

30 April 2020

## March 2020 Quarterly Activity Report and Appendix 4C

### Highlights:

- Design Patent successfully registered for revolutionary heat exchange stub in Australia
- Maturing commercialisation strategy - a follow-on sale completed valued at A\$36K to a leading medicinal cannabis grower in Israel - total sale value of A\$84K
- Adjusting cash flow expenditures and staff alignment due to COVID-19 impact
- Exclusive sales and distribution agreement signed with leading Italian ag-tech company Cairo & Doutcher to drive entry of RZTO Technology in Italian agriculture market
- Successful Proof of Concept study completed in Israel demonstrates RZTO heating technology increases total yield of Okra by 78% under extreme cold weather conditions
- Collaboration with FinePro Consulting Ltd to explore off-grid opportunities for RZTO technology in Israel and other major markets globally
- A\$500k placement completed – provides added flexibility to drive commercialisation of RZTO technology
- Mr. Boaz Wachtel appointed Chief Executive Officer and Executive Chairman to drive expansion into global cannabis sector
- RZTO sales pipeline continues to build momentum – multiple revenue generating opportunities currently being pursued across key markets globally

Roots Sustainable Agricultural Technologies Limited (ASX: ROO, “Roots” or “the Company”) is pleased to provide this update to shareholders for the period ended 31 March 2020 (“the quarter”).

**Commenting on important developments from the March quarter, Roots Executive Chairman and CEO, Boaz Wachtel said:** “Our priority for the quarter was to capitalise on several important collaboration and commercialisation opportunities across both the general agriculture and cannabis sectors, as highlighted by our successful entry into the Italian market and growing sales into Israel.

“Our exclusive agreement with Cairo & Doutcher provides a major steppingstone and access point into the lucrative Italian ag-tech market and given the positive feedback received to date we are confident that we will be able to deliver a steady stream of sales from this market.

“Our deployment of RZTO technology into the cannabis sector continued apace during the quarter as highlighted by our second commercial sale into Israel. This sale was highly encouraging on multiple



levels, as it not only validates our product offering to cannabis growers, it also considerably boosts RZTO's visibility with other large-scale producers in the market. We continue to see great global opportunity to expand into the rapidly growing cannabis sector and we are working hard to commercialise a number of these opportunities as quickly as possible.

"We are continuing to witness growing demand and interest for our root zone heating and cooling technology from significant ag-tech players globally and I look forward to reporting on further operational developments and RZTO sales over the coming weeks."

### **Operational Overview**

#### **Design Patent registration received for revolutionary heat exchange stub**

In January, Roots reported that it had significantly strengthened its intellectual property position by successfully registering a design patent for the Company's revolutionary heat exchange stub in Australia.

The heat exchange stub is designed to be inserted into the tops of plant's pots and grow bags to significantly simplify working procedures and lower the installation cost associated with Roots' Root Zone Temperature Optimisation (RZTO) technology.

RZTO technology optimises plant physiology for increased growth, productivity and quality by stabilising the plant's root zone temperature year around. Optimal Root zone temperatures is known to be the most influential parameter in plant's physiology besides water.

The Company's heat exchange stub enables the mobility of pots and grow bags during the growing cycle. Chains of stubs with insulated pipes in-between can be used for row installations. The solution caters primarily to the nursery, greenhouse and cannabis markets and has been successfully tested to Roots' research hub and among Cannabis growers in Israel (refer ASX announcement: 27 September 2019).

Importantly, the design patent will protect intellectual property developed and owned by Roots, while it sells the solution internationally.

#### **Second commercial sale of RZTO technology to Israeli cannabis grower**

A primary focus for Roots during the quarter was the continued commercialisation of the Company's RZTO technology.

Further commercialisation progress was achieved in February, with Roots securing a \$36K AUD sale on top of previous order of \$47K AUD for its RZTO, from Barlev agricultural crops Ltd (Barlev), a prominent Israeli medical cannabis producer.

