authorities, you cannot deny their presence, so be prepared for it!

## **5.4 What About Your Balcony Then?**

The balcony can be used for your outdoor growing but most of the time, your balcony area is visible from the road and you should be prepared to conceal that, additionally, your neighbors might also realize the presence of cannabis due to its pungent smell. You can use different concealing ideas when growing on the balcony, but you should not do that at the detrimental cost of potentially shielding your plants from sunlight, as proper sunlight is necessary for the proper growth of the plants.

## **5.5 Can You Grow on Rooftops Then?**

Fortunately, yes! You can choose your rooftop as your place to grow cannabis. Here are the factors that play a role that you should be prepared for,

the management of pungent smell as well as the constant winds. This is even more pronounced in the coastal areas and some sort of shield is a must for growing on the rooftop. You should remember that light breeze is favorable for the optimal growth of plants, but heavy constant wind does put your crop in danger of being underdeveloped.

### **5.6 What About the Empty Rooftop of My Nearest Building's Rooftop?**

If you are lucky enough that your neighbor doesn't have access to his terrace on the building and it is empty, you can grow on that particular rooftop at your discretion and it can do more than good in the sense that you can perfectly say that you don't know who grew them if it is found. You should keep in mind that if the empty rooftop has some sort of electrical appliance, like an air conditioner, you could lose your plants when they are discovered during any maintenance work.

### **5.7 Are You Familiar with the Term Guerilla Growing?**

Cannabis growing can be a very beautiful experience for you. Imagine going into a forest, hiking through the mountain, looking for an area away from trails with perfect sunlight for most of the day. A place near a river with the added benefit of the plants not requiring watering. This can be mesmerizing for you as well as rewarding. Even if the soil is acidic, as in the case of pine forests, you can still plant using your proper pre-mixed soil.

### **5.8 River Side?**

Yes, you can choose a riverside spot as your choice of site for cannabis growing. Make sure it's away from public sight and for that, you may need to swim and find a private location so that it's tucked away from unwanted eyes. Although it is difficult to find these types of locations, it can be rewarding if found.

### **5.9 I Am a Farmer, Can I Use My Field?**

You may get confused but yes, this can be your best choice to make if you grow in an open field where your plants will get enough nutrients and enough sunlight. For that, you need to use the camouflage technique. They should be easy for you to approach but difficult for the others to guess!

Your soil shouldn't be too acidic and should contain the proper amount of

nitrogen for your plants to consume. Having a cornfield on all sides of your cannabis crop is a very good idea as it provides you your desired privacy, a lot of direct sunlight, and all the necessary nutrients. If you want to grow in the center of the cornfield, you should grow your plant in the pots and later transport them into the center of the cornfield. The corn plant grows faster and for a longer duration than cannabis so it would cover your plants from all directions. To make access to your plants easy, you can try some sort of marking in the field.

### 5.10 Conclusion

After looking at a few options as an example above, you should be able to choose your outdoor crop site with ease. Here, I will go through the final important points for the site selection. There are some basic requirements which are a must in order for a place to be selected for cannabis growing. These requirements include, but are not limited to:

- It should be safe and hidden away to ensure it won't be discovered. Being discovered will make you lose your entire crop along with your reputation and precious time.



A nice sativa cannabis plant growing outside, loving the sun. This one had it bad! It was bitten and chewed by a groundhog but she managed to survive!

- Even if you are going to grow in your location, be ready to be able to deny it, if caught. Be sure that your plants are grown in far enough place from your house that you can easily say that you don't know if they were grown there.
- The idea of a greenhouse is good enough in that you can keep your plants in the best state, away from all the problems of outdoor, but if you are caught, you can't deny it!
- One interesting but safe place can be a public place, where you can grow cannabis. Seems weird? No, it's not! It is completely possible for you to find a public place that is not so crowded. Grow your plants there and watch them carefully daily. If your luck works, you can grow them to your fortune. If they are discovered, and later destroyed, you can't be traced as their original planter. Growing in public places is one of the safest options for you to take.
- A perfect growth medium in soil with perfect nutrients i.e., nitrogen, phosphorous, and potassium and pH in the range of 5.8 to 6.5.
- If the soil lacks the nutrients, or is short of those essential nutrients, then fertilizers can be used with expert opinion and caution.
- An optimal heat source is one of the basic requirements of cannabis growing. 75-86F is the best suitable temperature for the best outcomes of the crop.
- A light source is important, either in the form of natural light or indoor illumination sources
- The humidity of the soil is important. Dry soil will result in slower, more limited growth of cannabis
- Adequate, judicious use of water when the soil is visibly dry promotes the best growth of cannabis.
- Your site should be easily accessible by you so that you can keep an eye on your plants.
- As I said, it should be in your access, but it should be away from the access of anyone else! There are many thieves and law enforcement personnel out there. You have to keep your plants hidden from all of these and for that you can use different camouflage techniques like growing your plants along with

tomatoes, sugar cane, or corn plants.

# 6

## RECOGNIZING AND DIFFERENTIATING BETWEEN MALE AND FEMALE CANNABIS PLANTS

With hundreds of years of effort, we have developed many varieties of cannabis. We now have the choice to grow whatever variety we want. Do you remember when I told you about how different strains are produced?



Female Cannabis plant

Let me remind you! For a new strain, all you need is to grow a male and female plant of a different strain alongside of each other. The male plant will pollinate the female plant during its flowering stage and the seeds that are produced as a result will be of a new strain. That new strain will have the combined qualities of its parent plants.

### 6.1 Importance of Recognizing and Differentiating

Recognition and differentiation are important for a grower to get the maximum benefits in terms of crop value. You would like to get primarily female plants because they produce more buds and give more value to your crop. Male plants are used when you want to get seeds from your crop. But as

an enthusiastic grower, generally all you want is to get maximum amount of buds and little to no seeds at all.

Let's come to the main point:

- 6.1.1. Why knowing this is important for you?
- 6.1.2. Why do you need to know the differences between male and female plants?
- 6.1.3. Why feminized seeds have been developed?

One of the most important things, which made us realize that it's the female plant that we want to grow, is the amount of THC and CBD in the buds of female plants. THC and CBD amount is our main motivation for our efforts in growing cannabis. We want our plants to give us maximum output and that output is best attained if we grow only female plants. Male plants produce pollens that are used for fertilization and once a female plant is fertilized, its efforts and energy are consumed in making seeds. Here I will try to inform you of the most important differences between male and female plants so that at the end of this unit, you will be able to differentiate between the male and female plants. After knowing the differences, you will be able to remove male plants from your cannabis crop to gain the maximum output of THC and CBD.

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THC and CBD amount is our main motivation for our efforts in growing cannabis. We want our plants to give us maximum output and that output best attained if we grow only female plants. Male plants produce pollens that are used for fertilization and once a female plant is fertilized, its efforts and energy are consumed in making seeds.

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## **6.2 Male Plant Identification**

You should know that there are two stages of development. The childhood phase is called the vegetative phase and adult phase which is called the flowering phase. It is difficult to differentiate between male and female plants during their vegetative phase. The stalk of the male plant is thicker, and the plant has few leaves compared to the female plant. The male plants usually grow higher than the female plants. So, they need to have thick stalk to get support for their growth. The main focus of the plants during the vegetative

phase is to grow big and grow tall. They only begin to produce seeds/buds at the end of 6<sup>th</sup> week when they start entering into the flowering phase.

Male plants produce pollen and that pollen is present where the stalks grow from the main stem. They are present there in the shape of a ball. The pollen is present within those balls and it usually takes 3 weeks for the ball to burst and release all the pollen. You need to make sure to remove those balls before they burst. Because once they burst, you can't stop the production of seeds by your nearby female cannabis plants that have been fertilized by those pollens. Once the pollen ruptures, they look like a small ball that has burst. One more important feature to look for is pistils. Male plants don't have pistils at all.



Cannabis leaves and stem

### **6.3 Female Plant Identification**

Female plants have been the focus of humans since the beginning. Female Cannabis plants produce buds and those buds have the most important psychoactive compound, THC, in them. Those buds and all their qualities can be lost by just a single male plant fertilizing your plant and your plant will end up making seeds in place of buds and unfortunately, you can't smoke seeds.

The main features of the female plant are:

- Female plants are small in height.
- They have more leaves at the end of the vegetative phase as well as at full maturation.
- They have thin stalks.
- You can look for the female plants as their flowers open and they have small hairs on them which are called pistils.
- Male plants don't produce pistils.



Female plant showing hairy pistils

#### **6.4 How to Look for Hermaphrodites?**

As you know, there are separate male and female cannabis plants but you should also remember that both male and female plants can turn into hermaphrodites when put under stress. However, turning into hermaphrodite can be natural as well. These plants have buds as well as pollen. So, one part of the plant produces pollen which will then fertilize the other part of the plant that has been producing female buds.

You should be aware of the stress factors that can cause your plants to turn into hermaphrodites:

- Insects or pathogens
- Lack of water
- Lack of Light/Excessive light
- Coldwater
- Too much water
- Lack of night cycle

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Remember that both male and female plants can turn into hermaphrodites when put under stress. However, turning into hermaphrodite can be natural as well.

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You should be aware that hermaphrodites are not the type of plants you should keep in your crop. I would advise you to remove these from your crop. They are not worth their presence just because they produce a small number of buds.

## **6.5 Differentiation Between Male and Female Plants**

A regular visit to your plants is important to get the maximum output from the crop. A single male plant can pollinate a lot of female plants. You can recognize the male plant 7-10 days early in case of indoor and 3 weeks early, in case of female plants, due to their ball-like buds that burst later.

- Little stalks grow out from the main trunk of the plant and this is the area where ball-like structure grows on the male plant. This structure has a fewer number than those present in a female plant but in that case, they have little translucent hairs on it, and it is usually long.
- After 6 weeks of initial vegetative growth, if you look at your crop, you can easily identify female plants based on having more leaves, being bushy, and short.
- If you look at the stalks emerging from the female plants, you will see small hairy structures which are called pistils. They are easily identifiable for you due to their and emerging from the triangular area of the joint.
- It is quite possible for you to see a plant that has pollen sacs and pistils. This type of plant should be considered as a male plant

and should be removed.

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After 6 weeks of initial vegetative growth, if you look at your crop, you can easily identify female plants based on having more leaves, being bushy, and short

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## **6.6 Do You Know Why the Pistil is Hairy?**

A small sac-like structure with translucent hairs that you see on a female plant is called pistils. This is hairy because it must attract pollens for fertilization so that the plant can make seeds. If it gets pollen from the nearby male plant, it utilizes its maximum energy in making seeds. And as a result, your crop value is decreased.

## **6.7 Conclusion**

Now you should be able to recognize and differentiate between male and female plants.

Male plants being tall and female plants being short in height. Female plants having more leaves than the male counterparts. Male plants producing pollen sacs whereas female plants producing pistils. Male plants having thick stalk compared to the female plants. One trick to aid in identifying them is to regular visit your plants as you can identify and isolate male plants well before they are able to release pollens and fertilize your female plants. You can do it approximately 3 weeks before they burst. To be frank, it will be really easy for you to recognize the differences. One thing I would like to share is the quality and aroma of weed that you get at the end which is more potent in plants that have been grown in more natural ways. The plants which have been grown with only feminized seeds will produce more buds but at the cost of quality to some extent. This is the reason many expert cannabis growers stick to the regular seeds for their crops. In this way, they prefer to get quality smoke to the quantity of smoke.

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One trick to aid in identifying them is to regular visit your plants as you can identify and isolate male plants well before they are able to release pollens and fertilize your female plants.

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# 7

## HOW TO START AND MAINTAIN AN INDOOR CULTIVATION

Like all plants, growing cannabis is an expertise created after some time. It is anything but difficult to adapt to yet takes a joyfully stoned lifetime to ace. There is no motivation to be threatened by becoming your own expert. The procedure isn't confusing and can be as modest or costly as you can imagine.



Next Green Wave Cannabis Garden

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Understanding the essentials of cannabis growing is a decent spot to begin your pot growing excursion. Settling on educated choices early will expand your end yields.

