

## ASX and MEDIA RELEASE

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### First RZTO sale in North America's cannabis sector to industry leader

- **Roots has received the first sale of its Root Zone Temperature Optimisation (RZTO) technology in North America to a key opinion leader and cannabis producer.**
- **A\$49,500/ US\$35,000 order involves the installation of Roots' RZTO heating and cooling technology for use on outdoor cannabis crops in Northern California.**
- **Follows successful open field root zone heating pilot during autumn in Washington State, where heating system increased average un-trimmed dry bud and leaf weight by 60 to 283 percent compared to un-heated control crops.**

**Roots Sustainable Agricultural Technologies Limited (ASX: ROO, Roots or Company)** has sold its first Root Zone Temperature Optimisation (RZTO) heating and cooling system in America to Tim Blake of Laytonville, California. Blake is a leader in the cannabis industry in the Emerald Triangle and beyond.

Valued at A\$49,500/ US\$35,000, the initial sale involves Roots installing its proprietary RZTO cooling and heating technology at Blake's property in Mendocino County, housing the cultivation farm called Little Hawk Collective, Inc. Blake leases the land to the Collective and is installing the RZTO system as a tenant improvement.

Given the strategic importance of the sale, the two parties have agreed to split the cost of installation each paying half.

Tim Blake said, "We are very excited to use our lands to demonstrate the RZTO system that is green technology and heats and cools the cannabis roots, leading to a healthier plant and increasing the yield substantially. We are going to monitor the growing from the initial planting through the harvest to determine the yield increase and the energy savings. This is a demonstration, and if successful, we will be utilizing the RZTO system at partner's farms also".

The sale is a result of ROOTS' recent Technology Showcase in North America and builds on the successful RZTO heating results on cannabis in an open field in Washington State, where average dried un-trimmed bud weight increased by 60 to 283 percent despite challenging autumn growing conditions of heavy frosts and temperatures below zero degrees.

Climate management technologies are increasingly sought after by cannabis producers in North America as large-scale cultivation moves from indoor growing to greenhouses and open field operations. Roots' RZTO technology minimises the impact of external weather conditions.

Roots CEO, Dr. Sharon Devir said, "Roots has a unique offering in the American cannabis market with the only known and successfully tested open field Root zone heating and cooling technology. Our RZTO technology enables cannabis producers to maximise crop production, quality and profit and supplies security. In greenhouse set ups it also offers significant energy consumption reduction. This

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first sale to an industry leader is indicative of the potential of our RZTO technology within the lucrative cannabis sector.

“The highly competitive US cannabis market is increasingly seeking to adopt sustainable ag-tech solutions, with lower initial capital outlays and reduced operating expenses to maximize crop production, quality and profit year-round.”

“North America’s cannabis market has developed rapidly in recent years . Thirty-two US states now allow cannabis for medical use, 16 for Canabidiol (CBD) and 11 states allow recreational use. Market size of the US sector has increased 30 percent in 2018 to US\$12 billion with 10,000 active business licences across cultivation, extraction and manufacturing, retail, distribution and testing. It is an evolving and competitive market where increased supply is driving the adoption of sustainable ag-tech solutions to reduce capital outlays and ongoing operational expenses.

“We see the North American cannabis market as offering significant sales opportunities for our root zone heating and cooling technology. The Little Hawk Collective farm on Tim Blake’s property in the Emerald Triangle was one of the producers we visited on the recent technology showcase. We expect this to be the first of many sales with key producers in the region.”

-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](http://www.Rootssat.com)

#### **About Root Zone Temperature Optimization (RZTO):**

Root Zone Temperature Optimisation (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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### **About Tim Blake, Cannabis Industry Leader**

Tim Blake is a 30 year resident of Laytonville, CA in Mendocino County, the heart of the Emerald Triangle that produces the best cannabis in the world. Blake was one of the founders of the 9.31 program that allowed for the Mendocino County Board of Supervisors to pass the ordinance allowing the first legal cannabis cultivation permits to produce medicinal cannabis for patients anywhere in the world.

Blake also founded The Emerald Cup 15 years ago. This event is California's premier cannabis destination, highlighting outdoor grown, pesticide free cannabis growers and established a competition to determine the best cannabis products in many categories. The Emerald Cup is held in Santa Rosa, CA in mid-December at the Sonoma County Fairgrounds. The Emerald Cup prides itself in bringing together experts and educators in the cannabis field to share their knowledge with event participants.

#### **Investor Enquiries**

Justin Foord  
Market Eye  
[justin.foord@marketeye.com.au](mailto:justin.foord@marketeye.com.au)  
+61 2 8097 1200

#### **Media Enquiries**

Tristan Everett  
Market Eye  
[tristan.everett@marketeye.com.au](mailto:tristan.everett@marketeye.com.au)  
+61 403 789 096

#### **Corporate Enquiries:**

EverBlu Capital  
E: [info@everblucapital.com](mailto:info@everblucapital.com)  
P: +61 2 8249 0000

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