

# How to select the right genetics for cannabis production



With the wide range of cannabis cultivars available, licensed producers are advised to ask an expert for help in selecting the best genetics for their purposes. This will ensure faster, easier production, says **Thomas Walker**.

If you are launching a cannabis-growing operation, your priority should be to get products to market as soon as possible. One of the best ways to achieve this is to work with other licensed producers to obtain starter plants, should local law permit it.

Starter plants are essentially plants that have been phenotyped (selected for their desired physical characteristics; in other words, the visible expression of the plant's genetic makeup) and rooted. This will enable you to start production without selecting genetics and taking on the arduous process of phenotyping.

Although new technologies have been developed to speed up phenotyping, the process still requires propagation from seed and then the selection of one superior phenotype from a pool of hundreds of plants.

Starter plants can be used to launch production while phenotyping is still taking place. This strategy will guarantee your product is ready for sale within 18 to 20 months of receiving a cultivation licence.

Despite its effectiveness, few start-ups use this strategy; many start-ups I have worked with believe they should cultivate as many varieties of cannabis as possible. This is a misconception and only complicates the start-up process.

## KEEP IT SIMPLE, AND GET IT RIGHT

Each cannabis strain has its own characteristics and requirements in terms of light intensity, nutrients, time to maturity, and so on. Trying to juggle all of these variables, with multiple cultivars, can negatively affect the volume of product available for sale.

Selecting the correct phenotype is integral to the success of your business.

No amount of added light, nutrients or care can negate bad genetics; you should select the best possible genetics from the start, using a master grower with many years of phenotyping experience.

Unlike most commercial crops, which exhibit approximately 98% uniformity, cannabis displays a wide range of phenotypes. This is because cannabis growing has been illegal for decades and there is now a huge demand for new strains.

## GENETIC SELECTION WILL DICTATE THE SUCCESS OR FAILURE OF YOUR CULTIVATION

It can take up to three years to produce a stabilised version. When breeding is rushed, the result can be weak phenotypes that can exhibit hermaphroditism and increased susceptibility to pests and pathogens.

Improper breeding techniques can also lead to a large number of different phenotypes within a single cultivar.

As a start-up business, you should use no more than four varieties to reduce over-complication. New varieties can be added once your cash flow improves and you have completed several crop rotations.

## MEDICAL CANNABIS

To buyers in the medicinal market, the names of cannabis varieties tend to be of little consequence; what counts are the active pharmaceutical ingredients (APIs). Cannabis destined for the medicinal market usually ends up on the shelf with no reference to the original genetics.

For this reason, if you are growing medical cannabis, you will need to select robust genetics that deliver the APIs required by the client.

You would also do well to ensure some diversification of those APIs. Ongoing research is revealing new uses for lesser-known cannabinoids and this will allow for new avenues of revenue once demand rises for these molecules.

## TRAITS

When selecting a cannabis variety, focus on the following characteristics. All will play a crucial role in ensuring the long-term success of your operation.

- Pathogen resistance. This reduces or eliminates the use of fungicides.
- Flowering time. This dictates the number of harvests that can be achieved in a calendar year. Eight to nine weeks is the sweet spot.
- Yield. Obviously, the higher your yield, the greater your profit.
- Rooting time and success. These factors play a part in ensuring continual and predictable harvests. Aim for varieties that have a 90% success rate in fewer than two weeks.
- Growth rates and characteristics.

Short plants with adequate support for buds will require less netting and staking, and less labour to de-leaf, prune and spread for maximum yield.

To reiterate: when choosing varieties, seek help from a master grower with detailed knowledge of strain characteristics and phenotyping.

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