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# THE BEST GROW LIGHTS FOR THE BEST GROWERS

LED lighting for the agricultural industry and home growers.  
All the best cannabis growing lights.

## Cultivating Your Love: How to Grow Cannabis

**Welcome to our beginner's guide to growing marijuana.** As we begin our journey from humble roots, some of you may be embarking on your own adventure, as a new cannabis home grower. You may have poked around a bit online and discovered a huge, intimidating amount of information—about the different cannabis strains, the ideal growing environment and the necessary equipment, light spectrum and PAR, the best grow lights and environmental issues, water management and necessary nutrients, the proper plant care during the different growing phases and so much more. It can be overwhelming. But you're not alone!

At Ganja Lighting Supply, we're not just a place that sells amazing LED grow lights, grow tents and indoor growing supplies. We're also your trusted friend, as you embark on this exciting journey of cannabis cultivation. Consider yourself part of a wider community of large and small growers and enthusiasts who are realizing the joy in growing your own. For those of you just starting out, we provide this beginner's guide to growing cannabis. It's not meant to be complete, but rather a simple way to get started with your own cannabis grow operation.

Because it's best when you can grow year round, and not everyone will be lucky enough to have the perfect climate in which to grow cannabis plants, our guide is for indoor cultivation. We'll address the topics already mentioned and will also provide you with the best references to continue your discovery.

Welcome to the Ganja Guide, and Happy Growing!

## Why Grow Cannabis?

- Ultimate control over your weed – you'll know exactly where it comes from, what strain it is and what properties it will have, and how it has been grown and prepared
- No more dubious characters or pricey dispensaries
- Never worry about running out

## How to Grow Cannabis – The Process

Cannabis is an easy plant to grow—it is a weed, after all! However, just because the plant can be grown under just about any conditions doesn't mean you want to leave it to chance. Much is known about ideal growing conditions for marijuana, in terms of temperature, humidity and even the best light

wavelength for each phase of growth. The mission is to get the healthiest plants with the highest yield and most potent THC level.

Here's how you do it (more or less). There's a lot to know, but we trust this will get you started! There's a lot of helpful resources included for more information.

### What Do I Need to Grow Cannabis?

To start your cannabis crop, you will need:

- Containers (with drainage holes)
- Soil (or growing medium)
- Cannabis seeds
- Grow tent or homemade structure that can be closed off to air and light
- Grow light
- Thermometer and humidity meter
- pH meter or test kit (to test water, soil or nutrient solution)
- Exhaust fan
- 24-hour timer

The beauty of growing cannabis is that you can do it in a garage, basement, bedroom or large closet, so that the entire process can be kept discreet.

### Choose Your Growing Method

Decide on the best growing method, based on your requirements and resources.

**Traditional Soil** (a.k.a. dirt) is the old-school way, and it might be the best way for you. One main advantage of standard soil is it's cheap.

**Coco Coir** (Coco Fiber) is kind of like growing in soil, but with the benefits of hydroponics (faster, bigger harvests). It is also better than soil at absorbing moisture and nutrients, as well as retaining oxygen. The coco fiber medium reduces shock stress if the plant is overfed with nutrients. This material is made from fibrous coconut husks. See the full instructions on [how to grow cannabis with Coco Coir](#).

[Deep Water Culture \(DWC\) Hydroponics](#) is a popular way to cultivate cannabis, where the plant's roots grow in a tub of water. This method promotes quicker growth and the roots don't use up energy in search of nutrients. In addition to easy access to nutrients, plants also have unlimited oxygen because of added oxygen from air stones in the reservoir of a hydroponic system. Better oxygenation of the plant's roots provides energy for more vigorous growth. It also requires less maintenance than soil growing.

### Select Your Strain and Buy Your Seeds

Isn't all marijuana the same? Oh no. There are literally *thousands* of cannabis strains, with names like Afghan Skunk, Blackberry Rhino and Catfish. Leafly.com, the world's largest cannabis information hub, [categorizes all the strains](#) according to desired mood or activity, medical symptoms, flavors and other classifications.

