

# Growing marijuana - Outdoor marijuana cultivation guide

About the Authors We have been outdoor growers since 1980 and have had relatively small yearly harvests every year since 1983. We have grown Indica and Sativa strains and also hybrids (mixing the two together). Our horticulture has taken place largely in fields in New York and New Jersey. The goal of this paper is to allow others to produce their own, and to reduce the amount of marijuana traded on the street. As more individuals become divorced from having to sell and purchase fine herb, then we as consumers will become self-sufficient and will also be able to minimize the risk of being caught. Unfortunately, the ignorant powers that be continue to persecute marijuana smokers for political reasons. We should take responsibility for our habits and grow for our own consumption thereby eliminating the "buy and sell game." Although the marijuana trade is not known for attracting ruthless people, it none the less is a "black market" activity that many wish to avoid. Some people may read this paper with the hope that they can grow acres of reefer that will bring them riches. Unfortunately the gold rush as it pertains to weed has come and gone. The police confiscate patches of pot annually through the use of aerial infrared photography, and large plots are spotted much more frequently than small plots. This guide is not designed to be the herb growers bible, but to provide easy steps on how to cultivate small amounts of marijuana for personal consumption. There are people who know more about growing weed than we do, but the marijuana growing literature still lacks a brief explanation of how to produce outdoor kind bud in easy steps. Our hope is that this paper can serve that purpose. We want to thank the many people who helped us acquire skill in this realm (our assumption is that they want to remain anonymous). Any error or omission is our doing and we take full responsibility. All rights of this publication are not reserved. Anyone may duplicate this document in full or part. Please distribute liberally!

## Table of Contents

Acquiring Good Seeds Finding a Site Making a Trail

## The Mechanics of Growing

- a. Preparing the Soil
- b. Planting
- c. Weeding
- d. Removing Males
- e. The Fungus
- f. Emergency Visits

## When to Harvest

## Acquiring Good Seeds

Quality seed strains are often difficult to obtain. This is especially true for people who hang in a predominantly straight crowd and know few people who partake in the fine herb. The rule of thumb is if the weed gets you pretty high then the seed is usually good to grow. Seeds coming from green bud are often better to grow because the strain is frequently acclimated to the growing season of northern latitudes. Jamaican and Colombian varieties can not be easily produced in northern latitudes because the strains produce bud too late in the season. The results of growing these varieties in most of the U.S. will be little or no bud growth before the first frost hits. Sativa strains usually grow taller than the Indica or Indica-Sativa hybrids. This can be a major drawback especially in the fall when other plants are dying off and trees are losing leaves. Some growers have success crossing Sativa varieties from southern climates with Indica, and creating an offspring that will bud more timely. (nn. If you want good quality seeds at affordable prices check out <http://www.growing-marijuana.org/seeds.html>) When at parties, concerts, or other social events, keep an eye out for people breaking up bud and discarding seeds. The best time to look for seeds is from October to January because this is when most of the locally grown outdoor erb hits the market. Acquiring and maintaining a quality seed stock is the most fundamental task of a successful grower. Finding a Site Aside from acquiring good seed, picking a prime location to grow is probably the most important task a grower is faced with. One of the best locations is in areas of grasslands that have small trees and bushes interspersed. Often a farmers field that has been out of production for ten years is ideal. Flood plains along rivers and streams are another good location, but the risk of losing seeds in the Spring or the harvest in the Fall due to flooding should be considered. Growers have also been known to plant in buckets in more rocky or mountainous terrain. This enables them to grow in areas that receive good sunlight but have rocky, untillable soil. Digging a site in areas of dense but short plant growth, like sticker bushes, is another suitable spot. The sticker bushes grow high enough to prevent people from seeing through them and also serve as a direct deterrence from people and large animals wandering into the site. A grower can often use animal and insect life to his advantage. Bees, tics, green flies and the like can discourage people from wandering through fields so areas having an abundant insect population are prime locations. The most important criteria for an excellent growing site are good soil, available water, sunlight, and suitable cover. Other factors are secondary.

