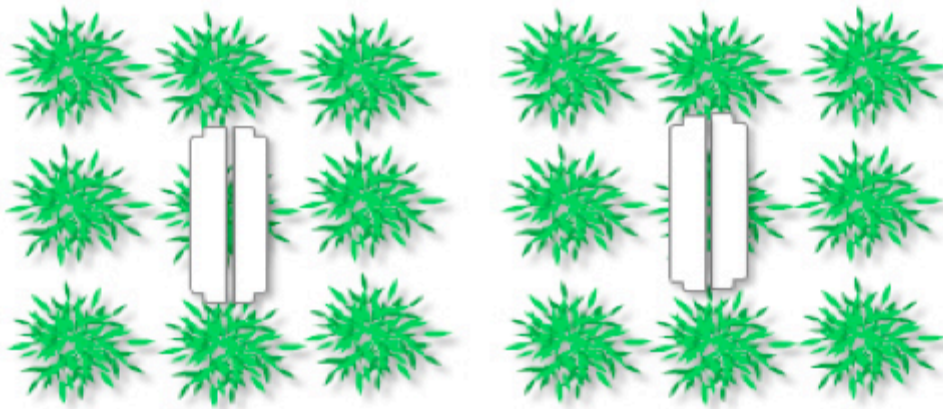


Chapter Six Cultivation Facility Design

Designing a cultivation facility requires a lot of detailed work, and knowledge about the growth cycle of marijuana. With any investor's or personal money, it is important to think, rethink and design it first on paper, looking for any bottlenecks in plant growth and moving equipment as well as taking advantage of any natural resources such as light and the actual design of the facility. One very common mistake made by many new cultivation facility owners is rushing to get construction finished based on the belief that getting plants growing is the most important part of the operation. This is a half-truth. Yes, it is important to get cash flow started by having sellable inventory, but by maximizing the output and efficiency of the grow space the payback will be much quicker, and will result in lower operating costs overall. The most common constraints in any cultivation design is the size and configuration of the space being used. Most cultivation facilities require serious contracting renovations including power, water input, drainage, HVAC, air filtration, carbon dioxide injection, and a number of other requirements.



Marijuana plants come in all sizes, shapes and potency. When designing your facility, it is best to decide what sort of strains you'll start with, and what their requirements are for nutrients, and any other variable that differentiates them from other plants. Marijuana plants essentially need light, a growing medium, nutrients and certain care to avoid mold, pests, mildew and fungus, so there is a base of knowledge necessary to know if your plants are growing under optimum conditions, and what to do when problems

are encountered with your grow.

When it comes to medical marijuana plants for any sort of ingestion (smoking, edibles, etc.), girls rule. Male plants are discarded as quickly as possible as they may spread pollen, fertilize the female plants, and then you generally end up with nothing but buds that are filled with unusable seeds. Given that your first crop may start with seeds, it sounds counterproductive to cull male plants, but the original crop should be the only time seeds are used, unless you are trying a new strain and can't find a clone from another cultivation facility to grow that specific plant.

All marijuana plants go through the same grow cycle, with certain variables such as canopy size, time necessary for growing to optimum size, and also some require different nutrients and other care. However, essentially you are raising the same plant no matter what the nomenclature is.

Starting with seeds, the first thing necessary is germination. This is the process where the seed is exposed to water, it splits open, and sends out the "taproot" which is essentially the first root seeking water and nutrients. In order to germinate seeds, you'll need the seeds covered in a paper towel which is moist (not totally soaking), and then put them somewhere warm and totally dark. Within 48 hours to ten days the seeds will sprout the white taproots as seen below. Rather than go through each part of the plant and how it grows, it is recommended that you go on the Internet and search out plant germination.



What is it going to cost to build out the facility with the style of planting you've chosen? Great question! Below is a "simple" list of some of the components necessary to put together a commercial cultivation facility. The list looks daunting, but you're not going to need every piece listed. Many of the parts are specific to a growing style, for example pumps for air generally are never seen in a soil based grow facility. However, we will walk through some of the more important parts further in this chapter. Plants need light,