



Did You Know

A greenhouse dehumidification system has a large impact in creating the optimal climate for indoor growing systems.

Many growers maintain that soil and nutrients are the most important factors in growing cannabis, however it is environmental conditions that really matter.

Light, temperature, air circulation, light reflection and humidity are the main factors for creating a perfect growing environment.



Common Industry Problems

- Humidity
- Temperature
- Lack of ventilation
- Lack of light

- Light burn
- Over/under watering
- Too many nutrients
- Bud/root rot

TO ENABLE A YEAR-ROUND YIELD, THE GROW ROOM MUST MAINTAIN A CONSISTENT CLIMATE. TEMPERATURE AND HUMIDITY ARE BOTH ESSENTIAL FACTORS DURING GROWTH CYCLES

Designing The Ideal Environment

A number of factors play a role when designing the ideal environment:

- Room temperature
- Room size
- Number of plants
- Air circulation
- Plant species





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Indoor Agriculture And Relative Humidity

Dry air causes plants to lose more water which drives down the overall moisture content in the plant. Once the environment becomes too dry, plants lose more water than they are able to regain via their roots.

If you water the plant more – the plant could develop root rot.

If the air is too moist it puts cannabis at risk of developing bud rot.

NB: when we talk about the ideal humidity for any plant, we mean 'relative humidity' (RH). In simple term RH relates to the amount of water air can hold.

Whether growing in a greenhouse or closed facility, plants constantly transpire water, driving humidity up. If kept unchecked, relative humidity will quickly increase. Once the air is saturated with water vapor, the dew point is reached and water begins to condense on cooler surfaces, including on the plants and inside the buds. This condensation causes fungal pathogens, leading to disease outbreaks and rotting of the end product.

Cannabis is susceptible to a variety of humidity-related diseases such as botrytis, downy mildew and Alternaria.

What Is The Ideal Relative Humidity For Cannabis?

The relative humidity that is best for cannabis plants varies over the course of their lifecycle. RH levels should be changed during different cycles to optimise growth and health.







Late Bud Stage

The above is a guide. RH also depends on the plant's heritage.

THROUGHOUT THE CANNABIS LIFECYCLE, HUMIDITY CONTROL IS REQUIRED TO MAINTAIN OPTIMAL GROWTH AND DRYING CONDITIONS. A HUMIDITY CONTROL SYSTEM WILL IMPROVE GROW QUALITY, INCREASE DRY WEIGHT MASS AND ENCOURAGE THE MANUFACTURE OF COMPOUNDS AND IS THE MOST EFFICIENT METHOD IN ELIMINATING DISEASE.

How To Create The Optimal Environment For Cannabis

In an endeavour to create the optimal environment, indoor agriculture can encounter certain challenges in climate regulation including humidity levels.

Ultimately, nearly every indoor grower, no matter how small or large the application, is going to need a dehumidifier or humidifier to achieve indoor air quality.

Dehumidifiers

Dehumidifiers simultaneously improve grow quality, increase dry weight mass, and stimulates

the manufacture of compounds. There are two types of common dehumidifiers that can be applied, depending on a few variables; a desiccant dehumidifier or a refrigerant dehumidifier.

Humidifiers

There are many varieties of humidifiers in the market however only few are designed with commercial operations in mind. Humidifiers add moisture to the air. Young plants need upwards of 65-70% humidity for vigorous growth. This extra humidity is needed because root systems have not fully developed yet, so most of their water is absorbed through the leaves.



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