Good soil is sometimes hard to find but without it you won't get much of a harvest. So, if you find a site that is perfect for all other factors but has poor soil, you may want to consider bringing soil to the site. Soil is often the richest in areas

where grassland vegetation has existed for a series of years. Grasslands recycle nutrients in the soil and form a thick layer of organic matter. Grassland biosphere's require very little preparation to start growing, while other soil conditions require more work. Sandy soils often need potting soil or top soil along with a small amount of lime to make them more fertile. Soils with high amounts of clay need material, like peat moss, added to break up the clay and make the soil more porous. I'm a naturalist and disagree with some herb growing professionals who believe that planting along road sides can be productive. The lead and other toxic chemicals found in some of these soils is enough to discourage many vegetable growers from producing consumable or smokable plant material. If you live in a city, and lack your own means of transportation then use roadsides as your last resort. A close water source is also very important. A site close to the water table would be ideal since bringing water into the site can get tiresome and also dangerous. It can get very tiresome if you have many sites or even a few big sites. If you choose a site much higher than the water table or grow in buckets, you will quickly find that the amount of water needed during a dry summer will be enormous and will give you great incentive to find a site closer to the water table. The dangers in having to bring water to the sites are numerous. The greatest of these would be the chance of someone spotting you, possibly a cop. The second greatest would be the destruction of the foliage you have to walk through to get from the water source to the site. If you have to make more than one trip you run a big risk that a trail will become noticeable. Finding a stable water source in the summer can be another obstacle since small streams often dry up at this time. How often you will need to water is determined by the weather and that could require you to make unexpected trips to the sites. Each trip puts you at risk. Your goal is to minimize these trips. Sunlight is less important than the previous two components but is still essential. Plants should be in areas that receive at least five hours of direct sunlight per day. Morning sunlight is preferable since plants tend to respond better to it than to the afternoon sunlight. Growers who scout sites during the winter months must be able to visualize how the landscape will be shaded by trees, and the path the sun will take come Spring. Of course, the greater the amount of sunlight the better, but when choosing a site sunlight is just one of many factors that must be considered. The last criteria has nothing to do with plant biology, but rather focuses on minimizing the threat of unwanted attention from people wandering by. The cover should be both tall enough to keep people from spotting it and thick enough to discourage them from wandering too close to it. The best foliage to accomplish this is a large patch of big sticker bushes. If that's not available, look for foliage that grows to a height of six to eight feet by the fall and is far enough away from where someone might stray.

The Ability to hide plants amongst the flora in fields is an art and skill improved upon through practice. One favorite technique is to hide plants on the south side of bushes so that passers by will have difficulty spotting the plant(s). Plants still get adequate light in spite of the appearance of being crowded by the larger bush. The best hiding spot for herb is where people have their view blocked from all sides and has the appearance of being impenetrable. In areas where the vegetation growth is less than three feet the herb may need to be trimmed back or tied to the ground in order to create smaller bushier plants. Fields with small vegetation growth may have poor soil or can be dry upland environments where the soil frequently becomes too dry so use caution. Making herb junior blend in with the other plants in the field will minimize risk. In order to grow plants efficiently, an outdoor grower must use the natural landscape to his or her advantage. Making a Trail One of the ways to ensure success is by creating trails that are not visible to passers by. This is easier in some places than in others. Areas having dense undergrowth with lots of sunlight can be ideal because plant growth is so rapid it will erase any damage to the vegetation between trips during the Spring and Summer. If you are growing plants in areas easy to spot trails then make the path weave back and forth so it becomes difficult for people to see a trail. Making a hidden trail to the site(s) is important because it allows the grower to minimize getting ripped off or worse, caught. People wander through undeveloped areas and follow trails to nowhere all the time. Their access can be limited through thoughtful planning of pathways and proper care in using them. When you walk through your entrance, do everything possible not to damage any of the foliage, especially toward the late Summer and early Fall. At this time of the year, damaged foliage usually will not regrow and this is when the plants need as much cover as possible. There are two things to keep in mind when making a trail to your site(s): 1) Can you see the trail you just made, if not that's great, if so look for ways to cover areas that look like a trail; 2) The more difficult it is for you to get to the site, the less likely someone else will try. The Mechanics of Growing Your cousin Louie and his friend Sam are in town from Oklahoma and they have smoked a lot of grass and grown some in their backyards. Sam has a good rap, and appears knowledgeable about fine herb. Taking these two gentlemen for a walk in the fields might appear to be a good idea. Shit, they could offer some insightful pointers. I must caution against these excursions. Even if these men are the herb experts they appear, taking a walk with them may not be in your best interest. They are unfamiliar with the area and may not know where to run if the need arises. Walking with more than two people through a field can attract attention (the greater the number of people, the greater chance of being seen). The more people walking on a trail the larger the trail becomes and thus the greater the chance your trail can be followed by others. Every time you visit the site(s) you are putting the harvest and for that matter yourself at risk. This may be a small or large risk depending on the particular place but remember that no place is 100% safe. Unless it is an emergency situation where the buggy fly has infested your crop, and you are bringing in a specialist to offer expert advice, the site(s) should not be visited by strangers. Having a growing partner is recommended regardless of his or her competence, and even then the site(s) should only be visited to accomplish specific tasks. Trips to the site should occur at the following times.