The order was secured following successful commercial outcomes of RZTO technology already installed on Barlev's farm in Israel.

Growing cannabis poses a unique set of challenges for growers, due to multiple stages of growth and special conditions required. Root's RZTO technology can mitigate these challenges by providing a stable temperature during any season and growth stage to ensure supply stability and greater plant standardization.



As part of the follow-on order, Roots installed its unique RZTO technology across an additional 1,500 square metres in one of Barlev's greenhouses. Roots is optimistic that additional orders from Barlev will follow as it continues to expand its growing facilities in the coming months.

The sale provides further validation of the RZTO technology and builds on the Company's ongoing push into the global cannabis sector.

#### **Roots signs sales and distribution agreement with Italy's Cairo & Doutcher for RZTO Technology**

During the quarter, Roots cemented its entry into the growing Italian agriculture sector through an exclusive and binding sales and distribution agreement for RZTO technology with leading Italian ag-tech company Cairo & Doutcher (<https://www.cairodoutcher.com/>).

The exclusive agreement commits Cairo & Doutcher to achieving clearly defined sales targets totalling €3,500,000 between now and the end of 2023. A breakdown of sales per year as reported on 13th February 2020 is provided below:

Cairo & Doutcher has committed to sell five systems in year 1 to maintain exclusivity. Ongoing exclusivity will be secured through the following minimum annual sales commitments:

- Year 2: total sales valued at €500,000
- Year 3: total sales valued at €1,000,000
- Year 4: total sales valued at €2,000,000

This agreement follows the successful installation of Roots' RZTO system for root zone heating and cooling of flowers at Cairo & Doutcher's greenhouse in Southern Italy during Autumn 2019. This installation will continue to be used for customer demonstrations in Italy and three more installations for other types of crops will be added.

Italy is an excellent market for Roots to build sales through Cairo & Doutcher. It is in the top three European countries for agricultural production. Fruit and vegetables, viticulture and olive crops are the main sectors of Italian agriculture.

#### **RZTO heating technology increases total yield of Okra by 78% under extreme cold weather conditions**

In February, Roots reported that it had achieved a key development milestone with the completion of another successful proof of concept (POC) study in Southern Israel, which demonstrated that RZTO heating technology successfully increased the yield of Okra plants by 78% under extreme cold weather.

The POC was conducted over a four-month period with the RZTO technology activated only during the winter months to heat the roots zone of the Okra. The system was able to maintain a stable root temperature of 22C despite air temperature fluctuating between 25C during the day and 8C during the night. The farmer's Okra growing protocol is based on two annual harvesting cycles.

This POC further illustrates the broad adaptability of the RZTO technology with a wider array of plant groups. Okra forms part of the Malvaceae family which contains ~243 genera and at least 4,225 different species of herbs, shrubs, and trees. Okra itself represents a large market opportunity with its seed market growing at a compound annual growth rate (CAGR) of 9.8% and expected to be valued at ~US\$352m by 2023.

#### **Strategic collaboration with FinePro Consulting Ltd**

In early March, Roots started a collaboration with FinePro Consulting Ltd, which is the representative in Israel of Robur, a leading Italian gas-based heat pumps manufacturer.



The collaboration will focus on exploring complementary sales opportunities within the growing agricultural technologies sector. Importantly, it will also ascertain the level of demand for off-grid technologies with respect to root zone heating and cooling, and green house climate control.

Many farmers around the world are not connected to electricity grids, a limiting factor on their ability to operate climate management options in the greenhouses. Tapping into this market will significantly bolster the sale potential of RZTO technology.

One of Robur's heat pumps is already installed in California and following the successful results achieved from the installation, the company opted to expand the collaboration for both the Israeli and international markets.

The two parties will use Robur's teams in Israel for turnkey installations, with Roots technical staff to allow farmers to use RZTO technology for off grid installations.

