

Discover a whole new world of cannabis cultivation

Case Study @KRUNCHBUBBLE

LOCATION_San Francisco Bay Area, California CROPS_Medical Cannabis (Blue Dream, Chocolate Hashberry, Romulan Grapefruit) TECHNOLOGY_Ursa Helios 320W Full Spectrum



With over 22 years of experience in growing top-shelf medical cannabis...

*photos from @KRUNCHBUBBLE's grow experiment

BACKGROUND

@KRUNCHBUBBLE approached URSA to discover the potential of LEDs on the potency and yield of plants. With over twenty-two years of experience in growing top-shelf medical cannabis, @KRUNCHBUBBLE was determined to test and discover the differences between URSA LEDs and the standard high pressure sodium (HPS) or metal halide grow lamps used in the industry.

The grow conditions consisted of four 4 x 4 grow plots, each consisting of three Helios 320W fixtures, spaced evenly in a 10 x 10 grow tent. All the identifiable factors were inclusive and controlled, including humidity, nutrients, temperature, vapor pressure density, and lighting cycles.

CHALLENGES

In the early stages of LED technology, LED fixture manufacturers lacking top-tier experience released a surge of low quality products. Because of this, LEDs in the grow market have received a poor reputation due to ineffective integration of the technology.

The main problem with the cannabis industry is that it requires a light fixture that will produce less heat and more effective light, while maintaining or reducing the wattage used. Current market solutions are driven by HPS and metal halide lamps, which have been proven to produce quality cannabis under the right factors.





BENEFITS

Replacing four 1000W HPS lamps with twelve Helios 320W fixtures resulted in significant changes in cannabis growth under the same grow factors. Beginning with the vegetative cycle, @KRUNCHBUBBLE noticed exceptional leaf to node strength. This means that the connection between the leaves and stem is more durable, showing increases in tensile strength and exaggerated swollen node connections. There was also a significant decrease in node to node stretching, implying that vertical stacking was magnified – hence more yield grown in the same vertical space. Since it's a single source light, the Helios 320W achieved more significant light penetration, resulting in reduced yellow leaves on the lower parts of the canopy when compared to the HPS lamp.

Under flowering, buds are shown to be denser and have increased sugar production, measured through lab testing after drying and curing. This increase can be noticed through the increase of THC crystal production, which appeared to be correlated through various batch testing. @KRUNCHBUBBLE also noticed that the cannabis buds were denser when compared to the yields grown under the HPS light.

Growing with URSA's Helios 320W resulted in higher potency and yield compared to a traditional 1000W high pressure sodium lamp.

CONCLUSION

By using the Helios 320W instead of the 1000W HPS lamps, power usage was reduced by 13%. Cannabis growth was shown to increase in yield by 9% and potency was increased by 3%, while using the same nutrients, time cycles, and environment factors for both types of lighting. The final yield weights were 7 pounds, 11 ounces, with each 4 x 4 tray producing 51.75 ounces of dried cannabis.

CONTACT US

USA Headquarters_ 48668 Milmont Drive Fremont, CA 94538 USA Tel: +1 (800) 766-6097

Canada Office_

71 Buttermill Ave Vaughan, ON. L4K 3X2, Canada Tel: +1 (877) 228-3250