## 1. Preparing The Soil:

(early March - Mid April depending on climate) I suggest buying 40lb. Bags of organic potting soil and mixing this in with the existing soil. This soil is not often found at your local all-purpose store so some searching may be required. Potting

soil is richer soil than commercial top soil so it goes a little bit farther when mixed with the existing soil. Lime may be necessary in areas with acidic soil and peat moss is a good additive for soils with a clay type consistency. I avoid chemical fertilizers, not just because I believe that organic farming is the best way, but also because toxic waste is produced from the manufacture of fertilizers. It's also a good idea to put up a two foot high fence at this time. This will keep small animals out and the use of dried blood and/or human hair will fend off deer. Purchase a wire fence with small gaps, 2 inches or less between the metal strands. Collect enough sticks in the area to provide stakes that will support the fence about every 2 feet. Outline the site with the sticks and tie the fence to the sticks with string or wire. Cut the fence endstrand and bend the strands that protrude from the top of the fence out and down the outside to discourage animals from trying to jump over it. Camouflage the fence and site with normal ground debris as necessary before leaving.

2. Planting: (early April - early May) There are different ways to go about planting:

A) The seed intensive method:

This method should only be used if you have an abundance of seeds. The seed intensive method entails planting many seeds in a small area. Its strength is that it can limit risk. When you journey to your newly prepared site(s), the seeds and trowels are hidden in your pockets. Plant the seeds about one half inch deep, unless the soil contains high amounts of clay then only plant seeds one quarter inch in the soil. If you setup small sites 3ft x 3ft square, put in three rows with a seed every one and a half inches. If you work out the Math this is roughly 72 seeds per site. Unfortunately, many growers, especially beginners, do not possess this many good seeds. If a grower creates four sites with this many seeds he or she is almost guaranteed a harvest. Yes, there will be some crowding and this is one of the drawbacks of using many seeds in a small area. Also, figure around 50% of the plants are going to be male so you must return to the site to cut out the males toward the end of Summer. Once the males are removed from the site, the females get more light and aren't as crowded. The seed intensive strategy tends to produce smaller plants because of crowding, but at the same time it helps ensure a harvest every season. In the present day of infrared photography, I believe it is important to have small sites to avoid detection from the air. This of course means growers may have to create a series of small plots in order to garner a year's supply of erb. If you grow merely for hobby, sport, or experimental purposes, than one site may suit you fine.

B) Planting small seedlings:

The strongest argument for this method of planting is that you get the opportunity to select for planting the strongest of the seedlings you've started. The strongest argument against this method is the risk of transporting the seedlings to their intended site(s). Transporting them requires you to find a method of concealing them, usually a box. The problem that then arises is that the size box needed to transport many plants may make this method too risky or totally impractical. The other concern with this method is that there is also the risk of shocking the seedlings when you put them outside in the site where they will be exposed to the harsh Spring weather. Before planting seedlings or sexed females they should be put outside and closely monitored at least three days before planting to become acclimated to the wind and change in temperature. This method works best when you can set up a small shelter near your sites that is enclosed but not insulated. This shelter can be as small as the site and 18 inches tall or big enough to walk in, providing you have a safe location for such a structure. Starting seeds in this shelter gives the benefit of acclimating seedlings to a temperature much closer to that which they will face when they are planted in the site and it will also protect them from any late Spring snows and/or frosts.