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As you know, it's the first step that is most difficult to take. And that first step in growing cannabis is a decision to grow. After taking your brilliant decision to grow for yourself or even as a business, the second step is to

choose a right place. If you have selected an indoor location for your future cannabis crop, then this guide is surely for you. This unit will help you understand all the necessary details about growing and then maintaining the indoor plants. Following the guidelines I will describe here, you will get the perfect outcome! A lot of buds that are high in THC and CBD.

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I am writing this guide assuming that it is legal for you to grow indoors. As a respected citizen of your country/state, I advise you to look for your local rules of cannabis growing.

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I will go through this unit step by step from beginning to the end.

### **7.1 Select Your Crop Room**

As a first-time grower, all you need is a small space for your crop. For you, it can be any unused space of your home. It can be a small tent if you don't have a separate room. I will advise you to grow small number of plants the first time and then increase the number of plants as you gain experience. You can start by growing 5-6 plants in the beginning. Over time, you will learn a lot and you will make less and less mistakes and you can increase the number of plants then. The benefit of having a fewer number of plants in the beginning is that even if you make mistakes, you will lose less plants and less money as well.



Indoor Cannabis plant

## **7.2 Now Select the Strain You Want to Grow**

The decision is faltering. Sativa, Indica, Ruderalis, any number of Hybrids, all accessible to you in matter of minutes. The decision is more dependent upon your realization of what you appreciate from individual experience. What strains have fitted your taste previously? Which strains have been beneficial for the management of your disease? They are presumably a decent spot to begin. In light of your own taste, presently think about your growing conditions. Is it accurate to say that you are growing in a little organizer where small, quick growing plants like auto-flowering strains or Indicas will be the best utilization of your space? Or on the other hand do you have a huge yard where you can grow at least one beast legitimately in the dirt or huge pots?

## **7.3 How to Germinate the Seeds You Have Selected**

After the selection of seeds, you want to germinate them. Every single seed relies on having all the necessary needs met to grow perfectly into its strain. Your selected seeds require few basic conditions to start germinating:

1. Humidity

2. Suitable temperature
3. Favorable location

Your growth of seeds is an art which you learn over the time. There are numerous methods which can be used for the germination of the seeds. Your selected way depends entirely upon your own choice.

#### 7.3.1. Direct in the Soil

You can use a small pot or even a large pot can be used for the germination of the seed. In this way you also avoid the transplantation of the seed to another medium after germinating. This is quite easy and effective way to choose.



Indoor Cannabis plant

#### 7.3.2. Moist Paper Towel

If you can maintain the moisture, humidity and temperature of a paper towel for few days while also keeping it in the dark, you can use it for germination of the seeds. This can usually be achieved by covering the wet paper towel under a plastic bag or a plate.

#### 7.3.3. Water

If you keep the seeds in nutrient rich water source, they can sprout in about a week or so and then you can plant them in the soil.

#### 7.3.4. Germination Stations

Offering considerable power over the sprouting condition, germination stations give stickiness, temperature control and can quicken germination times. At the point when your plants have broken the surface and the cotyledons have shed the seed husk and open to uncover the primary arrangement of seeds.



#### 7.4 Keep in Mind the Growth Potential of Your Plants

Your plant does have a vegetative phase and in indoor cultivation, you are the master. When you change the light cycle to 12-hour light, 12-hour dark, your plants start their flowering stage. During the flowering stage to the harvesting stage, your plant's size increases two-fold or even three-fold. You should keep this in mind while selecting a space for your plants growing indoor. Space between two plants is also very important so that you can inspect and look after the plants on an individual basis.

#### 7.5 Clean Your Indoor Crop Space

Cannabis plants have the potential to accumulate everything around them. So, while growing, you need to make sure that you keep the area neat and clean

to ensure the proper health of your plants. A dirty space around your plants will help the accumulation of germs around the plants and they can cause root rot or other health issues to the plants. If you clean your indoor crop space fortnightly, you can ensure the proper health of the plants.

## **7.6 Light-Tight Area**

I would say don't confuse your plants. I will explain this later. As you know, light is important for the plants and for the majority of the time, they should receive direct light from an indoor illumination source. Proper light at a proper height and intensity is very much important. But you should also keep in mind that a dark period is even more important than the light period. If you want to gain maximum output, you should not confuse the plants. When they are in the dark period, they should not receive any light from any source. In indoor cultivation, this can be ensured by tight sealing around the crop so that the plants don't receive light from any source during that phase.



Indoor tight lightening area

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You should not confuse the plants. When they are in the dark period, they should not receive any light from any source.

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## **These are the musts for you to grow indoors:**

1. Safe place from unwanted visitors.
2. Safe from animal attacks.
3. Regular Monitoring.
4. Tightly air sealed place to avoid outdoor humidity.
5. Temperature maintenance.
6. Easy accessibility.

### **7.7 Light Source Selection Should Be Proper**

As you are growing indoors, you need an artificial light source and this source is going to be the most important in determining the outcome from your plants. I will describe the selection and type of light sources in a later section but for now you should keep in mind that for indoor cultivation, a large amount of your budget is going to be spent on the purchase of this light source. Investing in the light source is worth its cost in regard to long-term growing.

I will describe a brief overview of the light sources that are being used nowadays.

#### **7.7.1. Light Emitting Diodes**

LEDs are cost effective, are easily available and these are convenient for the cannabis growers. Their benefit of using less energy and producing little heat makes them beneficial for the crop, which adds to increase in the quantity as well as quality of the plants.

Cost is the only important factor to keep in mind while selecting LEDs as these are nearly 10-15 times more costly than the HID lights. For a serious grower, this should be acceptable as this cost value adds to the crop outcome and the return of investment is good if you select this set up. You also need to keep in mind to avoid the fraud of selecting faulty/cheap LEDs from the unregistered marketers online.



Indoor illumination



Cbd Oil

### 7.7.2. Induction Grow Lights

Despite being not as good, you can choose these lights for your indoor growing. They are cost effective and not too bad in terms of benefits for your crop. Invented by Nikola Tesla in the 19<sup>th</sup> century, they are good enough, better than simple fluorescent light source, and more cost effective than LEDs and HID.

#### 7.7.3. High Intensity Discharge

Keeping in mind all the factors of cost, being efficient, and the ease of operating, these HID lights are the best choice to make when selecting the indoor source of light. You should be ready to invest for the long term as the costs can increase exponentially as you need to setup accessories to run these lights in the proper way. Most cultivators utilize one of two primary kinds of HID lights/bulbs to rely upon for the formative stage.

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On the off chance that you can bear the cost of one, pick HPS as they are more effective on a 'watt-to-light' delivered scale.

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Metal halide (MH) bulbs are best for the vegetative stage of development. High-Weight Sodium (HPS) is the best suited for the flowering stage of development. On the off chance that you can bear the cost of one, pick HPS as they are more effective on a 'watt-to-light' delivered scale. These lights produce a lot of heat so you should budget to spend a considerable amount to counterbalance this effect and install a hood/reflector for each light. A reflector is necessary to control the temperature of your cannabis growing area. The hood or reflectors flush out the excessive heat towards the ventilation fan and in this way helps maintaining the indoor temperature.

#### 7.7.4. Fluorescent Lights

These are easily the most affordable and easy to use. These two attributes make them an excellent choice for the cultivators that do not intend to grow for long term. Although not necessarily the best choice to make, they offer cost effective benefits for casual growers. These lights do not require any accessories and can be installed without having to connect them to the ventilation source.

### 7.8 Fresh Air is a Lifeline

Fresh air is a must for the plants to grow and we are fortunate enough that it is quite easy to maintain fresh air for the plants. Growing indoors, all you need is two fans. One that brings the air inside and other that acts like an exhaust fan. The number of fans is dependent upon your crop area. For a little first-time grower, two fans, as I described, are enough. The exhaust fan needs to be on the other side and near the ceiling. When set up as described, the exhaust fan sucks out the warm air and the other fan brings in the fresh air inside.

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Growing indoor, all you need is two fans. One that brings the air inside and other that acts like an exhaust fan. The number of fans is dependent upon your crop area.

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The air supply brings with itself the necessary CO2 supply for your plants while also maintaining the temperature of the area. You should keep in mind that Indica strains prefer the lower temperature range compared to the Sativa strains which prefer warmer temperatures. The normal temperature range, as I described in the previous units, is between 70-85° F and proper ventilation helps to maintain that temperature range.

## **7.9 You Can't Keep an Eye 24 Hours a Day!**

With ever-increasing scientific inventions, you now have the luxury of countless mini gadgets that you can utilize for your ease. Your indoor cannabis plants need some basic control mechanisms for optimal growth. As a human, you can't look after your plants all day so these control mechanisms work in your place to maintain normal temperature, light control and pH balance. A regulator controls and regulates the light. During the vegetative phase, you set it to provide 16 hours of light and 8 hours of dark to your plants. When you want your plants to start the flowering phase, you set the timer of the light regulator to provide a phase of 12 hours of light and 12 hours of dark. A temperature regulator controls the inlet and outlet fans to control the temperature as well as the intensity of light.

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A regulator controls and regulates the light. During the vegetative phase, you set it to provide 16 hours of light and 8 hours of dark to your plants. When

you want your plants to start the flowering phase, you set the timer of the light regulator to provide a phase of 12 hours of light and 12 hours of dark.

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Installing an additional pH regulator adds to the quality of your plant growth by helping you in maintaining the pH of the water or the soil. If you choose to grow in soil, then maintain the pH at 6-7 and if you opt for hydroponics, then a temperature range of 5.5 to 6.5 is optimal for the growth of plants at best.

### **7.10 You Are the Decision Maker in Choosing Growth Medium**

After making the choice of growing indoors, you need to choose the growing medium as well. You can either grow in soil or you can opt for hydroponics. As a first-time grower, I would recommend that you choose soil as your growing medium as it offers the advantage of being cheap, easy to manipulate and handle with less chance of making an error. On the other hand, hydroponic systems are usually more complicated and expensive where there is more of a chance of you making mistakes.

I will describe the basic attributes of soil and hydroponic system so that you can have a better idea when choosing your growth medium.

| Growth Mediums  | Soil  | Hydroponics         |
|-----------------|-------|---------------------|
| Cost            | Cheap | Expensive           |
| Manipulation    | Easy  | Technique sensitive |
| Margin of error | More  | Less                |

#### **7.10.1. Soil**

Pre-fertilized soil or regular pot soil can be used where the former soil has the advantage of requiring less maintenance and the latter requiring periodic addition of nutrients. If you select a quality pre-fertilized soil that has all the necessary ingredients, your guess work is no longer required in maintaining the necessary nutrients.

#### **7.10.2. Hydroponic Systems**

The latest addition of hydroponic systems and its proper use can increase the growth of your plants as well as your crop value. However, if you make a mistake, you can lose a lot of money and resources. Your plants get their necessary minerals and nutrients from the water by the process known as osmosis. After gaining experience, you can have the advantage of choosing the right value of nutrients and minerals for your plants. Currently, the market has several hydroponic kits that can be used for sure. The kits are foolproof in a sense that they are different for every strain and every phase of the plants development. The only drawback of going with this system is the cost for this entire system is usually ten times higher compared to the pre-fertilized soil.



Cannabis flowers in hydroponics system

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Currently, the market has several hydroponic kits that can be used for sure. The kits are foolproof in a sense that they are different for every strain and every phase of the plants development.

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I would advise you to choose soil for the first time growing.

### **7.11 All Important Choice of a Container to Grow In**

Your plants don't like excessive water so whatever type of container you choose whether it be a household container or market based, it should have a proper water drainage system. If you select your bucket as a container, make few holes on its bottom to ensure proper water drainage. In the case that you have purchased the soil from the market, it usually comes in pots and you won't need to shift it to other containers. I would advise you to choose a nutrient rich soil from the market that comes in pots with proper air flow maintenance systems.

