

ASX and MEDIA RELEASE

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Roots' RZTO heating technology more than doubles cannabis yield in open field

- Average dry un-trimmed bud and leaf weight of heated cannabis plants was more than 200% higher than un-heated control crop.
- Results were achieved in an open field during late fall in Washington State with heavy frost conditions.
- Root Zone Temperature Optimisation (RZTO) heating system used on eight cannabis strains in collaboration with American Farms Consulting and its clientele of licensed cannabis producers.
- Increased yield would generate substantial additional revenues for cannabis producers.

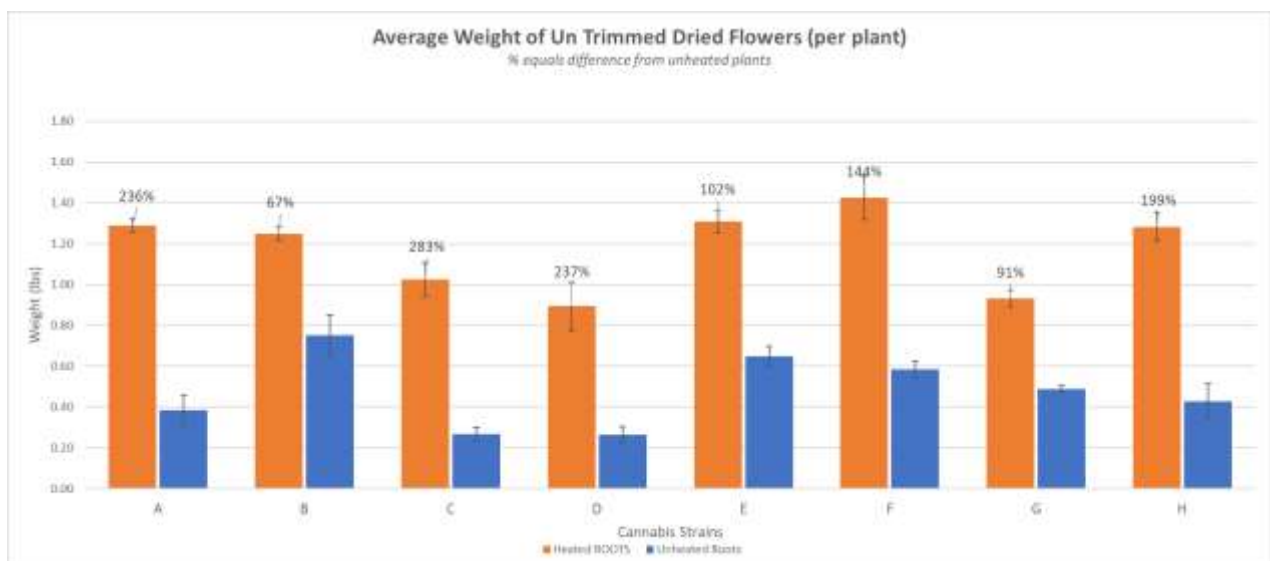
Roots Sustainable Agricultural Technologies Limited (ASX: ROO, Roots or Company) has released successful Root Zone Temperature Optimisation (RZTO) heating results on cannabis in an open field, showing a 60 to 283 percent increase in average cannabis dried un-trimmed bud weight.

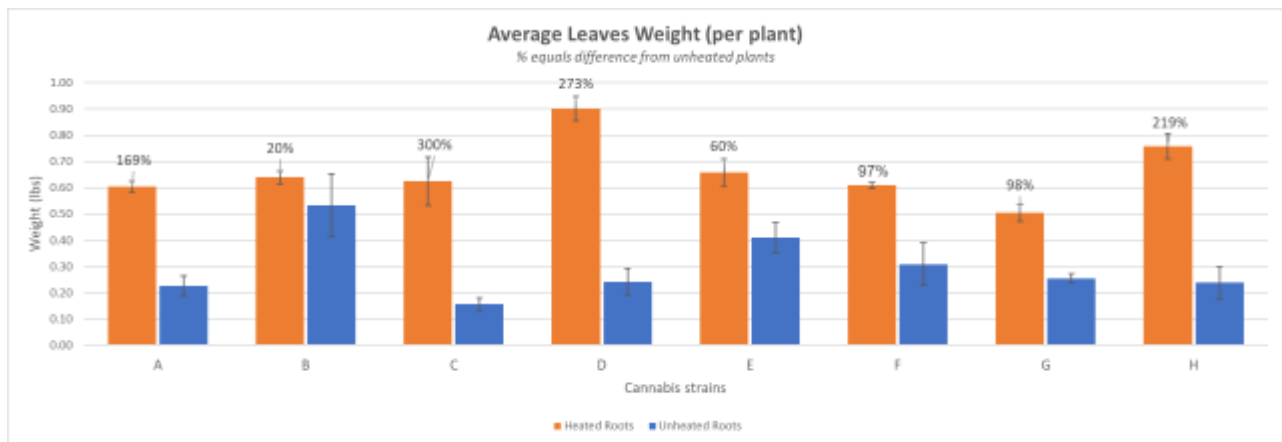
In addition, heated plants also increased the average dried weight of cannabis leaves.