Some cannabis strains are easier to grow, others produce different types of highs or are more effective for certain purposes. A specific strain may contain higher levels of THC or CBD. There are many online vendors that sell cannabis seeds. For an amazing selection of different cannabis varieties and high-

quality seeds, we recommend the folks at [I Love Growing Marijuana](#), who are expert breeders located in Amsterdam (of course!). They also sell plant fertilizers and nutrients.

**Types of Seeds** – In addition to the strain, you can choose from Feminized Seeds, Autoflowering Seeds, Fast Flowering Seeds and Regular Seeds.

Feminized Seeds – These seeds are genetically modified so that they'll only produce female plants. That's a big advantage, as the seeds are guaranteed to be of the female persuasion 99.99% of the time. Why is this important? Cannabis plants come in male and female varieties (and hermaphroditic, but we'll discuss that later). If you're growing cannabis for the purpose of delicious resin-covered buds, and we'll assume you are, then you'll want ladies only.

Autoflowering Seeds – These seed varieties automatically switch from their vegetative growth phase to the flowering phase with age instead of the changing ratio of light to dark hours. Many of these are ready to harvest in under 10 weeks. This makes them a great choice for beginner growers.

Photoperiod Seeds – These are seeds that respond to the photoperiod, which is a measure of the time cycle when the plants are exposed to light. For example, in an 18/6 cycle, plants are exposed to light for 18 hours and then the grow room is kept dark for 6 hours. This light cycle mimics the sun rising and setting.

### Design a Cannabis Grow Room

You don't need a fancy greenhouse to grow cannabis. Your indoor mini-garden can be a closet, tent, bedroom, garage or even a basement corner. Experts recommend that you start small, as it will cost less and you can "practice" on just a few plants, until you perfect your technique. A grow tent is a great idea, as it allows you to control the environment. How important is this? If you want to grow premium cannabis with huge yields, the more control you have over temperature, humidity, light, air quality and general cleanliness (to avoid dust and other contaminants), the better off you'll be. Are you interested in a low-cost grow tent? Ganja Lighting Supply has several economically priced options to choose from.

### Propagating Cannabis

If you're working from seeds, there are different germination methods. The easiest is to put the seeds in a glass of warm water (68 degrees, with a pH of around 6) for a few days, until you see a small tail. You can then plant it. You can also use a starter cube or even a damp paper towel between two plates (to retain moisture). Another way to propagate cannabis is to [clone an existing plant](#).

### Environmental Issues (temperature, humidity, air circulation)

Temperature, humidity and air circulation are all important issues when trying to grow the best weed. Use a thermometer and humidity meter to monitor the environmental conditions. The ideal temperature is 70-85 degrees Fahrenheit for lights on and 58-70 degrees for lights off. This can vary somewhat with different strains. Use a fan to circulate the air. Fresh air is required for plants to thrive, and they depend on carbon dioxide during photosynthesis. A quality grow tent will include space for an exhaust fan near the top and will have a filtered air inlet near the floor. Using a thermostat switch to control the exhaust fan costs a little extra, but it will make your life easier.

Learn more about [ventilation systems for growing cannabis](#).

### Choose Your Grow Lights

Traditionally, cannabis growers would use HID (high intensity discharge) lights, either MH (metal halide) or HPS (high pressure sodium). Sometimes they'd use fluorescent grow lights. However, LED grow lights are far superior, since they use far less energy, create less heat, and the latest designs generate true full-spectrum light, which improves plant quality and yields. See our state-of-the-art LED grow lights here at Ganja Lighting Supply! Our world-class manufacturers such as Black Dog LED, California LightWorks and Dorm Grow have spent years perfecting grow lights designed specifically for the needs of cannabis plants. This includes a high PAR level, which is Photosynthetic Active Radiation. PAR is a measurement of light emission within the 400-700 nm wavelength range that plants can absorb during their photosynthesis process.