### **7.12 Cannabis Loves the Nutrients**

Like all the necessities of your plants, like proper soil and lighting, it is also especially important for your plant to get proper nutrients. Cannabis is a resilient plant, which means it can grow even in harsh conditions, but it is at the risk of losing quality and quantity of buds. Irrespective of the growth medium being used, these seven macronutrients are a must for the optimal growth of the cannabis plant.

- Nitrogen (N)
- Potassium (P)
- Calcium (Ca)
- Phosphorus (Ph)
- Magnesium (Mg)
- Iron (Fe)
- Copper (Cu)

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If you choose organic soil, then to your ease, it should contain all the necessary minerals and nutrients. But in the case of general pot soil, you need to buy them from the market for your plants.

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If you choose organic soil, then to your ease, it should contain all the necessary minerals and nutrients. But in the case of general pot soil, you need to buy them from the market for your plants. They are easily available at the market in packages. Every strain has its own unique requirements of its food and whatever strain you choose to grow, you can make sure its proper

nutrient supply by making a little research about it. For example, there are some strains that need more calcium than others in order to grow into healthy buds.

### **7.13 Cannabis Loves Water Just Like You Do!**

Just like humans, cannabis loves water for its health but doesn't like too much water. Proper water supply for your cannabis plants is necessary and overwatering can be detrimental for their optimal growth. Two factors that need to be considered are: frequency and amount of water. These two factors are dependent upon the size and development stage of your plant. Plants require less water when they are in vegetative phase and small in size. They need more water during the flowering phase. Overwatering does more harm than underwatering your plants. If your plant's leaves show noticeable drooping, then it's the time to water it. Overwatered plant roots are susceptible to fungal infections and root rot. Proper drainage systems for the plant containers can make sure that excessive water doesn't clog and is drained out of the container.

Another important aspect regarding watering your plants is the source of water. I will advise you to be careful in selecting the source of water. Casual selection of tap water can end with you harming your plants by saturating your plants with excessive chlorine and minerals. To avoid this situation, try to use filtered water or you can opt for distill water at least. Addition of unwanted minerals can do a lot of harm to your plants.

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Overwatering does more harm than underwatering your plants. If your plant's leaves show noticeable drooping, then it's the time to water it. Overwatered plant roots are susceptible to fungal infections and root rots. Proper drainage systems for the plant containers can make sure that excessive water doesn't clog and is drained out of the container.

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### **7.14 Your Plants Need You Everyday**

You can't keep an eye on your plants 24/7 but what you can do is pay a daily visit at a fixed time. A few minute daily visit can make a wonder of difference. During your visit, you can inspect for temperature, pH and water requirements of the plants. After the vegetative phase is over and you turn

toward the flowering phase, your daily visit also aims at identifying and removing the male plants. I have already discussed the importance of doing this work and you also know how important it can be as an enthusiastic grower of cannabis. If you are growing from feminized seeds or female clones, then you usually don't need to worry about male plants. But still, you should make sure that your cannabis plants are not under stress because your plants can convert into hermaphrodites under stress.

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After the vegetative phase is over and you turn toward the flowering phase, your daily visit also aims at identifying and removing the male plants.

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### **7.15 How to Know the Time of Maturation of Cannabis**

Presently shrouded bounteously in trichomes, pistils are shrinking back and evolving shading. Profound orange, mauve, earthy colored, or red may rise contingent upon species. The swollen sap sacks start to change shading in waves everywhere throughout the plant. To start with, going from clear to smooth then smooth to golden. The bloom bunches are so swollen they appear to have turned back to front. These signs mean the time has come to gather the consequences of your difficult work. For a higher THC content, collect when trichomes are 20-30% golden. For a more extensive cannabinoid profile collect when trichomes are 60-80% golden. Watch cautiously when collecting the cannabis plant.

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For a higher THC content, collect when trichomes are 20-30% golden. For a more extensive cannabinoid profile collect when trichomes are 60-80% golden.

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### **7.16 Your Cannabis is Ready to Be Harvested!**

The final step of your long, tiresome journey of growing cannabis is harvesting your plants. A great deal of first-time producers assume that the nugs will jump out independently on the branch. At that point, they will pull them off, crush them, and begin smoking. It is somehow more confusing!

The buds of a normal, mature female cannabis plant have a mix of fan/sugar/water leaves with them. You can trim the buds with using scissors.

Initially this may seem tiresome but once you get used to it, you will enjoy it for sure. Water leaves need to be separated as they contain a lot less THC. Fan leaves are long and green while sugar leaves are short. There are some people who use the sugar leaves as well but most of the people don't use them.

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Initially this may seem tiresome but once you get used to it, you will enjoy it for sure. Water leaves need to be separated as they contain a lot less THC.

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Most of us are interested in the buds that contain the most THC, which makes you high. Sugar leaves can be used to make cannabutter. After cutting, buds are hung for about a week to dry. Dry your buds in a dim cool spot with little dampness. In a perfect world, this procedure is moderate and should take at least fourteen days.

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Most of us are interested in the buds that contain the most THC, which makes you high. Sugar leaves can be used to make cannabutter.

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Check things frequently for over-drying or shape. When dry, meager branches will effectively snap. Thick branches will be somewhat malleable. The chlorophyll has corrupted, and the green growth has been supplanted with species-subordinate hues. Grovel, tan, a light green, or even dark blue and purple can rise as the buds dry and create genuine hues.

After two weeks, you can store the dried buds in a jar for future use. Now freely pack a glass container with your fortune. Open the top or "burp" the container once every day for the initial fourteen days. This allows the cannabis to develop a stickiness that can form your buds. When the blossoms are dry to the touch, just burp the container once per week. You don't need a long time of difficult work to be destroyed by an absence of consideration.



Clear glass jar filled with kush

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Open the top or "burp" the container once every day for the initial fourteen days. This allows the cannabis to develop a stickiness that can form your buds.

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You can cure for whatever length of time that you like. Remembering that the psychotropic mixes dry and convert when appropriately relieved and turn out to be more psychoactive. This takes up to a month and a half when cured under perfect conditions. The more drawn out the drying period, the smoother the outcome. Keep your containers in a dim cool spot. THC separates into different cannabinoids after some time when presented to light. On the off chance that you are uncertain about bud dryness, test your products as they dry so you have a future reference. Dry cannabis doesn't generally feel totally dry due to the waxiness of the tars. You will build up the vibe and aptitude rapidly. Making the most of your own homegrown cannabis isn't troublesome. Some consideration and persistence can receive stinky rewards even from the smallest of spaces. The taste of your buds will increase over the time, so you need to have patience.

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Dry cannabis doesn't generally feel totally dry due to the waxiness of the tars. You will build up the vibe and aptitude rapidly. Making the most of your own homegrown cannabis isn't troublesome.

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### **7.17 Conclusive Remarks**

Collecting cannabis is an exquisite encounter. It is one we prescribe to any weed sweetheart who has an enthusiasm for all parts of the plant. Most cultivators accept that they gain some new useful knowledge with each harvest. There's no uncertainty and somewhat of an expectation to absorb the information included. You'll commit a considerable number of errors. Nonetheless, trust us when we state everything justified, despite all the trouble.

# 8

## INDOOR ILLUMINATION

On the off chance that you are anticipating developing your cannabis indoors, you undoubtedly have researched the diverse lighting alternatives that are accessible. Each cultivator has their inclination for specific indoor lights, and you have most likely previously gotten counsel about setting up your lighting framework somehow. However, how would you realize that it is the most ideal path for you?

One of the simplest ways to regulate your cannabis growth and one of the most vital factors that contributes to it is the light cycles. The process by which the plant produces food and energy is called photosynthesis and this process is directly dependent on light. The cannabis plant tends to follow and react to the natural surrounding environmental changes. It might germinate, grow, flower, and produce seed all as reactions to changes in their surroundings. Giving any cannabis variety lower than twelve hours of uninterrupted darkness won't cause it to flower quicker. Instead, the plant could take longer to mature, its buds are going to be smaller, and therefore at the end, you will be getting less than optimal results from your cannabis plants in terms of quality and quantity.

These changes in light exposure, changes in temperature, and changes in relative humidity all affect the cannabis plant. The foremost vital issue is almost always light, however, particularly the cycles during which lighting happens. The cycles of light and darkness are roughly comparable to the relation of hours of night and hours of daylight in a day.

Generally, cannabis plants get additional light in the vegetative phase and equal amounts of light and darkness throughout flowering cycles. Cannabis seeds are usually germinated throughout the spring once the hours of sunlight in everyday begin to extend. They'll grow even until the days get shorter and shorter.

Eventually, as a result of the shorter days that warn of winter, the plants will begin the flowering cycle so that they're going to reproduce and expire their genes. Once the days are longest, the cannabis plant has the time and energy to develop a strong structure in preparation for the all-important, sticky buds.

At least this can be often, however nature would add to the cycle.



Healthy cannabis leaves

Thanks to the wealth of growing techniques and artificial growing systems, these natural cycles are typically changed and taken advantage of. Generally, growers wish for the plants to be healthy and powerful as well as attainable while not losing any energy on seeds or reproductive efforts.

As suggested above, cultivators can exploit how plants grow in nature, basically hacking the plants to act in specific manners. One of these methods is sometimes called 'driving'. Driving is the way of taking a plant that has been encountering long days (enduring a long presentation to light, between 18-24 hours) and abruptly changing the light introduction just by mimicking the change from spring to summer. This strategy has the impact of causing the cannabis plant to quickly start the flowering cycle. It's such a high affectability to changes in light cycles and introduction that make it workable for cultivators to successfully develop cannabis.

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18 hours of light cycle + 6 hours of dark cycle = vegetation stage

12 hours of light cycle + 12 hours of dark cycle = blooming stage

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An unadulterated Cannabis Sativa strain isn't as delicate to the light changes as some different strains since it is typically from tropical locales around the globe. As a rule, the connection between night and day is more stagnant in these tropical locales and changes moderately little between seasons. This is one reason that Cannabis Sativa is bigger than different assortments, taking up to 5 entire months to arrive at development. Since it turns out to be so huge before flowering, it isn't as typical for indoor cultivators to utilize a Pure Sativa strain. Hybrids can be developed with no issues.

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Cultivators can exploit how plants grow in nature, basically hacking the plants to act in specific manners. One of these methods is sometimes called 'driving.' Driving is the way of taking a plant that has been encountering long days and abruptly changing the light introduction to just around 12 hours.

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Don't hesitate to explore and do your research into light cycles. Each cannabis strain will respond somewhat diversely to various upgrades. More importantly, the light cycle is critical to the final result gathered. At the point when the cannabis plants get the perfect measure of light in the correct cycles, the plant will flourish. A plant blossoms when the proportion of light/dark cycles is equivalent, while they will quit blooming when the times of dark cycles are less than light cycles.

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The More Light Methods = The More Cannabis

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Whether or not you decide to develop your cannabis indoors or out, you are going to require a decent wellspring of light. The more light methods, the more Cannabis. In nature, plants utilize the sun. Light is the power that makes photosynthesis conceivable, changing over that vitality into usable glucose and oxygen. Photosynthesis parts hydrogen from oxygen and afterward joins with oxygen and glucose.

## **8.1 Importance of Glucose as a Fuel for the Plant**

Glucose is the concoction that controls the essential structure and developing

capacities that transform the plant from seed to the full-grown cannabis plant. Your plants utilize a great deal of light to grow and by and large, the more, the better. The significant thing to remember is to keep the remainder of the earth offset with whatever measure of light you're applying. In addition to controlling the light cycles, you also have to keep track of temperature, relative humidity and air control in your indoor settings. Past that, your plant requires satisfactory supplements and a lot of water. Your possible objective as a cultivator is a top-notch yield of buds, and this will be resolved in part by the measure of light your plants get. Cannabis is particularly open to overwhelming lighting, and the quality and size of your blossoms will be resolved to some extent by each one of those lumens!

When all is said in done, you need at least 30,000 lm for every 10 square feet in your indoor growing space. With the correct adjusting of the light intensity, you can go as far as possible, up to 80,000 lm for every 10 square feet. Try not to do this except if you are anticipating committing a great deal of time, vitality, and cash into ensuring that nature is continually getting the fundamental changes.