Roots' patented RZTO technology was used to heat the roots of multiple cannabis strains in a world-first open field pilot in Washington State during October and November 2018. Results presented are based on a total of 81 heated plants, compared to 82 unheated plants from eight strains.

RZTO technology effectively stabilised root temperatures at optimal range despite heavy frost conditions and temperatures dropping below zero degrees centigrade.

These results follow promising interim results released in December, where the average wet weight of heated plants increased by 40 – 272 percent.





Roots CEO, Dr. Sharon Devir said, “This successful world-first proof of concept with American Farms Consulting validates the versatility of our climate management technology. Unlike traditional heating systems, which are capital and energy intensive, RZTO effectively combats extreme external weather conditions to significantly increase yield and crop profitability.

“The global cannabis market offers significant opportunities for our root zone heating and cooling technology, with promising results already achieved in both greenhouse and open field environments. The highly competitive US cannabis market is increasingly adopting ag-tech solutions, which lower initial capital outlays while maximising crop production, quality and profit year-round.

“Average dried un-trimmed bud weight increases varied due to the different types of cannabis strains and heat management architectures used, which correlates with previously reported wet weight yields.

“Based on current market prices, our RZTO performance results suggest cannabis growers could generate an additional US\$150,000 – US\$300,000 per 30,000 sqf a season. For most treatments and breeds, cannabis producers will see a return on their investment within a year.”

Chief executive at American Farms Consulting, Mr Elad Kohen said, “Roots’ RZTO heating technology can enable our clients to mitigate the risks associated with growing high-value crops in open fields or light deprivation tunnels. Despite difficult growing conditions, average dried bud weight increased substantially - this can result in increased income and reduced risk. We are excited to continue to work with Roots to solidify their technology as a truly helpful method for a profitable and sustainable future within our industry”

“Increased supply in the market has constrained prices, which is driving the adoption of ag-tech equipment which facilitate year-round crop production with higher returns.”

-ENDS-



About Roots Sustainable Agricultural Technologies Ltd:

Israeli-based, Roots Sustainable Agricultural Technologies Ltd. is developing and commercialising disruptive, modular, cutting-edge technologies to address critical problems being faced by agriculture today, including plant climate management and the shortage of water for irrigation.

Roots has developed proprietary know-how and patents to optimise performance, lower installation costs, and reduce energy consumption to bring maximum benefit to farmers through their two-in-one root zone heating and cooling technology and off the grid irrigation by condensation technology.

Roots is a graduate company of the Office of the Israeli Chief Scientist Technological Incubator program.

More information www.Rootssat.com

About Root Zone Temperature Optimization (RZTO):

Root Zone Temperature Optimization (RZTO) optimises plant physiology for increased growth, productivity and quality by stabilising the plant's root zone temperature. Leveraging the principle of Ground Source Heat Exchange (GSHE), Roots installs a closed-loop system of pipes. The lower part is installed at a depth where soil temperature is stable and not affected by weather extremes, and the upper part in the target crop's root zone just below the soil surface. Water flowing through the lower pipes is charged by the soil's stable temperature. The heated (or cooled) water is pumped through the pipes installed in the root zone, where the heat (or cold) is discharged.

This significantly increases yields, increases growing cycle planting options, improves quality, mitigates extreme heat and cold stress while significantly reducing energy consumption by stabilising and optimising the roots zone temperature.

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