### Add Water (about water management)

Know your water! Depending upon your location, some water may contain minerals that are harmful to your babies. If you suspect your water isn't the best, and especially if it contains a lot of chlorine, consider filtering it first. A basic rule is once a week for young plants and once a day for mature ones, but you should wait until the soil is dry. Be careful not to overwater. Some growers even wait for the lower leaves to slightly droop before watering. Overwatering is a common mistake of the newbie grower.

### Add (and maintain) Nutrients

To grow excellent quality cannabis, you need a higher level of nutrients (fertilizer). This is true regardless of the grow media. These are the macronutrients your plants require: Nitrogen (N), Phosphorus (P), Potassium (K), and in lesser amounts Calcium (Ca), Magnesium (Mg), Copper (Cu) and Iron (Fe). For the new grower, it's best to get these pre-packaged as a powder or liquid. If you're using an organic soil, check first, as many already include them. If you're not using organic soil with fertilizers, feed your plants once a week. Be very careful not to overfeed them – better too little than too much. Start with half the recommended amount until growth becomes robust and then just ¾ strength.

### Care for Plants in the Vegetative Phase

If you asked 100 different growers about their cannabis growing techniques, you'd probably get 100 different answers. Since you're just starting out, simpler is probably better. But we'll address a few issues and mention some tried-and-true techniques for improving your harvest.

Light/Dark Cycle – **Very Important!** The timing of your lights (or maybe it's just one light) is critical, as this will approximate the rising and setting of the sun. Experts agree that for the vegetative growth of cannabis plants, you want to have lights on for 16-20 hours a day per 24-hour period. Turn lights on and off at consistent times to avoid stressing your plants. Using a timer is the easiest way to do this.

pH Level – **Also Important!** Cannabis plants enjoy a pH level of 6-7 for soil growth and 5.5-6.5 in a hydroponic system. This is the optimal range for nutrient absorption.

Bending and Securing Plants – This is done to maximize the light the plant gets and to maximize the yield. You may see the **ScrOG** (Screen of Green) mentioned on growing sites. This is a type of netting that is used to spread out each plant's canopy horizontally until they're a few weeks into their flowering stage, for more budding areas.

Super Cropping – Here is another way to bend and secure the plants for greater yields and possibly for more potent buds as well. It's done 1-2 weeks before the flowering phase begins and involves gently bending the stem without damaging the stem's outer skin. Within this technique, there's high stress and low stress training. For more information about this, [see PotGuide.com](#).

Topping, FIMing and Lollipopping/Pruning – Another technique to increase yield is to [remove parts of the plants](#). Beginner growers should be very careful to follow instructions exactly.

Cloning – If you want future results more quickly than starting from seed, [cannabis clones](#) are a great way to achieve this.

SOG (Sea of Green) – This strategy involves growing many small plants and putting them in the flowering phase when they're still small, for a faster harvest. The technique is often used with auto-flowering strains, since they automatically switch from veg. to flower when they reach a certain age. It also makes it easy to grow several different strains at the same time.

### Care for Plants in the Flowering Phase

At 3-4 weeks, you'll want to encourage flowering by changing your light cycle to 12 hours on and 12 hours off. At the same time, lower the temperature to 65-80 degrees Fahrenheit for more productive flowering. They have now moved from their vegetative (growth) stage to their flowering stage, and your cannabis plants should begin flowering in about their 4<sup>th</sup> week. Ideally, move from 16-20 hours a day of light gradually to 12/12, to make it a more natural process. After about 4 weeks of your 12/12 light cycle, you should see the first buds begin to form.

### Separate Out the Ladies from the Gents (if you have a mixed garden)

A quick lesson in cannabis sexuality is in order. Ganja comes in male and female varieties, and only the females create those delightful buds. What's more, once a male plant pollinates a female plant, she will start producing seeds instead of buds. That doesn't mean it's completely "game over," but you'll get a smaller yield and you'll have seeded buds with less resin. As soon as the plants' reproductive parts start to form, you must identify any males and remove them from your cannabis harem.

Identifying the sex of cannabis plants is quite easy. If you see whitish hairs around forming buds, it's a female. If you see hanging balls (round or oval, like little bananas), it's a male. Remove the males immediately. If you planted feminized seeds, it is rare (though not unheard of) to find a male plant.

