Humidity

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Humidity

Generally, low humidity tends to be more common than high humidity. In fact, when growing indoors under hot lights, most hydroponic growers tend to start off with very low humidity. This is problematic because humidity needs to be relatively high during the vegetative growth stages.

Example of a low humidity problem: a typical indoor NFT (Nutrient Film Technique) set-up.

Grow room equipment:

1 x 6ft ² channel multi-duct table

2 x 600w lights

2 x 6" RVK (440m³/h one intake, one exhaust)

When you start out your plants will be small with not much vegetation. The 2 x 600w lights will most definitely heat and dry the air in the grow room giving a relative humidity of 35-50% and a temperature of 25-28°C. This'll cause the small plants on the table to take up and release increased amounts of water to balance water vapor in the air. This stresses the plants considerably by taking away the energy it needs to produce new roots shoots and leaves. By increasing the humidity to between 60-70% during this vital early stage, you'll find the roots establish quicker, growth will be more vigorous and internodes remain compact. In general, your plants will grow faster and healthier.

A humidifier, such as one of the Centrigugal humidification systems will add humidity to your growroom.

For tight control of humidity, we recommend that you use a Centrifugal humidification system with HR-HRSA humidistat.

Alternatively, the Humidification kit-HR 15 will provide for all your humidification needs.

Once the plants have grown in size and produced more shoots and leaves, they'll take up more water into their roots and loose more water vapour from their leaves. As there is more water vapour being released into the air by the plant, the humidifier could now be switched off.

If the relative humidity in your grow room decreases to below 40%, you'll run into problems, one of these being over-fertilisation. High temperatures and low humidity will cause your plants to take up and release more water. Your plants will take up more water than nutrient, causing the nutrient to continually increase in strength. It is this increase in nutrient strength, coupled with an increase in water uptake and release that causes over-fertilisation of your plants and other nutrient related problems. Although the cause of many problems during the hotter summer months, the link between humidity and nutrients is often overlooked.

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Humidity and the Dark Cycle

Some indoor growers find that when the lights go out the relative humidity shoots up. This'll lead to mould problems like Botrytis on fruits or flowers if the night time humidity is too high. This can be corrected by using a dehumidifier. Be sure that the dehumidifier does not remove too much water during this time as it can over-dry the air, causing the plant to loose water through its leaf tips. This water can collect on the leaves, creating the perfect micro environment for spore germination. Ideally, you want your grow room to have a lower humidity during the day compared to the night. The ideal figures to aim at during fruit/flower formation would be 50-60% in the light cycle and 60-70% during the dark cycle.

Humidity and Propagation

During the propagation stages, rooting, cuttings or germinating seedlings humidity is controlled and kept high using a propagator, such as the Stewart Heat and Grow Electric propagator. We recommended that you spray the lid of your propagator daily to keep the humidity above 80%. This'll minimise water loss through the plant and concentrate its energy on producing new roots.

In summary, you'll achieve the best results with your plants if you keep humidity above 50% and below 70%, and make sure that the humidity is not lower in the night than day.

We hope this article has been of help. If you require further information, please don't hesitate to contact us.

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