

Medicine Man Analysis of Thrive Agritech's T5 LED

BACKGROUND

Medicine Man conducted a controlled experiment to investigate Thrive Agritech's T5 LED retrofit lamp vs. traditional fluorescent. Medicine Man wanted to determine if the LED T5 would grow cannabis as well or better than fluorescent – while cutting their T5 energy bill in half. Medicine Man Technologies offers cannabis consulting, licensing and state-of-the-art cultivation and dispensary operating solutions.

EXPERIMENTAL SETUP

Thrive Agritech's 30W LED T5 lamps were installed in Medicine Man's grow facility in Denver, Colorado. The LED lamps were evaluated against traditional 54W T5 fluorescent lamps. Both lighting technologies were used to grow cannabis from clones through the vegetative cycle. Plant performance and growth characteristics were monitored during the six-week experiment.

Results

Clones

Growth of the clones was noticeably better using the LED T5 lamps. Plant health was improved as there was no yellow streaking that often occurs as the result of overheating the plants with fluorescent lights. The LED lamp has much less heat in the beam, which prevented the unhealthy yellow streaking.



Vegetative Growth

Plant growth outcomes using the LED T5 during the vegetative cycle were equivalent to fluorescent, with the primary benefit being a 45% reduction in energy consumption for the LED solution. An additional benefit for the LED T5 was the lower heat output that resulted in an additional 8W reduction per lamp for the HVAC system.



"The LED T5 is more than just cost savings for us – the clones actually grow better under the LED light because there's a lot less heat. I wouldn't go any other way at this point."

- Tyler Schneider
Director of Operations, Medicine Man