

ASX and MEDIA RELEASE

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Israeli Government subsidy delivers Roots its first local RZTO sale

- **Roots has sold its first Roots Zone Temperature Optimization (RZTO) system for basil crops in Israel**
- **Order comes just a month after Roots' RZTO technology was approved for a subsidy of up to 30 percent for basil growers by the Israeli Government**
- **Sale follows successful pilot with the farmer earlier in the year, where plant roots were heated to grow plants faster, increasing yield by 66%**

Roots Sustainable Agricultural Technologies Limited (ASX: ROO, Roots or Company) has sold its first Root Zone Temperature Optimization (RZTO) system for use on basil crops in Israel. The sale follows a successful pilot with the farmer earlier this year and the granting of a up to 30 percent subsidy for basil farmers purchasing Roots' RZTO technology by the Israeli Government last month.

The order, valued at AU\$30,000, is expected to be the first of many as Israeli basil growers take advantage of the government subsidy.

Dr Sharon Devir, CEO and co-founder said, "This first sale under the Precision Ag Program, a collaboration between the Israel Ministry of Agriculture and the Ministry of Finance, shows the value of government supporting innovation in agri-tech. We expect the subsidy will generate additional commercial sales and opportunities with Israeli basil and other growers."

The farmer took part in a successful pilot in Carmia during the Israeli winter where the roots of traditional summer basil plants were heated an average of five-degrees warmer using Roots' RZTO technology. The heated plants grew faster than control plantings, increasing yield and average plant size by 66 and 35 per cent respectively.

"During the pilot we were able to demonstrate to the farmer the economic value of our root zone heating and cooling technology. Stabilising the basil roots temperature during winter allowed the farmer to dramatically increase crop production and yield, extending seasonal crop growth periods year-round with relatively low energy costs and, ultimately, increase profitability.

"Our first RZTO order by a basil grower highlights the importance of commercial pilots in the ag-tech sector, enabling farmers to test new technology on different crops, environments and growing conditions before purchasing. The Israeli Government subsidy has reduced the initial outlay required as well as provided independent verification of the multiple benefits of our RZTO technology.

"As basil requires high temperatures for normal development, the cost of heating the volume of greenhouses makes it prohibitive to grow in winter in many parts of the world due to energy costs involved. RZTO heats the crop roots, rather than the air, providing increased plant protection against cold for substantial less initial investment in heating system and energy costs throughout the growing cycle."

For the first time, Roots will use a self-embedding machine to install its RZTO system. The modular device can easily be mounted to any two-wheel tractor and significantly reduces installation times.



Roots' self-embedding machine being used to install RZTO pipes.

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 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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