

Strategies to ensure sustainable cannabis production



Cannabis growers, regardless of where they are, should practise environmentally responsible cultivation methods. This is not only the right thing to do; it's ultimately more profitable, says **Thomas Walker**

Growing awareness of climate change, the importance of biodiversity and the need to preserve natural resources has seen farmers everywhere under increasing pressure to adopt more environmentally friendly production methods. Cannabis is no exception. In this article, we'll explore some of the strategies and best practices for sustainable cannabis cultivation.

ENERGY EFFICIENCY

Many cannabis producers grow their crop in a controlled environment, which requires significant amounts of energy for lighting and climate control. As a result, they tend to rely heavily on fossil fuels to power their operations, and this in turn contributes to air pollution and climate change.

Switching to renewable energy sources such as solar or wind power can significantly reduce an operation's carbon footprint and help to mitigate the negative effects of climate change.

The good news is that the cost of renewable energy is dropping, and will continue to do so for several more years. This makes the switch to renewables ever more attractive.

One of the best ways to reduce energy consumption is to use LED lighting, which uses up to 60% less energy than traditional lighting. In addition, LED lights produce less heat, which means less energy is needed for cooling.

Another way to reduce energy consumption is to use natural sunlight wherever possible.

WATER CONSERVATION

Using hydroponics can contribute greatly towards sustainable cannabis cultivation. Hydroponics uses nutrient-rich water and a growing medium

such as coco coir rather than soil, and uses far less water than conventional soil-based growing techniques.

The precise control over nutrient delivery also results in greater yield and faster growth rates.

Another effective technique for saving water is to harvest rainwater, typically the run-off from a roof. This water can be used for irrigation and other non-potable purposes.

LED LIGHTS, WATER CONSERVATION, SUSTAINABLE PACKAGING, AND BIOCONTROL CAN ALL PLAY A PART

To save water at the watering point, drip irrigation is recommended. This reduces water loss from evaporation and run-off by supplying water directly to the roots.

Recycling water can also reduce water usage significantly. Wastewater can be purified and used for non-potable purposes and irrigation.

SUSTAINABLE PACKAGING

The packaging of cannabis products is frequently made of unsustainable plastic. There are numerous alternatives to traditional packaging, including:

- **Biodegradable material**

Plant-based materials are commonly used to create biodegradable packaging, which decomposes rapidly in the environment.

- **Glass**

Glass can be recycled indefinitely.

- **Hemp-based packaging**

Hemp is a renewable resource that can be used to create a wide range of goods, including packaging.

INTEGRATED PEST MANAGEMENT

Although pest control is crucial to growing cannabis, conventional approaches can harm the environment. Integrated pest management, by contrast, is sustainable. It uses techniques such as:

- **Biological controls**

Natural predators can be used to reduce pest populations.

- **Mechanical controls**

These can include physical barriers such as nets that prevent pests from entering the growing environment.

HEALTHY SOIL

Where cannabis is grown in soil, healthy soil is vital. It enhances plant growth, reduces the risk of pests and diseases, and sequesters carbon.

The following methods help to enhance soil health:

- **Compost**

Ideal for producing nutrient-rich soil. Plant waste and other organic materials can be used to create compost on site.

- **Cover crops**

To enhance soil health, cannabis growers often use cover crops such as rye or clover.

- **No-till cultivation**

Leaving the soil undisturbed aids in nutrient and moisture retention.

CONCLUSION

Sustainable cultivation not only helps to protect the environment, but also increase efficiency and profitability for growers. And given the emphasis on environmental responsibility, cannabis growers that use sustainable methods have an obvious market advantage.

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