

HEMP

What to Know Before You Grow!

Hemp growing can be a highly profitable endeavor, it also can be a technically challenging and an expensive endeavor. Please take your time to understand this crop and its pre-season and post-season requirements before you spend money on a Hemp License and expensive inputs like clones and seeds. This overview is regarding CBD hemp only. We hope you find it helpful. For more, visit our website, www.BeyondOrganica.com.

BASICS

HEMP VS. MARIJUANA

Hemp and “marijuana” are both cannabis plants. The defining difference is the THC level. The federal government defines hemp as being below 0.3% THC, and that is the distinction throughout the industry. Then there is understanding the delta-9 THC vs THCa, which some states count and some don't. Know your states particular distinction.

CBD hemp plants behave just like marijuana plants. It's physical structure, crop timing/light requirements, nutrient and water requirements are very similar. Hemp for fiber and food have different growth habits and are generally grown on a larger scale than CBD hemp.

Cannabis is an annual plant. Under the right light and kept indoors, you can grow a ‘mother’ plant for years. But if you are planting in a field, you will need to plant each year.

FEMINIZED VS. NON-FEMINIZED

Farmers growing hemp for CBD production will want only female plants. This is why clones are a good option. Feminized seed will often cost much more money than non-feminized seed. Planting non-feminized seed is okay if

you know how to identify male plants and go through your field and pull out the males.

SEED VS. SEEDLINGS VS. CLONES

You will hear people tell you that you only want to plant clones. Other people will tell you that you only want to plant seeds. Both are correct and both could be wrong. It depends on what works for you and your land and resources available.

Seed

Seed will put down a tap root, whereas clones won't. However, even when planting feminized seed, you will need to comb your field for male plants. Also, mice may eat the seed you plant.

Seedlings

Seedlings give you the hardiness of seed and the advantage of guaranteed germination and that mice or birds won't eat the seed out of the field. However, if your seedlings are small vermin might eat them. If your seedlings are large enough when they go into the ground, they should be okay.

Clones

Clones should all be female and give you a consistent crop (plant size and cannabinoid profile). Clones are made off the best individual

‘mother plants’ and should have the best value in CBD, terpenes, and/or consistently lowest THC.

COMMON MISCONCEPTIONS

HEMP DOESN'T USE MUCH WATER - NOT TRUE

CBD Hemp will use less water than corn but more than alfalfa.

HEMP IMPROVES YOUR SOIL - DEPENDS

Hemp does not improve soil unless you don't harvest your plant and instead till it back into your soil. But if you're growing for CBD oil, you will definitely be harvesting your whole plant, thus removing the organic matter from your soil.

YOU CAN GET CBD OIL, FOOD FROM SEED AND HEMP FIBER FROM THE SAME CROP - SORT OF

You can get food, fiber, and CBD oil from the same plant but most farmers select one reason to grow and specialized varieties for that hemp product market. The yield of CBD oil on fiber plants is low. Growing for both Fiber and CBD is done on very large plantings. While all plants are fibrous, if you are intending to grow for fiber you would want that particular hemp strain.

PRE PLANTING

WHAT IS YOUR ENDGAME?

This is very important to consider before you decide to grow anything. What is the end product you want to sell and who is buying it?

Biomass, flower, fiber, seed, crude oil, full spectrum oil, distillate, isolate, value added products such as topicals or tinctures?

Choosing your end product ahead of time will determine what strains you choose to grow and how you will grow them.

Biomass

If you want to sell your biomass, great. Who will buy it? What will they pay you for it per pound? Can you get a contract for a guaranteed price? A common price range is \$2.80 to \$3.50 per CBD percentage point. (For example, if your hemp comes in at 10% CBD, you could sell one pound of it for \$28 to \$35.)

Smokable Flower

Some farmers are able to produce nice hemp buds and like marijuana, they have it trimmed. This ‘flower’ can be sold for more than biomass. How do you intend to trim it? Do you want to sell it to a wholesaler, a retailer or direct to customers? How will you market that? Do you have the money to get you through the time it will take to trim, store, market and sell your product?

Processed CBD

If you want to see your processed CBD biomass as crude, isolate, etc., who will process for you? How much will they charge you for that service, called ‘tolling’. Often, extractors will offer to keep a percentage of your product in lieu of charging you money. Then, who will buy that product from you and what will they pay you?

Value-Added Products

The most amount of money to be made is in creating ‘value added products’, hence the name. However, there is much more time, money and planning involved in this route. Do you have the resources to build a brand and take your finished product to market?