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You need at least 30,000 lm for every 10 square feet in your indoor growing space. With the correct adjusting of the light intensity, you can go as far as possible, up to 80,000 lm for every 10 square feet.

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If the plant gets light in plenitude, at that point it will concentrate more on creating leaves than making blossoms. The converse remains constant. If a plant isn't getting enough light, at that point more vitality will be dedicated to the creation of leaves, and you will wind up with a more terrible reap. This is because the plant is attempting to make up for the low measure of light by making additional leaves to pull in the light for its use. The range of light your plants are accepting influence its growth tremendously. The sun has a full range, yet you can control the sorts of light you are utilizing in your grow space to accomplish some fantastic impacts. Photosynthesis and various chlorophyll related responses are invigorated by the orange, red, and blue spectrums of the range. Phototropism is constrained by hues going from blue to bright. This is simply the wonder by which a plant develops itself into the most ideal situation for catching the light. The most significant general principle to remember about light and cannabis development is that red range

hues incite flowering, while blue range hues favor the vegetative phase.

The cycles or timeframes during which your plant gets light is likewise significant. While your plant is developing, it ought to get around 18 hours of light with regular intervals of the dark. At the point when it's an ideal opportunity to flower, you'll need to change to 12 hours of light and 12 hours of darkness. An extremely pleasant aspect concerning indoor development is that you have full power over the light. You pick how the section of night and day will happen, thus you ought to be aware of giving it in perfect extents with the goal that your plant flourishes.

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The most significant general principle to remember about light and cannabis development is that red range hues incite flowering, while blue range hues favor vegetative phase

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## **8.2 Choosing the Best Light Source for You!**

If you're growing indoors, you'll have to decide how best to set up your lights. It will come down to the size of your grow room, your electrical needs, and how much time and money you're willing to invest in lighting up your grow room.

When it is time for you to pick an indoor lighting framework, first decide what extent of light you might want to utilize. At that point contrast that with what extent of light you'll practically be able to accommodate for the plants. If you live in an old house with DC, it most likely won't be a lot! Be practical and remember that lights consume heaps of intensity. When it is about the decision of lighting, you have huge amounts of different options. I have discussed some of the basics of the kinds of lighting inside the last unit. In this unit, I'll discuss more about the different decisions you'll make and talk about some of the pros and cons of different lighting arrangements. Below, I'll offer an overall look at some of the different lighting choices you're confronted with as a cannabis cultivator. Numerous producers contend about which lights are the best, in any case, by and large, there is a light spotlight on a specific period of development or a specific kind of employment. It's dependent upon the cultivator to settle on a choice that fits the time and cash they have to bring into their lighting frameworks.

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If you live in an old house with DC, it most likely won't be a lot! Be practical and remember that lights consume heaps of intensity. When it is about the decision of lighting, you have huge amounts of different options.

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### **8.3 HPS — High Sodium Vapor Lights**

In the mid-'80s, when correspondence started decisively about developing practices, and how they varied inside the US and Europe, initially Americans were utilizing significantly more energy than their European partners. The clarifications on this are regularly because most Europeans were utilizing horizontal reflectors and HPS development lights and Americans were utilizing vertical reflectors and metal halide lights. HPS lights have the ideal shading range for cannabis plants during their flowering stage while metal halide is unrivaled for the vegetative stage. They work also with other HID lights and make light by arcing current through a bulb containing xenon and sodium gas. They produce a dull pink gleam that rapidly transforms into an orange-pink light once it heats up. Once more, these lights work terrifically for indoor development, particularly for a plant perusing the flowering period of development. You can buy HPS lights of different power: 250w, 400w, 600w, and 1000w. Try not to have to depend on utilizing the 1000w light except if you're growing a huge field in an underground dugout. To enjoy the benefit of the quality, you have to try to cool your development with a ventilation system. Your smartest option is to utilize two 400w or 600w HPS lights: these will uniformly diffuse light for your plants, and because they aren't excessively parceled in this way, you don't have an danger of light bleaching. Bear in mind that you essentially should utilize a bright light related along with your sodium fume light.

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You can buy HPS lights of different power: 250w, 400w, 600w, and 1000w. Try not to have to depend on utilizing the 1000w light except if you're growing a huge field in an underground dugout.

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Agro's lights are likewise a fair decision. Made by Philips, the 'Agro' light slips into the blue range, and thusly, the lights are easy on the wallet. You'll hope to trade lights about once per annum on the off chance that you have them running constantly or more frequently.

## **8.4 CFL — Fluorescent Lights**

In the vegetative period of cannabis development, fluorescent lights were utilized by cultivators to recreate the sun, as they had been utilized for quite a while by the ranchers and botanists for indoor development, and early germination in chilly atmospheres. Tragically, these lights are costly, and you need huge amounts of fluorescent lights to mimic regular daylight. It requires large amounts of different kinds of lights to imitate the total range of common light. These days, cultivators, despite everything, utilize these lights when plants are very sensitive to warmth. This is material to cuttings and seedlings in the beginning phases of development. Keep in mind, notwithstanding, that these lights, despite everything, got the chance to be near the precarious edge of the plants themselves, for the most part around 5 cm away. Fluorescent innovation has changed to some degree, as well, and now bright lights offer a somewhat more excellent development for cannabis than they need to. In case, you're utilizing fluorescent lights, you'll additionally need reflectors to use with them, to amplify their proficiency and spare yourself some vitality.

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These days cultivators, despite everything, utilize these lights when plants are very sensitive to warmth.

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## **8.5 High-Power Discharge Lights**

High-Power Discharge Lights were first concocted for a tremendous scope, to be utilized in open fields and arenas. These sorts of light are exceptionally ground-breaking, and they're used by huge amounts of botanists and horticulturists to develop numerous things other than cannabis. However, they are accomplishing work very well for cannabis, so how about we discuss them? Inside the different kinds of HID light, we have mercury, metal halide, and sodium fume light. We'll check mercury lights off the rundown straightforwardly because their lumen to watt limit is simply excessively low for them to rival the others.

## **8.6 MH — Metal Halide Lights**

Metal halide lights produce light by arcing an electrical flow through mercury gas blended in with some metal iodide like thallium, thorium, or sodium. The

sort of lighting that it produces falls into a perfect scope of the darkening period for the vegetative period of cannabis development. It's particularly useful for delivering foliage. Additionally, it's adaptable: 1000-watt metal halide lights are frequently acquainted with actuating the flowering phase of the plants. Cultivators inside the US utilized metal halide lights for an all-encompassing time after the introduction of HID lighting, and appreciated that they performed well for all periods of plant development.

## **8.7 Light Emitting Diodes**

LEDs (Light-Emitting Diodes) became omnipresent inside the lighting scene over the course of the most recent decade. While not the ideal light for developing cannabis, LED lights offer a few preferences. To start with, they're low voltage, which proposes less cash spent on upkeep and power to keep them running. Counting this, they produce practically zero warmth, which means you don't have to stress about overheating your growing room if you utilize LED lights. It additionally further decreases your dependence on ventilation and fans, which allows for significantly more profound vitality of reserve funds. Truth be told, relying on your activity, you'll have the opportunity to warm the space in case you're utilizing LED lighting. For cultivators organizing protection, LED lights to offer a further reward—the low warmth makes LED lighting difficult to distinguish with warm imaging strategies and usually won't to recognize the infrared warmth compared to the more typical HPS lights.

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It additionally further decreases your dependence on ventilation and fans, which allows for significantly more profound vitality of reserve funds.

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Driven lighting is furthermore calmer than the contrary lighting choices, without the foundation murmur discharged by HPS lights. Remember that not all LED lights are made equal! Take care to inspect your bulbs and guarantee that they're high-wattage and have high lumen esteem. The higher caliber these are, the more brilliant your light will be. You moreover might need to be certain that the LED lights you select are explicitly produced to radiate light at the total range of shading for your plant's requirement for

photosynthesis. Driven lights do have a superior starting venture than some of the less expensive choices which may make a few cultivators distrustful about utilizing them. Be that as it may, they're effective. Driven lights squander far less vitality as warmth, considering the space doesn't get the chance to be warmed, and individuals' reserve funds on power can pay for themselves in just a couple of years.

You may not get the opportunity to stress over setting your grow room on fire and LED lights keep going for an all-inclusive time. A few makers publicize every 100,000 hours of life in their LED bulbs, which gives you sufficient opportunity for about ten years of growth and harvesting. The Best Systems is the genuine key to choosing what sort of light you might want is to work out the components of your developing zone. In case you're utilizing a local space that is smaller than 5 square feet (0.46 square meters), consider utilizing a fluorescent or HPS 250w light. Bright lights are small, and that they will enable your cuttings to root well. Afterward, as plants become enormous, you'll need an HPS light.

In a perfect world, and on the off chance that you have space, you should utilize a metal halide light when your plant is in its development stage and an HPS light for the flowering stage. If you utilize a metal halide light for both development and flowering, you'll be alright but your plant will have more foliage than should be expected, and not the same number of buds. This insinuates that you'll have a lower yield. If you utilize an HPS light during the development and flowering periods, you'll end up with a long plant, yet perhaps not as fundamentally sound as you'd like. If you essentially have separated, or time to, utilize one light consider utilizing one among the 'Agro' kinds of light. Most importantly, be smart about utilizing what you have. It's essential to have lighting, yet you might want to design it out as well. You can't simply fill an area with ultra-high wattage lights and anticipate that your plants will flourish. Try not to squander significant force and discover how to shape the utilization of your assets.

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insinuates you'll have a lower yield.

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## **8.8 How to Arrange Lights and Plants**

Now I'll give you a certain very important piece of advice on arranging your pot plants and lights, similarly covering a couple of clues and methods for avoiding reaching out in your plants. Keep reading this unit as it will help you with expanding the turn of events and bud adequacy of your plants that will ultimately increase your yield.

As you know, like all plants, the leaves of the cannabis plant also utilize light for the photochemical food-making process of photosynthesis, and the plant will organize itself towards the light it needs. Outdoors, it's not hard to see this miracle in various plants, and you'll see it yourself indoors as well. In case you put the cannabis plants unreasonably close to each other, they will hinder each other from getting light and less photosynthesis will happen. This will cause huge issues for your plants. Guarantee that each plant gets a great deal of light.

You moreover need a truly uniform proportion of light cast onto the plants themselves.

It's critical that the buds on your plants all get a similar proportion of light, whether or not they are of different sizes. To do that, you need to guarantee that each plant gets a ton of room. You needn't bother with combining any plants to accumulate the light or you risk shielding its more diminutive relatives.

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Giving your plants a great deal of room from one another will, in a similar manner, help air course, which is basic for keeping up stable degrees of humidity. If you let the plants reach each other a tad, you risk the bud shape. This could bolster bacterial or parasitic turn of events.

If you aren't growing a huge number of gigantic plants, you can keep them alongside each other with small openings. Cutting isn't the best course of action, but at this point cultivators need to make do with confined space. In particular, your plant needs reliable and uninhibited access to light to thrive. Do whatever it takes not to let the plants swarm each other!

A basic blunder for certain growers is putting their cannabis plant unreasonably far or close to their lighting establishments. Unmistakably, if a plant is unnecessarily a long way from a light, it won't get the imperativeness it needs to make a sound reap. Such plants will grow up to be unreasonably thin and spindly, lacking concern and the essential trustworthiness to hold up under overpowering yields. The converse is legitimate for unnecessarily close lighting. It will be unnecessarily hot, and plants can dry out and even kick the bucket if they are seriously snug by a mind-blowing light source.

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## **8.9 Evidence Proven Distance Between Light and Plants**

In this section, I am going to let you know the scientifically proven distances between your plants and light. One thing that you have to make sure is that the temperature should remain within the normal limits.

If you are using fluorescent lights, then your distance should be 2 to 4 inches at max. A simple light bulb should be 6 to 9 inches away. Distances for HPS and Metal halide lights are based on their power where distance should be 8 to 12 inches for a 250W light and 12 to 16 inches for a 400-watt light.