C) Planting sexed females:

The advantage of planting sexed females is obvious; every plant will produce buds. The sex of plants can be determined by growing them until they're four inches high, and then decreasing the amount of light they receive to eight hours. The males are then identified and removed in one to two weeks. This method requires being able to control the amount of light the plants receive each day, and also requires that plants be started indoors earlier than you would normally start (late February - early March). This method allows growers to spread their plants across a wide area in smaller sites and also to hide plants amongst small trees and shrubs. By spreading two dozen female plants throughout a ten acre area in individual sites, a harvest is almost guaranteed, providing that you remember where all the sites are. Growers are encouraged to create a map of their sites to insure against memory loss. Just remember to guard that map closely. Putting anything about your operations in writing puts you at risk.

3. Weeding:

Three weeks after the plants or seeds are in the ground return to remove weeds that are crowding out the kind erb. Three weeks after the first weeding a second weeding should take place. A third weeding is optional, by this time the plants should be large enough to compete with the weeds, however, if you are in a site that has strong weeds around it you may have to cut the weeds back at additional times throughout the year. Remember, weeding does not mean destroying all vegetation within three feet of a plant. Weeds can help hide your crop and protect your crop from hungry animals. Nearby vegetation can also help keep water in the soil from evaporating in the hot sun. So don't go overboard

and be very careful, it's very easy to accidentally injure small plants or their roots trying to get rid of weeds.

#### 4. Removing Males:

(If you are growing sexed females these trips can be omitted) Male plants will begin to produce their flowers and pollen as early as mid July for varieties acclimated to this climate. Varieties from more southern climates, may not start until mid September. This difference depends on the budding cycle of your variety, some plants start to bud earlier than others, so the exact time to cut the males will vary with the strain. If you are using a variety of different seeds it may be necessary to visit once a week from July 21 through September 15. The timely identification of a male plant is crucial to the success of the harvest. If the weather is exceptional during the time a male starts producing its flowers and you missed seeing the first signs during your last visit, you could wind up with a lot of seeds and little of the fine herb. A female can either generate a large seedless bud, a large bud with a few seeds, or a large bud that is almost totally seeds. The first case is achieved by removing all the male plants before any of their flowers open. The second case occurs when a few male flowers have opened but you remove them before any more open. The third case occurs when you miss-time the flowering of the male. This can be devastating if you have big female plants because you could lose 90% of the smokable herb to seed production. This last scenario may not always be bad though. If you are short on seeds for the next growing season, it may be prudent to let one or two males stand and fertilize a portion of the females. Good seeds are hard to come by, so if you have a strain you like, make sure to plan ahead and have at least a few hundred seeds for the future. The spotting of males is one of the most difficult of things to explain to a person that's never grown since it really takes careful attention to how the tops of male plants look at this stage of development. Even experienced growers will be unsure at times and will have to wait till the next visit to be sure. When a male enters the stage of flower development, the tips of the branches where a bud would develop will start to grow what looks like a little bud but it will have no white hairs coming out of it.

#### 5. The Fungus:

Along with cops, thieves, animals, and insects, "the fungus" is another obstacle in the path of a successful growing season. When the buds are roughly half developed they become susceptible to a fungus or bud rot. It appears that growing conditions for the fungus are best when temperatures are between 60 and 80 degrees and the humidity is high. The fungus is very destructive and spreads quickly. It is a spore type of fungus that travels to other buds via the wind so it is impossible to prevent or stop if weather conditions permit it to grow. If things should go badly and the fungus starts to attack your plants, you must remove it immediately or it will spread to other areas of the plant or plants. Some growers will remove just the section of the bud that is infected whereas other growers will remove the entire branch. Removal of the entire branch better insures that the fungus is totally removed, and also enables the grower to sample the crop a few weeks ahead of time. The main point in removing the fungus is to be very careful. Since it is a spore type of fungus, the accidental jerking of an infected bud will release some of the spores and they could fall onto a lower bud so by the next visit, you might have to pull that bud too. Also be careful in touching the fungus with your fingers because your fingers could pick up the spores and then when you touch the next bud, the spores could cling to it and start eating away at that bud.