On occasion, a cannabis plant may be (or become) a hermaphrodite — that is, it will have the reproductive gear of both sexes. These plants can self-pollinate, and they can pollinate nearby females, so they will need to be removed as well. Certain [environmental conditions](#) can cause a plant to become stressed and turn into a 'hermie', such as drought, big temperature changes, insects, disease, physical damage and overuse of pesticides.

### Harvest, Dry and Cure

You're almost there! For more detailed information about proper harvesting, drying and curing of cannabis plants, you can visit [PotGuide.com](#), [How to Marijuana](#) or [Production Grower](#). But here are the basic steps.

- Hang plants upside-down from top of grow tent, keeping them about a foot off the floor.
- Keep lights off, temperature at 70 degrees Fahrenheit and humidity to 50%.

- Use fan to circulate air but don't point it directly at buds.
- Drying is complete when bud stems snap when bent.
- Use glass jars with lids to cure buds; keep them in a cool, dark location at 70 degrees.
- Periodically let air into jars to avoid mold. Week 1 – one hour per day; week 2 – 30 minutes per day; week 3 – 15 minutes per day and add humidity packs (i.e. [Boveda](#)) after a few days; week 4 – should be ready to taste! Congratulations!

#### Resources for Cannabis Growers

##### Beginners Guide to Growing Marijuana

<https://potguide.com/guides/beginners-guide-to-growing-marijuana/>

##### Cannabis Growing 101: Everything You Need to Get Started

<https://www.leafly.com/news/growing/cannabis-growing-101-everything-you-need-to-get-started>

##### Beginners Guide to Growing Marijuana

<https://productiongrower.com/blogs/how-to-grow-weed/beginners-guide-to-growing-marijuana>

##### Growing Marijuana Indoors for Beginners

<https://www.how-to-marijuana.com/beginners-growing-marijuana-indoors.html>

##### A Beginner's Guide to Growing Marijuana

<https://www.ilovegrowingmarijuana.com/beginners-guide-growing-marijuana/>

##### How to Grow Weed: A Step-by-Step Guide for Beginners

<https://hightimes.com/grow/grow-weed-guide-beginners/>

#### Glossary: Cannabis Plant Parts

**Cola** – The cluster of buds growing tightly together. The lower branches have smaller colas, while the top of the plant has the main cola.

**Cotyledon** – embryonic leaf in seed-bearing plants.

**Fan Leaf** - the large, primary leaf of the plant; they only contain trace amounts of cannabinoids, but each fan leaf brings in light that helps increase bud size.

**Node** - junction of the stem and the leaf.

**Nug** (Nugget) – A chunk of the bud portion of the plant; sometimes used to refer to the entire bud.

**Pre-flowers** – Will develop near the growth tip after 6 weeks. Will become a white stigma (female) or pollen sac (male).

#### Reproductive Parts

**Bract** - contains female reproductive parts; tear-shaped leaves covered in resin glands; highest cannabinoid concentration.

**Calyx** - translucent layer over the ovule at the base of the flower (can't be seen without a microscope).

**Male Pollen Sac** – holds the pollen (round or oval shaped).

**Ovule** - part of female cannabis reproductive system. If fertilized, it becomes a seed.

**Pistil** - reproductive parts contained on a flower.

**Stigma** - hair-like strands; the other part of the female reproductive system. The two stigmas (per flower) catch pollen from the male plant, which the plant uses to fertilize the ovule); stigmas start out white and then get darker, turning yellow, then orange, red and brown during the growth of the plant.

**Stem** – A branch of the cannabis plant; for the main stem, see Trunk.

**Sugar Leaf** - smaller leaf that extends from the cola.

**Trichome** - crystal resin on cannabis bud (when dried, it's called "kief"); it secretes through translucent glands on stems, leaves and calyxes; protects plants from predators; contains terpenes and cannabinoids such as THC and CBD.

**Terpenes** - aromatic cannabis oils.

**Trunk** – the main stem of the plant.