One thing to remember for light and arranging is that you need each plant to get the most favorable position possible from the lights. This suggests that shorter plants should be put closer to the light source than enormous ones so they get comparable proportions of light. Disregarding the way this gives off an impression of being direct, it's a run of the mill oversight for new cultivators (and to a great extent old ones.)

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Utilizing this strategy similarly offers a maker the upside of keeping humbler plants out of the shadows of the greater ones, an issue which would irritate the nonattendance of light. If your plants are of similar sizes, it is not an unfeasible thought to move them or the lights around to help ensure that they are getting comparable segments of the splendid stuff.

### **8.10 Use Reflective Materials**

You need every single bit of light to get to your cannabis plants. The notable saying "Waste not, need not" measures up to the current circumstance to the advancement of cannabis. One of the underlying stages in hindering light is a setback for creating movement of the reflectors despite your lights. This infers you'll require your lights to be arranged on a level plane, so the reflection technique is extended. Vertically balanced reflectors unquestionably lose more light than the horizontal ones.

Moreover, put forth an attempt to not use any reflectors with single parabolas. Twofold parabola reflectors are far predominant at reflecting light. This goes for close reflectors also. Close reflectors work better since they direct light more profitably into the center. That infers you need on a level plane presented with a twofold parabola shut reflector despite the lights you pick.

The two most essential materials for reflectors are aluminum, both beaten and smooth. Every sort of aluminum works wonderfully of reflecting light yet beaten aluminum will help diffuse the light. A couple of cultivators recommend that painting the dividers of a grow room white or using confining flooring is satisfactory for reflectivity for your internal parts.

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Put forth an attempt not to use any reflectors with single parabolas. Twofold parabola reflectors are far predominant at reflecting light. This goes for close reflectors also. Close reflectors work better since they direct light more

profitably into the center.

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### **8.11 Safe Installing**

Right when you're setting up numerous lights and reflectors, you should take an extra moment, especially if you are another or fledgling cultivator. After you've set up all the principal lights and electrical apparatus, you'll be overseeing enormously strong streams of electricity. If things aren't set up fittingly and carefully watched, you could experience power floods, power outages, dazes, and flames. At high voltages, these would all have the option to create troublesome issues as well as perilous. If you're using a hydroponics structure like various indoor cultivators, you will have a huge amount of water spilling around in the grow room. Water and electricity don't mix well. Guarantee everything is grounded and safe in case of a flood or spill. On the off chance that you're either another grower or need help with electricity and wiring, leave these things to a specialist. If you select a specialist, attempt to check their experience and guarantee they understand what they're doing.

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Considering the common peril of spills and floods in a grow room, guarantee that all of your electrical equipment is raised off the ground. Keeping everything off the ground will help thwart any short-circuiting if the room floods.

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Guarantee your wiring and electrical structures are good for dealing with the remarkable demands of a grow room before you start too. We vehemently encourage getting capable help concerning power and wiring. Make an effort not to consume your home's power for specific plants!

# 9

## HOW TO START AND MAINTAIN AN OUTDOOR CULTIVATION

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This book's guidelines are written while assuming that you are going to grow cannabis and its medical strains within an area where it is legally permitted to do so.

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Outdoor cultivation was the only method of weed cultivation for thousands of years. Long before we came to know the magnificent effects of cannabis, it was still there being used just like all other plants. Then we learned about its psychoactive effects and now we are also familiar with its medical uses. Cannabis' two components of our interest, THC and CBD, made themselves the center of all the research. It is a clear-cut fact that growing cannabis outdoor results in a more potent and quality crop. Over the years, we have learned that growing outdoors is not simply throwing the seeds in the soil and then waiting for the magic to happen. For a quality crop, you need to make a lot of effort, from the beginning to the end. In this unit, I will discuss all the steps, from beginning to end to grow cannabis outdoors in a systemic way. I will start right from your climate and then I will end at the time of harvesting. Stay here and enjoy reading! You will learn the art of growing!

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It is a clear-cut fact that growing cannabis outdoors results in a more potent and quality crop. Over the years, we have learned that growing outdoors is not simply throwing the seeds in the soil and then waiting for the magic to happen. For a quality crop, you need to make a lot of effort.

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### 9.1 Learn About Your Climate

It's critical to have a decent comprehension of the atmosphere in the zone where you will grow. Cannabis is exceptionally versatile to different conditions, yet it is defenseless to an outrageous climate. Supported temperatures above 86°F will cause your plants to quit developing, while

production with temperatures beneath 55°F can make harm and hindering plants, even cause demise. Overwhelming downpours and high breezes can physically harm plants and lessen yields and unreasonable dampness can prompt shape and fine buildup, particularly during the flowering stage. Notwithstanding climate designs, you have to comprehend how the length of the day changes all through the seasons in your general vicinity. Understanding the measure of daylight during the seasons is significant to making plants "flip" from the vegetative to the blooming stage when they begin to deliver buds. It's acceptable to use nearby assets, as experienced plant specialists in your general vicinity will have an abundance of information about developing blossoms and vegetables, and that data can be applied to growing cannabis. On the off chance that you have some experience planting and developing veggies, you will likely understand that developing cannabis outdoors is a genuinely simple undertaking.

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- . Supported temperatures above 86°F will cause your plants quit developing, while production with temperatures beneath 55°F can make harm and hindering plants, even cause demise. Overwhelming downpours and high breezes can physically harm plants and lessen yields and unreasonable dampness can prompt shape and fine buildup, particularly during the flowering stage.
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## **9.2 Decide On Your Growing Location**

Picking a space for your outdoor development is one of the most significant choices you'll make, particularly in case you're planting legitimately in the ground or enormous stable compartments. Your cannabis plants ought to get however much direct sunlight as could reasonably be expected. In a perfect world this is during noontime, when the nature of light is ideal. As the season changes and fall draws near, your plants will get less and less sunlight for the day, which will trigger the blooming stage. Having a steady breeze is useful for your plants, particularly in hot atmospheres. Be that as it may, if you live in a region with a lot of high breezes, think about planting a windbreak or the like, similar to a divider, fence, or huge growth. At last, you will need to think about protection and security. Many individuals need to disguise their nurseries from critical neighbors and possible thieves. Tall walls and huge bushes or trees are your smartest choice, except if you live in an isolated

zone. Likewise, most state laws necessitate that you keep cannabis plants covered from the road. A few cultivators plant in compartments on overhangs or housetops that are protected from being seen, while some form overwhelming measured wire confines to keep hoodlums and creatures under control. Whatever you choose, consider how enormous you need your plant to be. Outdoor cannabis plants can develop to 12 feet tall or more, contingent upon the amount you let them go.

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At last, you will need to think about protection and security. Many individuals need to disguise their nurseries from critical neighbors and possible thieves. Tall walls and huge bushes or trees are your smartest choice, except if you live in an isolated zone.

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### **9.3 Choose the Best Strain as Per Your Climate**

The achievement of your outdoor cannabis development will likewise rely upon picking the correct strain to develop for your specific atmosphere and area. If you live in a territory with a background marked by cannabis growth, odds are good that numerous strains will effectively grow there, and some may have even been reared explicitly for your atmosphere.

#### **9.3.1. The Difficult Decision of Starting With Seeds or Clones**

Plants developed from seeds can be more generous as youthful plants when contrasted with clones. You can plant seeds legitimately into the nursery in late winter, even in cool, wet atmospheres. The primary downside to developing from a seed is there is no assurance concerning what you'll wind up with. If your seeds don't come feminized, you could wind up with the two males and females, in which case you'll have to sex them out to dispose of the males (just females produce buds). In any event, when you do have every single female plant, each will be an alternate phenotype of a similar strain. To get the best form of that strain, you'll have to choose the best phenotype, which can be an extensive procedure. A great deal of starting cultivators begin with feminized seeds. Contingent upon the legitimacy of cannabis in your state, you might have the option to purchase clones or seedlings from a nearby dispensary. A few producers avoid these because they believe they aren't as hardy as developing plants from seed.

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To get the best form of that strain, you'll have to choose the best phenotype, which can be an extensive procedure. A great deal of starting cultivators begin with feminized seeds. Contingent upon the legitimacy of cannabis in your state, you might have the option to purchase clones or seedlings from a nearby dispensary

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Auto-flowering seeds are another well-known decision for outdoor development, as they begin sprouting when they arrive at development, paying little heed to the length of the day. You can either have a fast-developing yield or fit numerous harvests into a year with auto-flowering cannabis. The drawback to auto-flowering cannabis is they will in general be much less powerful.

#### **9.4 Make Sure to Choose the Best Soil**

Soil is comprised of three fundamental segments in different proportions:

- Earth
- Sand
- Sediment

You can plant legitimately in the ground or purchase soil and put it in pots. Cannabis plants flourish in soil rich with the natural nutrients, and they need a great amount of fertilizer. On the off chance that you choose to plant straightforwardly in the ground, you'll have to comprehend your soil structure and alter it appropriately. Overwhelming dirt soils channel gradually and don't hold oxygen well, so they should be vigorously changed. At any rate, a month before you plant, burrow enormous openings where you'll be putting your cannabis plants and blend in large measures of fertilizer, compost, worm castings, or another decayed natural issue. This will give air circulation and nutrients, just as supplements for the plants.

Sandy soil is anything but difficult to work, depletes well, and warms rapidly, however it doesn't hold supplements well, particularly in blustery situations. Once more, you will need to burrow enormous gaps for your plants and include manure, peat greenery, or coco coir, which will help tie the soil together. In hot atmospheres, sandy soil ought to be mulched to help with water maintenance and to shield roots from getting excessively hot.

Silty soil is the perfect developing medium. It's anything but difficult to work, warms rapidly, holds dampness, has great waste, and contains a ton of supplements. The best silty soil is dull brittle topsoil. It's rich and most likely won't need any change. On the off chance that you truly need to guarantee great outcomes and limit cerebral pains, you can get your soil tested, which is simple and generally economical. A soil testing administration will reveal to you the cosmetics and pH of your soil, tell you of any contaminants, and prescribe materials and manures to revise your soil.

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## **9.5 Make Effective Use of Fertilizer**

Cannabis plants require a lot of supplements over their life cycle, chiefly nitrogen, phosphorus, and potassium. How you decide to take care of them will rely upon the structure of the soil and your strategies. Business manures that are focused on home plant specialists can be utilized if you have a decent comprehension of how they work and what your plants need. Be that as it may, a first-time producer should maintain a strategic distance from these, especially long-discharge granular manures.

### **9.5.1. Best Nutrients for an Outdoor Grow**

You can buy supplement arrangements planned explicitly for cannabis from your nearby grow shop, however, they are typically costly and can harm soil microorganisms—they are commonly made out of manufactured mineral salts and proposed for indoor development. Natural treatment exploits microbial life in the soil and limits unsafe spillover. There are various normal and natural composts accessible at neighborhood home and nursery stores, similar to blood feast, bone dinner, fish supper, bat guano, and kelp supper. Start with composts that are modest and promptly accessible. A portion of these materials discharge supplements rapidly and are effortlessly utilized by the plant, while others take weeks or months to deliver useable supplements.

Whenever done accurately, you can blend in a couple of these items with your soil changes to give enough supplements to the whole existence of your plants. Once more, getting your soil tried can be exceptionally helpful and will disclose to you how to change your soil and what types and measures of manure you should utilize. On the off chance that you are uncertain about the amount to utilize, be moderate. You can generally provide nutrients to your plants if they begin to show a lack of any nutrients.

## **9.6 What If You Don't Have the Luxury of Having Soil?**

You may need to place the entirety of your plants in holders if you don't have incredible soil. Likewise, in case you can't play out the overwhelming work expected to burrow openings and correct soil, holders might be the main route for you to growing your cannabis outdoors. On the off chance that you don't have an appropriate fix of the earth to make a nursery, compartments can be set on decks, yards, housetops, and numerous different spots. If necessary, you can move them around during the day to exploit the sun or to shield them from over-the-top warmth or wind. You can likewise utilize basic cannabis supplements intended for indoor development since you will utilize premixed soil. This will remove a great part of the mystery of treating your plants. Nonetheless, plants growing in pots, basins, or barrels will probably be smaller than those planted in the ground because their root development is confined to the size of the holder.