PLANTING

SEEDS OR STARTS

Will you plant seeds or starts? Will you plant by hand or with machinery? Orchard style is

about 1,000 plants per acre. Intensive planting could be up to 3,000 plants per acre? When estimating cost and pricing, base your math on plants per acre.

MALE PLANTS

If you've planted seed, you will have to rogue the fields for male plants. Do you know what to look for and have the labor to do this?

POLLEN

Consider what your neighbors are growing. Will there be hemp pollen from other farms? How many miles away are they? If your neighbors let a bunch of male plants release pollen, this could reach your field, pollinate your females and you'll end up with a bunch of seed that you did not intend to have. This can greatly devalue your crop.

CANNABIS IS DAY-LENGTH SENSITIVE

Planting too early in the Spring will result in the plant trying to flower at the wrong time and stunt the growth.

In our region (New Mexico and Colorado) May 1st is the earliest one would want to plant seed outside. June 1st is best time for clones to go in the ground. As the summer days start to become noticeably shorter (about August 10th) the plants will start to flower. By the fall equinox (September 21st) plants will be in full flower.

Short-season strains will soon be ready to harvest. Some strains may not be ready until November 1st. If you are in a cold area (like Lower Los Colonias in Taos) it's best to plant shorter season varieties. If you're in the inversion zones, along the mountainside, you'll have a longer season.

GROWING

WATER

Do you have the correct type of water rights? How do you plan to water it? Flooding, drip, or via a portable tank? Get your water tested and consider those results. Water pH is important for cannabis. Seedlings like water between 5.6 and 6.5 pH. Older plants will do fine in soil with a pH of up to 8.

SOIL

Have your soil tested and consider those results. How will you amend to prepare to plant your hemp? Because hemp has a relatively expensive start up cost and a high value crop, you will want to do all you can to reach your yield goals. Starting with good soil or amending to the specific needs of your hemp will be a good investment in your crop.

NUTRIENT PROGRAM

How do you plan to feed it / how will you get nutrients in your water or on your field?

How much can you afford to spend per acre or per plant? Think in terms of \$0.50 to \$5.00 per plant. For intensive or large acreages think in terms of cost per acre.

Do you know how and what to feed CBD cannabis plants and when? There is growing evidence that particular microbes and growth hormones can influence THC/CBD ratios.

Organic Hemp

We encourage you to be organic but there is no USDA certification program yet. Ask your local USDA representatives to pressure their agencies to fulfill the mandate of the Farm Bill and create programs for hemp! There are independent services but they are expensive. Please grow organically and find ways to convey your farming practices your customer.

PESTS & DISEASE

Pests

Do you have prairie dogs around? They are likely to destroy small transplants but leave larger plants alone. Mice may eat your seeds.

Aphids, Mites, Powdery Mildew, Bud Rot

These are things to look into. We will cover elsewhere.

TESTING THC LEVELS

At some point in August you will want to start taking samples of tops and bottoms of each strain that you're growing, dry it and send it to a lab to test for THC levels. As your plants grow, the cannabinoid profile expands. As the CBD goes up, so does the THC. Because there is a THC limit, you will need to keep an eye on this and harvest before it goes "hot" (Going "hot" is an industry term that means the THC has gone above the legal limit).

HARVESTING

How do you plan to harvest your hemp? By hand, your own machinery, custom harvesting services?

If by hand, do you have enough people to help when it's time to harvest? Consider contracting with a processor to get your crop off the farm at harvest. You may get a lower price, but a guaranteed sale and saving much effort on your part.

POST HARVEST

DRYING & CURING

Whatever product you want to sell, first your harvested crop needs to dry and cure. This will take around one week in a well ventilated, covered, dark and dry space. The size of drying

space depends on the number and size of plants you grow. Generally, the whole plant is hung from a cable, side by side, in a barn or building with fans running to circulate air. Though something as simple as a hoop-house with dark-out tarp and an exhaust fan will do if you can keep the sun off of it. The sun will degrade the quality of your material.

To retain all of the cannabinoids and terpenes you will want to control and change the temperature and humidity over the drying period. Maintaining a temperature range of 60-70°F and keeping the humidity between 45-55% is typical.

Do you have a facility that can handle this for you? Get a guarantee that you can use this space when you harvest your crop. If you are wildly successful, it's likely you will need more drying room than you think.

There are also dry machines that can be brought to your location and get most of it done in a day, however, this may lower the overall quality.

STORING

How will you store your material until you are able to sell it? This is an important factor that we've seen go wrong. Keep it dry, cool, away from pests and out of sunlight.

Once your crop is dry, you will need a reliable and secure method to store it until it is sold.

Freezing it would be next best if you have that ability. Storing in plastic totes can work as well.