

16 September 2019

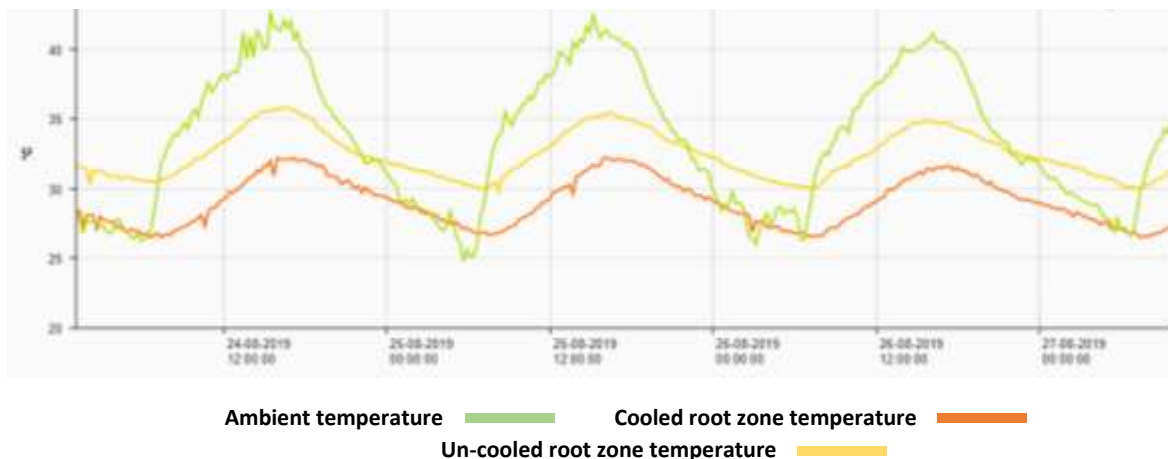
Roots' RZTO cooling technology increases total plant yield of basil by 30% under extreme desert heat conditions

- RZTO cooling technology increased yield of basil by 30% compared with un-cooled control crops
- Reduced basil mortality rate by more than 60% compared to uncontrolled crops
- Results were achieved under extreme climate conditions exceeding 40C°
- Latest results provide further proof of Roots' unique ability to create year-round food production security for producers in summer and winter months

Roots Sustainable Agricultural Technologies Limited (ASX: ROO, Roots or Company) has successfully used its Root Zone Temperature Optimisation (RZTO) cooling technology to increase the harvest yield of basil plants by 30 percent under extreme heat in the Arava desert in Israel.

While basil is grown and harvested in warmer months, the plant is highly susceptible to extreme weather conditions, leading to high mortality rates for producers and unprofitable farming practices. Using RZTO cooling technology, Roots was able to reduce plant mortality by more than 60%, resulting in a 30 percent increase in yield compared to un-cooled control crops.

Root zone temperature comparison during summer



The positive results follow previous tests in winter near the Mediterranean Coast where Roots' RZTO technology was used to heat the roots of basil to increase yields by 66 percent and average plant size by 35 percent. In addition, a 30 percent subsidy has been provided to basil growers by the Israeli Government under the Precision Ag Program. It is a collaboration between the Israel Ministry of Agriculture and the Ministry of Finance, which is investing AU\$17.6m (NIS \$45m) in innovative ag-tech and machinery.

Roots CEO, Dr Sharon Devir said, “The basil cooling test results reaffirms Roots’ product offering and validates the value we can offer producers year-round. Our RZTO cooling technology significantly improves yield on a range of crops, including basil, when compared to uncontrolled crops and saves on plant replacement costs due to reduced risk of mortality rates from volatile weather conditions.

“RZTO offers options for producers’ with increased planting cycles during traditional off-seasons and provides significant savings on energy costs when compared to commonly used air heating and cooling systems.



RZTO cooled basil crop (left) vs uncooled basil crop at a commercial farm in the Arava desert, Israel

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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

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