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From a wide perspective, the size of the pot will decide the size of the plant, even though it's conceivable to develop enormous plants in small holders if legitimate strategies are utilized. When all is said and done, 5-gallon pots are a decent size for little to medium outdoor plants, and 10-gallon pots or bigger are suggested for huge plants. Notwithstanding size, you'll need to shield the underlying foundations of your plants from overheating in a warm climate, as pots can rapidly get hot in direct daylight. This will seriously restrain the

development of your plants, so make certain to conceal your holders when the sun is high in the sky.

While outdoor cannabis gardens have the advantage of using precipitation and groundwater, you will in all likelihood need to water your plants now and again, particularly in the blistering summer months. Some monster cannabis plants can utilize something like 10 gallons of water each day in a warm climate. Cultivators who live in hot, bone-dry spots will regularly burrow down and place dirt soil or shakes beneath their planting openings to slow waste or plant in shallow touches of melancholy that will channel overflow toward different plants. Adding water-retaining polymer precious stones to the soil is another acceptable method to improve water maintenance. Water your plants profoundly in the first part of the day so they have a satisfactory amount throughout the entire day. On the off chance that you live in an especially stormy atmosphere, you may need to find a way to improve seepage around your nursery, as cannabis roots are vulnerable to contagious ailments when they become waterlogged. These methods include:

- Planting in raised beds or hills
- Burrowing trench that immediately moves water away from the nursery
- Including rock, dirt stones, or perlite to the soil

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Adding water-retaining polymer precious stones to the soil is another acceptable method to improve water maintenance. Water your plants profoundly in the first part of the day so they have a satisfactory amount throughout the entire day

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In case you're utilizing tap or well water, it's a smart thought to test it first. This water can contain significant levels of broken up minerals which can develop in the soil and influence the pH level, or it can have elevated levels of chlorine which can kill valuable microorganisms in the soil. Numerous individuals filter their water.

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Plants developed in hot or breezy atmospheres should be watered all the more now and again, as high temperatures and wind cause plants to pass at a faster

rate.

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Remember that over-watering is a typical slip-up made by the new kid on the block cultivators—the general guideline is to water profoundly, at that point wait until the top inch or two of soil is dry before watering once more. An economical soil dampness meter is a decent apparatus for an amateur.

## **9.7 Cannabis Needs You Protecting It**

Developing cannabis outdoors is an entirely unexpected involvement with comparison to developing the spice inside the solace of an indoor setting. Developing inside includes reproducing a common habitat and gives the producer command over basically every factor from temperature to humidity to lighting. In growing outdoors, while the cannabis plant faces a lot of environmental issues, bugs represent a far greater danger. Regardless of a portion of these expected challenges, developing outdoors is an incredibly compensating process. Keeping an eye on your plants while the early morning fog skates over the dew-substantial grass is an otherworldly second and assessing leaves and blossoms while the brilliant shine of nightfall strokes the foliage is something that simply is beyond the realm of imagination inside. Moreover, if developing in beds, plants have the chance to spread their underlying foundations, develop a lot bigger in size, and produce mammoth yields in contrast with their indoor partners.

# 10

## OUTDOOR CULTIVATION TECHNIQUES

Normally, we as a whole, have our preferred strains, which we can hardly wait to plant after the cool, extreme, and long winter months. Every circumstance is remarkable, with the conditions of somebody living in Pakistan being unique when concerning those of somebody living in Mexico. All things being equal, there are sufficient assortments to be delighted on each edge of the globe. When you've picked your preferred cannabis seeds, the initial step is clearly to develop them. It's a given this must be done effectively otherwise, the seeds will be useless. Be patient and remember that a few seeds may require more an ideal opportunity to grow. For best outcomes, follow this germination strategy.

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All things being equal, there are sufficient assortments to be delighted on each edge of the globe.

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The beneficial thing about developing outdoors – and which causes us to value spring – is that, in addition to other things, you can get impressive harvests with the least venture. What's more, in circumstances such as these, who doesn't need that?

We can begin when we are sure about everything, from a selection of strain to the selection of soil and techniques as well.

Before you start your outdoor activity, there are a few components you have to consider to guarantee achievement. The following is a rundown of the fundamental techniques of growing the best quality cannabis outdoors, intended to give you the most ideal beginning.



Outdoor Cultivation

### **10.1 Are You Blessed to Have a Suitable Location?**

Before trying to develop cannabis outdoors, it's essential to consider if your area is appropriate. For one, on the off chance that you live in an urban or rural setting in an area that doesn't endure cannabis, you may be much better off developing inside for caution.

### **10.2 The Temperature Never Loses Its Importance**

The area is likewise an indispensable factor to consider because of cannabis' natural requests. Cannabis is an incredibly flexible and versatile plant discovered flourishing in nature all around the globe, from the tropical warmth of the equator right to the harsh atmospheres of Central Asia. Odds are, your area is reasonable for cannabis development—however, the spice basically won't proceed to in limits. Supported temperatures of 86° F or higher will cause plant growth to back off or stop totally, while temperatures underneath 55° F will add to a decrease in plant wellbeing and can even be deadly. Ensure your location remains easily inside this range before planting a yield. It's critical to acknowledge various strains develop better in various atmospheres, something we'll cover later on.

### **10.3 Sunlight Exposure is Directly Dependent on Your Area Selection**

Another consideration that befalls the classification of the area is scope, a topographical arrangement that indicates the north-south situation of a point on Earth. The scope is significant because it directs everyday light introduction over the developing season. The long periods of light a plant gets during the day is crucial for two reasons. Reason one is that plants expect the light to play out the pivotal procedure of photosynthesis, in which they convert daylight to fuel like glucose. Reason two is that photoperiod strains require an occasional move in the light cycle to tell them that harvest time is drawing closer and that it's an ideal opportunity to blossom. Understanding what scope your area sits on will assist you with knowing exactly how much light your plants will get every day of the season, and when they are probably going to start flowering.

### **10.4 A Spot With Maximum Sunlight and Gentle Breeze is the Spot to Go With**

Attempt and discover a spot in your nursery that gets however much daylight as could reasonably be expected. The more your plants can photosynthesize, the more fuel they will make to develop and give predominant yields. On the off chance that you live in a region where the sun can be especially merciless during the mid-summer, watch out for plant hydration. Setting your plants in a location to recognize that it is presented to a breeze will likewise assist them with turning out to be more grounded and more fit for conveying the heaviness of their buds later down the line. Plants adjust to a steady light breeze by getting tougher, particularly at a more youthful age. On the off chance that your area is inclined to intense breezes, at that point think about impermanent windbreaks, or position plants securely close to dividers and different types of the safe house.

### **10.5 You Should Know When to Grow**

Indoor cultivators have the advantage of setting up the environment of their choice, as they can modify it as required. One of the restrictions of outdoor development is that nature is in charge, and when she chooses it's too cold for plants to endure, at that point it's excessively cold.

### **10.6 Outdoor Growing is Very Much Dependent Upon Temperature**

## **Changes**

There is a window in the year, the developing season, wherein growers must sprout seeds, back them through the vegetative and flowering stages, and reap them. Growers lucky enough to live in the tropics can develop cannabis throughout the year, yet those living a lot of further north should comply with these characteristic rhythms.

### **10.7 Keep in Mind the Temperature Changes and Planting Calendar**

It is conceivable to begin with plants inside, where they will be protected from expected ice, and afterward, relocate them outdoors sometime later. It should also be conceivable to have your plants in the ground around May in many territories of Europe and the United States. Look at the suggested planting times for verdant greens in your district for a harsh gauge. Harvest time generally happens around September or October, however, this extraordinarily relies upon the blooming time and attributes of a specific strain.

### **10.8 Factors Influencing Your Selection of Cannabis Strain**

Cannabis is a yield that is cherished everywhere throughout the world. Its introduction to a variety of various natural variables, and a wide range of cultivators with fluctuating wants, has brought about the specific rearing of a monstrous measure of cultivars. A huge number of strains exist, each with various developing qualities, tastes, and effects. Cultivators who live in mellow and pardoning atmospheres are sufficiently blessed to have the option to develop practically any strain they need, while those living in territories with shorter developing seasons and colder climates are constrained to strong, quick blooming strains. The strain you select ought to be lined up with the results that you're after. If your principle objective is to get a titanic yield, at that point it merits choosing a transcending Sativa assortment that can without much of a stretch surpass tallness of 3m and put out yield in the area of kilograms.

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The strain you select ought to be lined up with the results that you're after

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If you will probably raise plants that offer a mitigating, stony, and loosening

up effect, at that point an unadulterated Indica or Indica-prevailing hybrid will be reasonable. A few strains have additionally been reared to explicitly flourish outdoors. On the off chance that you live in a harsher atmosphere with a less occasional light presentation or need to set up and finish a grow cycle as fast as workable for reasons unknown, at that point an auto-flowering strain will be suitable. Auto-flowering assortments don't require an occasional difference in light to start blooming and can deal with colder temperatures. This is because they contain hereditary qualities got from the cannabis subspecies Ruderalis, which adjusted to make do in the tundra of Central Asia.

### **10.9 All-important Selection of Seed and Clone**

There are two different ways to start cannabis growth. One is to acquire the seeds you wish to develop and sprout them in a developing medium. Developing from a seed guarantees a hereditarily one-of-a-kind example that will include characteristics from both the male and female cultivars used to take the strain. The strain might be a treasure, which means both the male and female guardians were of a similar strain, or a half breed, which means two unique strains were reared together to make a novel strain.

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One possible ruin of utilizing seeds is that you could wind up with a male that won't produce suitable buds and will fertilize your females whenever given the opportunity. A route around this is to buy feminized seeds, which have a lot higher possibility of delivering female plants.

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The other option is to go with selecting clones for growing. A clone is a cutting from a cannabis plant that, when established, produces a hereditarily indistinguishable duplicate of the mother plant. This can be useful as it permits producers to recreate alluring attributes. In any case, cloning will likewise mitigate negative qualities, for example, illness.

### **10.10 Your Technical Choice of Growing in the Soil or Artificial Containers**

Outdoor plants are developed in soil. They can be developed in compartments or brought legitimately up in the ground in raised beds or huge

fields. There are various favorable circumstances and burdens to every one of these methodologies, and one technique isn't better than the other. Developing in pots is a decent methodology on the off chance that you are constrained to a little nursery or a nursery where the vast majority of the soil is canvassed in concrete or stonework. Pots likewise permit growers to constrain the size of their plants exactly as they would prefer, which is especially useful in case you're hoping to keep things watchful. The greater the pot, the greater the plant, and the other way around. Developing in pots can likewise be exceptionally helpful if you have to move your plants because of an outrageous heat wave, overabundance precipitation, and cold temperatures that may show up toward the finish of the developing season. It's likewise simpler to guarantee pruned plants approach great soil as the encompassing area would have soil that isn't ideal for plant development. The drawback of developing cannabis in pots is that they are inclined to spilling if a solid breeze moves through. They likewise require more consideration as they just give restricted water and supplements. With regards to developing cannabis legitimately in the ground, one enormous bit of leeway is, obviously, the extra space. The roots are allowed to delve further into the soil and can along these lines acquire bigger amounts of supplements and water. This more mind-boggling framework additionally encourages plants and makes them stronger to the wind and awful climate. This expansion in space permits plants to develop a whole lot bigger. There will likewise be a more extravagant decent variety of microbial life, with mycorrhizal organisms and useful microscopic organisms keeping your plant sound and beneficial. The primary drawback of developing straight in the ground is a failure to be able to move plants during times of outrageous climate.

### **10.11 What About Getting the Perfect Soil?**

Soil is an essential developing medium utilized outdoors. Soil is a separate natural issue. What was once plant matter passed on and was gradually separated into smaller and smaller atoms by growths, worms, and microorganisms. Soil can change greatly in quality relying upon what was developed on the site previously and what sort of contamination or utilization the soil has been presented to.

