

Understanding the science of terpenes in cannabis



Terpenes contribute significantly to the flavour and effects of cannabis. Growers and breeders can develop new strains with specific flavour and aroma profiles to meet consumer demand, says **Thomas Walker**.

Terpenes are organic compounds that play an important role in cannabis, particularly when it comes to flavour and effects. Many plants, including herbs, fruits and spices, owe their distinct flavour and aroma to terpenes.

Terpenes are produced in glandular trichomes, tiny hairlike structures on the epidermis of the plant that also produce cannabinoids such as tetrahydrocannabinol (THC), the principal psychoactive constituent of cannabis, and cannabidiol (CBD).

In total, more than 100 terpenes have been identified in cannabis, each having its own distinct flavour and aroma profile.

ENDLESS COMBINATIONS

Terpenes can be influenced by environmental factors such as temperature, humidity and light. This means that different terpene profiles can be found in the same cannabis strain depending on where and how it was grown.

Terpenes can influence the way that cannabinoids such as THC and CBD interact with the body. Some terpenes, for example, enhance the effects of THC, while others reduce them.

Terpenes can also produce a wide range of flavours and aromas by combining with other compounds such as cannabinoids.

Well-known terpenes include myrcene, known for its musky, earthy aroma, and limonene has a citrus/lemon aroma.

The unique flavour profile of a strain of cannabis is due to its specific combination of terpenes. Growers and breeders develop

new strains with specific flavour profiles to meet consumer demand by understanding the role that terpenes play in cannabis flavour.

THE EFFECTS OF TERPENES

In addition to influencing flavour, terpenes are thought to play a role in the effects of cannabis.

While much research is still in its early stages, there is growing evidence that terpenes may interact with cannabinoids to produce specific effects.

INCREASING TEMPERATURE AND LOWERING HUMIDITY HAVE BEEN SHOWN TO BOOST TERPENE PRODUCTION

Some terpenes, for example, are thought to have sedative properties, while others are thought to have energising or uplifting properties.

Myrcene is thought to have sedative effects and may contribute to 'couch lock', the strongly sedated sensation associated with some cannabis strains.

Limonene, on the other hand, may be beneficial to people suffering from depression or anxiety.

BOOSTING TERPENE PRODUCTION

There are several methods for increasing terpene production in cannabis plants, resulting in a more flavoursome and aromatic final product. Optimising the growing environment, including temperature, humidity, and light intensity, is one method.

Studies have shown that terpene production increases in response to higher temperatures and lower humidity levels. Growers can therefore encourage their plants to produce more terpenes by carefully controlling these environmental factors.

Another approach is to employ growing techniques such as low-stress training and defoliation. These methods entail carefully pruning and shaping the plants in order to maximise their exposure to light and air circulation, which can aid in the stimulation of terpene production.

Growers can increase the likelihood of an aromatic final product by selecting strains known to produce high levels of terpenes.

Finally, various nutrients and supplements can be added to the growing medium to boost terpene production. Some growers, for example, use molasses, which is high in carbohydrates and can feed beneficial micro-organisms in the soil while stimulating the production of terpene.

Mycorrhizal fungi and kelp extracts have also been shown to promote terpene production in cannabis plants.

In general, carefully monitoring and optimising the growing environment, genetics and nutrient inputs is the key to increasing terpene production in cannabis plants. In this way, growers can produce high-quality cannabis with complex and enjoyable flavours and aromas.

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