#### 6. Emergency Visits:

The Real Estate and Construction Industries have conspired to develop housing near your crop and their "progress" must be monitored. A hurricane or tropical storm with winds over 50 miles per hour has visited your area. A drought takes place. Etc. One of the drawbacks of growing outdoors is that you can not control for interference by outside forces. Emergency visits may be necessary but don't go crazy every time there's a bad storm. These plants are strong and can take some punishment. The Harvest Performed at night if possible. A nighttime run will limit the chances of someone seeing you. Do the most risky parts, such as carrying freshly cut herb where you could easily be spotted by a passing car, when the police jurisdiction changes shift. This can help ensure that officials do not spot you, and if a nosey nearby resident or passerby calls the police, it may take time before a car is dispatched to investigate. If harvesting at night, use flashlights sparingly so as not to attract attention, and bring extra batteries just in case (the rechargeable kind are recommended). When harvesting more than a couple of plants remember a small pocket knife because it makes the night move quicker. Unless you are planning to use the large fan leaves for cooking, remove them in the field so they don't take up a lot of space. If you have more than one variety of herb that you are harvesting bring various bags to put the different strains of buds in, and I would suggest using backpacks for travel to avoid suspicion and for easy handling. When to Harvest The time to harvest depends on several factors: bud development, weather, fungus, and thieves. Some pot strains mature earlier in the fall than others, depending on the latitude of the globe where the strain originated. You will need to pull Indica varieties in late September and Colombian varieties in late October. The weather may also force you to pull early. If there is a severe freeze heading your way, you are better off not chancing that the weathermen are wrong and pull at least a majority of what you have. Another case for pulling early is if weather conditions are perfect for the fungus to run wild. This will also force you to pull early. And of course if your site has been found or is in great danger of being found, you must pull everything to avoid losing out on what would otherwise have been a great year. For instance, if you have a site in a corn field or other temporary situation, the harvest must occur at a point in time relatively independent of weather. Also try to find out if and when hunters start to roam the fields.

One other thing to watch for is frost. Even a mild frost can damage plants so watching the weather closely in late September and throughout October is important. If your plants do get damaged by frost the herb is still harvestable so don't give up entirely if you fail to chop before the first frost. If by some freak chance there is a frost in early September and the buds are still very small you may want to allow the damage to occur and then let the buds finish maturing rather than harvesting a small quantity of premature buddage. This type of situation is an on the spot call and you must consider many factors, such as bud size, weather predictions for the following weeks, strain of weed, location of site, etc., before deciding. Indica varieties usually mature sooner than Sativa varieties, and the best time to harvest varieties acclimated to the Northeast is from late September to mid October. Those varieties not acclimated to the Northeast, such as Colombian or Jamaican, are best left to late October or even mid November if the weather permits. One other thing you want to avoid is harvesting in the rain. Moisture can lead to problems in the drying process such as molds and fungi. The dryer the plants at the harvest date the better. As mentioned before, it is important to acquire seeds from strains that can be grown at the latitude you are at, some Mexican or Colombian varieties may not develop mature buds until November and by then the weather becomes harsh. Knowing when your plants will mature is difficult for beginners or growers using new seeds for the first season. Planning and getting to a good drying location quickly is important so the buddage is not left in bags for longer than a few hours. If the freshly harvested bud remains in bags for too long (12 hours or more), molds and fungus will begin to destroy the herb. Once you get to your drying location you need to prepare the herb for drying. This entails removing excess fan leaves and other larger leaves. However, if the drying spot has a temperature higher than 85 degrees it may be beneficial to leave a few large leaves to keep the buds from drying too quickly. Typical places to dry are attics, closets, dresser drawers, and basements. The best position for a bud to dry in is hanging upside down in a location where air can circulate all around it. If you are fortunate to have a location that you can do this in, great, otherwise use a dresser drawer or some other concealed place. If you dry the buds in dresser drawers remember not to double stack the buds or the weight of the upper layer of buds will cause a flat spot on the buds underneath. Also remember to rotate the buds every day so the herb dries uniformly and you can check for any signs of mold or fungus. If space permits and you are able to retrieve the whole plant, roots and all, you can hang them upside down by the roots, but don't expect this drying procedure to yield higher quality bud. THC does not drain from the roots down into the buds, the THC forms in the resin on the buds. The entire drying process should take place over four to six days depending on the size and variety of bud, the temperature, and the relative humidity of the drying area. If the buds are dried too quickly, the flavor of the herb will become more harsh and the THC level may not reach its potential. If the herb is dried too slowly then molds and fungi may develop and have a similar effect. With any method of drying, the process must be monitored on a day-to-day basis. Room temperature is fine for drying as long as the humidity is kept low. If drying must take place in a cool damp place then a fan and possibly a heater should be installed to compensate.