There are 5 unique kinds of soil. It's essential to research the nature of the soil in your nursery to ensure planting legitimately in the ground is a feasible

alternative. All soil is comprised of three fixings: sand, residue, and dirt. It's the fluctuating proportions of every one of these parts that decides soil type. The following are the five soil types:

- Silty—smooth, holds water well, generally fruitful, little particles, helpless seepage.
- Earth—clingly, helpless air circulation, conservative, little particles, holds water well.
- Sand—abrasive, fast seepage, can't hold supplements.
- Saline soil—found in dry locales, loaded with salts, includes a white surface.
- Peaty—dull earthy colored/dark, stacked with the natural issue, acidic.

If you are deciding to develop in pots or beds, at that point you can uncover a portion of the soil in your nursery or buy a preparing blend that comes in with sufficient supplements for the initial long stretches of development.

Your soil will be a blend of a large portion of the sorts referenced previously. Your local soil may be an issue on the off chance that it has been abused previously and depleted of supplements, or on the off chance that it has either very moderate or quick seepage. If the soil in your nursery looks great, at that point feel free to utilize it!

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If you are developing auto flowering seeds, at that point, you have to consider that they incline toward an alternate kind of soil than the photoperiodic strains. Auto flowers like circulated air and free soil that isn't excessively high in supplements. You can buy premixed soil for them or make a preparing blend of half soil and half perlite/coco coir.

## **10.12 The Technical Way of Maintaining pH Balance**

Remember pH, or "intensity of hydrogen", from science class?

This logarithmic scale is utilized to decide the sharpness, alkalinity, or neutrality of a specific arrangement. All soil has pH esteem that can be estimated utilizing paper test strips or pH tests. Producers should expect to keep their soil's pH inside a particular range to keep plants solid.

The pH scale is a range that ranges from 1 to 14.

1–6 demonstrate acidic readings, 7 is neutral, and 8–14 show basic readings. Cannabis flourishes in soil that is marginally on the acidic side and does well at 6.0–7.0. On the off chance that you discover your soil pH is excessively high, you can include natural waste, sulfur, or peat to determine the issue. If the pH is excessively low, take a stab at including lime and wood debris.

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1–6 demonstrate acidic readings, 7 is unbiased, and 8–14 show basic readings. Cannabis flourishes in soil that is marginally on the acidic side and does well at 6.0–7.0.

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### **10.13 An Effective Technique of Watering Cannabis**

Water is a fundamental piece of continuing vegetation, however, a lot of it very well may be unfavorable, and can even end it. Overwatering is a typical error made by amateur producers that results in plant pathologies, for example, root decay. In the case of developing outdoors, the downpour makes it harder to precisely check how much water your plants are getting. If you live in a region with a successive and substantial downpour, at that point you may need to move pruned plants under coverings incidentally and guarantee that your nursery beds have fitting seepage. Consider developing in raised beds in case you experience these sorts of conditions. When watering pruned plants, the overall dependable guideline is to hold up until the top inch of soil has gotten dry before watering once more. Monster cannabis plants developed in the ground will be anxious for water on a practiced routine. Various soils hold water at various limits. Your soil ought to consistently have a soggy surface, so get a bunch and check if so. On the off chance that it does not, at that point it's an ideal opportunity to water your cannabis field.

### **10.14 Cannabis Plant Needs a Balanced Amount of Nutrients**

Cannabis plants have explicit requests for supplements during various phases

of improvement. Supplements are required so plants can do indispensable physiological procedures and, in the end, produce an ideal yield. Too little supplements will create inadequacies that can slow development and harm plants, while an excess of, can consume roots and be similarly as impeding.

There are three essential supplements, known as macronutrients, that cannabis requires. Together, these supplements are alluded to as N-P-K and can be found inside most business preparing blends. They should be included explicit proportions during various times of the developing cycle.

During the vegetative stage, the period before blooming when plants just produce leaves, plants require significant levels of nitrogen, medium degrees of phosphorus, and elevated levels of potassium. During blooming, these change with plants requiring low degrees of nitrogen, medium to elevated levels of phosphorus, and significant levels of potassium. Plants likewise require micronutrients, for example, calcium, magnesium, sulfur, iron, manganese, boron, molybdenum, and zinc.

Growers can combine their supplement equations, however, the simple and essential methodology is to buy premade recipes that are anything but difficult to utilize and have been made for explicit phases of the development cycle.

A considerable lot of these supplements are appropriate for pots and different compartments. In case you're developing legitimately in the ground or raised beds, think about creating your manure at home. Throw kitchen scraps and nursery flotsam and jetsam onto a heap in a proportion of 2 sections of earthy colored issue (carbon-rich) to 1 section of green issue (nitrogen-rich). In the long run, microorganisms will separate this natural issue into particles that are accessible to plants as supplements. You'll have to flip the heap once in a while to quicken the procedure. Manure loads will for the most part produce material that is prepared to use after around a half year. Fertilizer can likewise be applied as a tea. Manure tea is known to support plant development and is applied as a foliar shower that feeds leaves and can fight off bugs. Look at this formula to make your own flexibly of manure tea.

### **10.15 Protect Your Plants From Pests and Mold**

Probably the biggest test of developing outdoors is the entirety of the little critters that consider you to be a tidbit. There are numerous destructive

vermin species, from aphids and creepy crawly bugs to whiteflies and growth gnats. There are additionally various approaches to keep them away from harming your plants and conceivably decreasing the yield. Utilizing concoction pesticides is one method of doing it, in any case, the harm these substances due to natural and human wellbeing does not merit the compromise. Furthermore, you're going to wind up smoking it. Organic vermin control strategies are a better choice. These include strategies, for example, utilizing other plants that kill those bugs, where advantageous plants are grown in closeness to cannabis, assisting with baiting in useful bugs, and discourage bothers.

Fungal molds can be dangerous for the cannabis plants as well. Producers can work to forestall these molds by countering stale air, cool temperatures, and damp conditions. By planting your plants inside the surge of a light breeze, you can assist with maintaining a strategic distance from these molds from grabbing hold. A few molds can be treated by utilizing foliar splashes, though the best way to keep away from the fiasco with others is counteraction.

### **10.16 Want to Avoid Being Under Suspicion? Try Guerilla Planting**

Too stressed to even think over growing cannabis in your nursery on account of nearby disallowance? Need to keep your issues hidden from others? If so, you should evaluate guerrilla development. This includes planting seeds or taking seedlings out into a distant area in nature. Numerous guerrilla cultivators decide to bring their plants up in forests and fields.

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The entirety of the data above likewise applies to this sort of developing activity, you simply should be more chivalrous of the area you pick. A decent develop spot ought to have the critical light presence and ought to be near a decent regular wellspring of water, for example, a stream or lake. Your area likewise should be far enough away to limit the odds of someone unearthing it, however close enough for you to have the option to pay visits to screen and care for your cannabis plants.

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Strain choice is additionally a significant factor. Strong hereditary qualities are required because of the expanded rivalry and harsher conditions. Strains, for example, Northern Light, Quick One, and Royal Jack Automatic are your

closest companions if you live in an area with less-positive growing conditions. Without the capacity to control the earth as effectively as you can inside, outdoor cannabis cultivators need to shield their plants from storms and other climate occasions that could harm or even murder plants.

#### 10.16.1. Temperature Changes

Temperatures underneath 40° F can rapidly harm most assortments of cannabis, so on the off chance that you live in an atmosphere where pre-summer or late-summer ices are a typical event, take a stab at utilizing a nursery or other defensive fenced-in area.

#### 10.16.2. Wind Conditions

High breezes can break branches and excessively stress your plants. In case your nursery is situated in an especially blustery spot or case or you're anticipating an especially overwhelming blow, set up a windbreak. This can be as straightforward as connecting plastic sheeting to plant stakes around your plants.



Leaves affected by wind conditions

### 10.16.3. Rain

While supportive of watering your nursery, a downpour is by and large observed as a disturbance by cannabis cultivators. It can seriously harm your yield and cause shape and mold. You particularly don't need downpour on your cannabis plants when they are flowering. You can develop a DIY nursery or even simply utilize plastic sheeting and stakes to assemble an impermanent asylum over your plants when you realize downpour is in transit.

### 10.16.4. Pests

Shielding your cannabis garden from pests can be testing. Contingent upon where you live, you may need to keep enormous creatures like deer under control by building a fence around your harvest. In any case, the more troublesome test is managing the huge range of creeping and flying creepy crawlies that can assault your plants. The best insurance is to just keep your plants solid. Solid, overwhelming cannabis plants have characteristic protection from pests that makes minor invasions simple to manage.



Ladybird on hemp

It's additionally a smart thought to keep your cannabis plants separate from different blossoms, vegetables, and ornamentals, as pests can, without much of a stretch, spread between them. Look at your cannabis plants a couple of times each week with an eye out for pests. A pervasion is far simpler to manage whenever caught early. There are numerous natural pesticides intended for use explicitly on cannabis, and advantageous creepy crawlies are additionally an incredible alternative. You should now have enough information to effectively begin your open-air cannabis garden. Developing and growing plants is a charming and compensating leisure activity, so remember, invest bunches of energy with your plants, and have a good time!

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The best insurance is to just keep your plants solid. Solid, overwhelming cannabis plants have characteristic protection from pests that makes minor invasions simple to manage. It's additionally a smart thought to keep your cannabis plants separate from different blossoms, vegetables, and ornamentals, as pests can without much of a stretch spread between them

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# 11

## GERMINATION AND HARVESTING TECHNIQUES

Cannabis germination is the way toward getting your seeds to sprout, and you realize sprouting has happened when a little white ring jumps out of the seed.

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The first structure that comes out of the seed is known as the taproot. It looks like a white ring- like structure. This is going to be the future precursor of all the parts of your plant's root.

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The taproot – and possibly a couple of little early branches of the taproot – will get longer and more, pushing the seed up, and after the shell gets through the outside of your developing medium, the principal leaves (these first-round leaves are known as "cotyledons") will rise out of inside the cannabis seed.

The cotyledons were at that point made as a feature of the plant, an undeveloped organism in the seed itself, so the cannabis seedling doesn't need to develop them. Indeed, the developing first leaves are what break and separated the shell after it's aired out by the taproot, as imagined here.

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The following arrangement of leaves after the cotyledons are your plant's first "valid" leaves and will have barbed edges (serrations). At any rate, they are the principle leaves that your seedling cannabis plant has developed completely all alone, not at all like the cotyledons which were at that point shaped in the seed.

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There are some basic requirements of the seed to germinate which include the presence of air, darkness, and humidity. Along these lines, there are numerous strategies to germinate your seeds. The most widely recognized and least difficult technique includes the utilization of paper towels soaked in water.

**For this strategy you will require:**

1. Two clean plates
  2. Paper towels
  3. Seeds
- Take four pieces of paper towels and drench them with refined or filtered water. The sheets ought to be drenched however, shouldn't have abundant water running off.
  - Take two of the paper towels and spot them on a plate. At that point, place the cannabis seeds, in any event, an inch separated from one another and spread them with the two sheets of water-splashed paper towels.
  - To make a dim, secured space, take another plate and flip it over to cover the seeds
  - Ensure the area they're kept in is warm, somewhere close to 70-90° F.
  - After these means have been finished, it's an ideal opportunity to pause. You can check the paper towels to ensure they're despite everything, immersed, and if they appear to lose their dampness, you can apply more water to keep the seeds happy.

A few seeds germinate quickly while others can take a few days. You realize a seed has germinated once the seed parts and a solitary sprout shows up.

This is the taproot, which will end up being the primary stem of the plant, and seeing it is an indication of fruitful germination. It's essential to keep this region sterile, so don't make contact with the seed or taproot as the seed parts. When you see the taproot, it's an ideal opportunity to move your germinated seed into its developing medium. Small 2-inch pots are a decent spot to begin.

Fill the pots with free, breezy gardening soil and jab a gap in the center about a quarter inch down utilizing a pen or pencil. To move the seed, utilize a couple of tweezers to tenderly get it, at that point drop the seed in the gap with the taproot looking down. Delicately spread it with soil.

Next, you'll have to water the plant. At first, utilize a shower container to give dampness without over-soaking the dirt. You need to give the seed water; however, overwatering can suffocate and slaughter the sensitive sprout. Focus on the temperature and the relative humidity of the soil to keep the

seed cheerful, and inside a week or so you should see a seedling start to develop from the soil.

Growing seeds doesn't generally go as arranged. A few seeds will be duds. Others will be moderate and take more time to sprout. Be that as it may, some will pop rapidly and develop quickly.

This is the magnificence of seeds—regularly, you can tell which plants or hereditary qualities will flourish directly as it so happens. This will assist you with figuring out which plants you need to take cuttings from for clones and which to raise with other solid plants to make your very own seed bank.

Numerous methods can be used for the germination of the seeds. Your selection of the way depends upon your own choice.

### **11.1 Direct in the soil**

You can use a small pot or even a large pot can be used for the germination of the seed. In this way, you also avoid the transplantation of the seed to another medium after germinating. This is quite an easy and effective way to choose.

### **11.2 Moist Paper towel**

If you can maintain the moisture, humidity and temperature of a paper towel for a few days while also keeping it in the dark, you can use it for germination of the seeds. This can usually be achieved by covering the wet paper towel under a plastic bag or a plate.

### **11.3 Water**

If you keep the seeds in the nutrient-rich water source, they can sprout in about a week or so, and then you can plant them in the soil.



Hydroponic cannabis seedling germination

## 11.4 Germination Stations

Offering considerable power over the sprouting condition, germination stations give stickiness, temperature control and can quicken germination times. At the point when your plants have broken the surface and the cotyledons have shed the seed husk and opened to uncover the primary arrangement of the taproot.

# 12

## HARVESTING TECHNIQUES

The final step of your long, tiresome journey of growing cannabis is harvesting your plants. A great deal of first-time producers assume that the nugs will jump out independently on the branch. At that point, they will pull them off, crush them, and begin smoking. It is somehow more confusing!

The buds of a normal, mature female cannabis plant have a mix of fan/sugar/water leaves with them. You can trim the buds with using scissors. Initially this may seem tiresome but once you get used to it, you will enjoy it for sure. Water leaves need to be separated as they contain a lot less THC. Fan leaves are long and green while sugar leaves are short. There are some people who use the sugar leaves as well but most of the people don't use them.

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Most of us are interested in the buds that contain the most THC, which makes you high. Sugar leaves can be used to make cannabutter. After cutting, buds are hung for about a week to dry. Dry your buds in a dim cool spot with little dampness. In a perfect world, this procedure is moderate and should take at least fourteen days.

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Check things frequently for over-drying or shape. When dry, meager branches will effectively snap. Thick branches will be somewhat malleable. The chlorophyll has corrupted, and the green growth has been supplanted with species-subordinate hues. Grovel, tan, a light green, or even dark blue and purple can rise as the buds dry and create genuine hues.

After two weeks, you can store the dried buds in a jar for future use. Now

freely pack a glass container with your fortune. Open the top or "burp" the container once every day for the initial fourteen days. This allows the cannabis to develop a stickiness that can form your buds. When the blossoms are dry to the touch, just burp the container once per week. You don't need a long time of difficult work to be destroyed by an absence of consideration.



Cannabis drying

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You can cure for whatever length of time that you like. Remembering that the psychotropic mixes dry and convert when appropriately relieved and turn out to be more psychoactive. This takes up to a month and a half when cured under perfect conditions. The more drawn out the drying period, the smoother the outcome. Keep your containers in a dim cool spot. THC separates into different cannabinoids after some time when presented to light. On the off chance that you are uncertain about bud dryness, test your products as they

dry so you have a future reference. Dry cannabis doesn't generally feel totally dry due to the waxiness of the tars. You will build up the vibe and aptitude rapidly. Making the most of your own homegrown cannabis isn't troublesome. Some consideration and persistence can receive stinky rewards even from the smallest of spaces. The taste of your buds will increase over the time, so you need to have patience.

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# 13

## **TIPS AND TRICKS FOR INDOOR AND OUTDOOR CANNABIS GROWING**

As we have come here all the way, learning every single aspect of our cannabis growing as a beginner solving all the mysteries, I would like to share with you, some of the important tips and tricks which are scientifically proven over the years. Giving their due importance to this advice will make sure that you go through a perfect experience of growing cannabis.

- Cannabis growing is tricky, even a little bit of change can make a huge difference, so be attentive to all the little details to enjoy the amazing aroma of your weed.
- The selection of quality soil for your plant is very important in deciding the future of your cannabis quality.
- Sticking to, and respecting the vegetative and flowering phase of the cannabis growing plays a huge role in the outcomes of the buds quality as well as quantity. You need to keep in mind the sunlight cycles if growing outdoors and light/dark control if growing indoors.
- I would advise you to keep your record of growth. Keeping a record lets you understand the pros and cons of your different actions throughout the Cannabis growing.
- Proper research of your climate conditions and light durations as well as the safety factors help you in achieving what you want.
- Preparing the soil with natural fertilizing sources help you much better than the market-based fertilizing sources. Preparing the soil approximately four weeks before the growing and then taking care of it will do wonders for you.
- Keep in mind what you are growing! If you don't know the requirements of the particular strain that you are growing in your garden, you cannot achieve a good quality weed.
- After the selection of seed, you need to let the seeds germinate. You have to ensure the flawless process of germination of seeds.
- Different strains behave differently, so select the strains that best

suit your environment. There are different strains for indoor and outdoor growing and even for the different regions of the world.

- I would advise you to keep the process of germination indoors. After germination, keep the plants in indoor settings for a few days so that they can get through the most important initial phase of vegetative growth. Later you can shift them outdoor into the soil or pots.
- It is better suggested that make your plants accustomed to the outdoor environment before shifting them outdoor permanently. This can be done by keeping them outdoor for a few hours initially and gradually increasing the duration. In this way, your cannabis plants will get accustomed to the natural outdoor environment and you can plant them permanently in that environment.
- The best method to realize when to harvest outdoor plants is by reviewing them. You will presumably require an amplifying glass to do this effectively. There are two things you ought to be watching intently when your buds are approaching the finish of their blossoming period:
  - The shade of the pistils (little hair-like projections from the buds)
  - The shade of the trichomes (minuscule, precious stone like resinous circles that coat the buds)
  - The pistils will gradually start to change shading from white to a dim rosy, earthy colored shading. If you need to harvest when THC levels are at their most extreme, at any rate, 60% of the pistils ought to have obscured and nestled into the bud. If you need to harvest with most extreme CBN (all the more quieting, less psychoactive effects), at that point you should hold up until 70-90% of the pistils have obscured and twisted inwards.
  - You may likewise investigate the trichomes to evaluate whether it is harvest time or not. At the point when your plant is first beginning to build up these resinous trichomes, they will be clear upon assessment with an amplifying glass. They will gradually change from clear to a golden/brilliant

shading. This is when THC levels are at their most extreme. When around 30% of the trichomes have turned golden, it is a decent ideal opportunity to harvest. If the trichomes turn dim or wilted, the ideal harvest window has passed.

# 14

## COMMON MISTAKE TO AVOID DURING CANNABIS GROWING

There are a few reasons we state cannabis develops like a weed; it's fiery, strong, and needs scarcely any upkeep to flourish. Notwithstanding, there are a few errors that even experienced cannabis cultivators can make every once in a while.

It is anything but difficult to imagine that developing cannabis happens normally. In any case, just covering the seed in the ground and permitting Mother Nature to do something amazing won't get the job done for a decent yield. If you need to develop your cannabis seed inside or outside, you ought to comprehend the prescribed. Numerous individuals begin the development of cannabis with much eagerness. Be that as it may, when it's harvest time, they are normally baffled with a couple of buds they figured out how to get. The bombed harvest, ordinarily, is the aftereffect of basic and avoidable missteps. For example, the cannabis plant needs explicit supplements and pH, which numerous cultivators ignore.

### 14.1 Non-selection of Proper Soil with Adequate Nutrients

There are explicit composts and specific soil types that are best for developing cannabis. There is a once in a lifetime opportunity for numerous new producers that don't know about this. This implies they purchase whatever fertilizer they believe is ideal. Because of this, when getting compost, be certain you know the specific amount of every supplement your cannabis plant needs at the exact phase of their cycle. Your nursery soil may be perfect for your tomato, pepper, and corn however you can't be excessively certain it is appropriate for your cannabis plant. For your cannabis to flourish, you need equalization of supplements that your lawn soil probably won't have. Your dirt ought to outfit the plant with the correct supplement at each phase of its cycle. The sort of supplement your plant requires will rely upon the strain of cannabis you develop. Individuals growing an auto-blooming strain won't need bountiful soil supplements instead of photoperiodic strains. The correct pH level is similarly fundamental. With ideal pH levels, there won't be a supplement lack as the

plant will have the option to suck up supplements from the dirt. The correct pH level can keep you from starving or overloading your plant. As indicated by research from North Carolina State University, the pH for cannabis fluctuates as it relies upon the strain.

Be cautious about the surface of your dirt too. This grapples the plant so it must be sufficiently able to hold it and encourage development. Stay away from amazingly thick soil that won't permit water, oxygen, and supplements to infiltrate.

### **14.2 Not Knowing What They Are Growing**

Do some exploration of the strain you're developing in an attempt to make its favored indoor or outdoor condition. Except if your strain has explicit necessities, most strains lean toward daytime temperatures of around 75°F and between 55-65°F around evening time. Screen the dampness too, keeping it at around 60% through the plant's vegetative stage and diminishing it to 40% when the plant is blooming. Consistency and not as many emotional changes as conceivable in the earth are critical to growing a decent cannabis harvest

### **14.3 Overwatering or Underwatering**

While sufficient and standard water flexibility is vital for lavish, beneficial plants, a lot of water can suffocate the root framework and truly harm or execute your yield. Likewise, abundance of dampness in the dirt can permit root decay to set in.

### **14.4 Premature Harvest**

Harvesting too soon is a mix-up that will cost you the size and strength of your blossoms. Hold up until the blooming procedure is finished and the trichomes are swollen before harvesting your yield.

### **14.5 Unfavorable Environment**

You should have full command over the understanding of temperature and humidity changes in your surrounding environment. Your cannabis plant won't flourish with a very hot or cold nursery. With frosty temperatures, it won't develop well, and over the top temperatures will trigger warm stress. Should the warmth continue, the plant could end up dying. While cannabis

can endure outrageous conditions, you shouldn't face the challenge. Growing your plant at a favorable temperature is the best practice you should make. The humidity of the surroundings needs to be checked regularly. Molds flourish within the sight of dampness and could be very negative to your plant.

#### **14.6 Wasting Your Energy on the Wrong Strain**

Your companion offered you some cannabis seeds and without dithering, you planted them. Indeed, this could be an awful slip-up considering the qualities could be unfortunate. This is the incorrect method to begin developing. You may discover some seeds in a weed you purchased and the following thing that rings a bell is planting it. This is certifiably not a decent movie.

Along these lines, get your seed from a reputable in source. With a great seed, all the exertion and hardware you put resources into will bring about an enormous yield and the result will merit the exertion.

#### **14.7 Being Unable to Wait for the Harvesting Time!**

Even if you have done everything right, beginning from germination to the final flowering stage, even then a single misstep you should keep an eye out for is picking an inappropriate harvesting time. Concerning harvesting, you should wait for the proper time!

There is, be that as it may, a straightforward stunt to know when it is the ideal opportunity for harvesting. There are little mushroom-like trichomes on the bud. With a magnifying instrument, you can check the shading, which will tell you when the time has come to harvest. Submit a general direction to the accompanying:

- Clear trichomes show that you despite everything you have a long time before harvesting.
- White/overcast shading trichomes are a decent sign, which means that the creation of THC. In any case, you should hold up somewhat more.
- Overcast white trichomes with little segments that turn golden blue are the best an ideal opportunity to harvest.
- If most trichomes turn golden or red with few or no whites we've incorporated a waitlist of the most widely recognized missteps

we see new cultivators make. Peruse underneath to see whether you're making one of these basic botches!

**Thank You**