Using Robur's gas operated off grid heat pumps opens vast markets in Israel, California and elsewhere to work with gas-operated heat pumps. In addition, Roots received initial design from Robur for an off-grid Irrigation by condensation (IBC) set up that includes gas operated chiller backed by small solar panel installation and batteries.

This design is intended to lower the IBC overall price and facilitate the use of IBC where electricity is not available or solar panels are not fully functional due to heavy cloud cover. Special terms and prices will be awarded to Roots by Robur as a function of the number of units bought.

#### **A\$500k placement completed**

In February, Roots received firm commitments to raise A\$500,000, before expenses, by way of a placement of CDIs to sophisticated and professional investors.

The funds raised from the placement will be used to commercialise RZTO marketing and sales opportunities in various jurisdictions, expand cannabis growers marketing and sales activity in North America, to fund the pursuit of new cannabis and hemp opportunities and to provide ongoing working capital.

Everblu Capital Pty Ltd, (an entity controlled by Roots Director, Mr Adam Blumenthal) acted as Lead Manager to the Placement and received a capital raising fee of 6% of funds raised and will be issued 2,000,000 CDIs, subject to shareholder approval to be sought at the next General Meeting.

#### **March Quarter Board Changes**

In January, Mr. Boaz Wachtel was appointed as Chief Executive Officer and Executive Chairman, with Mr. Sharon Devir transitioning to the role of Executive Director and Business Development.

The planned change in leadership roles coincided with Roots placing a much greater focus on pursuing opportunities in the global cannabis sector.

Boaz Wachtel is a pioneer and one of the global leaders of the cannabis industry who co-founded two ASX-listed cannabis-related companies during the past five years. He was previously CEO and Chairman of one of the first ASX-listed cannabis companies.

Mr Wachtel was also partly responsible for formulating the legalisation for Medical cannabis in Israel and he is involved in various other global medical cannabis initiatives. Mr Wachtel is the inventor of Roots' RZTO and IBC's technologies which are the core technologies of the Company.



In February, Mr Dror Nagel resigned as non-executive director of the Company. Mr Nagel had been a non-executive director since July 2019.

On 24th February, Roots announced the appointment of Dr James Ellingford as a Non-Executive Director of the Company. Dr Ellingford previously served as International President of a multi-billion dollar NASDAQ software business Take-Two Interactive Software with its headquarters in Geneva and New York. Dr. Ellingford has vast international experience in the software industry and has close ties with financial institutions and governments throughout the world.

### **Outlook**

Roots continues to be well positioned to grow sales into key target markets globally. Increased sales volumes are expected to be driven largely by increasing market visibility and successful Proof of Concept studies and pilot installations.

We are actively targeting further near-term opportunities across the lucrative cannabis cultivation, ag-tech and organic meat replacement markets and we are strongly positioned to capitalise on our growing reputation with several major players within these markets.

Notwithstanding some of the difficult market conditions we have encountered this quarter, 2020 remains on-track to deliver an exciting year of growth for the business. We remain committed to capitalising on value accretive opportunities wherever possible for our shareholders and I look forward to reporting further positive news from across the business in due course.

**-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 faced by agriculture today, including management of plant's root zone temperatures 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 Optimization (RZTO) optimises plant physiology for increased growth, productivity and quality by stabilising the plant's root zone temperature. Using Ground source heat exchange (GSHE) installations either alone, or in combination with heat pumps, or with heat pumps alone, ROOTS is able to provide accurate range of root zone temperatures for farmer and the plants to obtain the multiple benefits.

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.

*This announcement was authorised to be given to the ASX by the Roots Executive Directors, Mr Boaz Wachtel and Mr Sharon Devir.*

**Corporate Enquiries:**

EverBlu Capital

E: [info@everblucapital.com](mailto:info@everblucapital.com)

P: +61 2 8249 0000

**ROOTS Enquiries:**

Adi Moll Teichman

E: [adi@rootssat.com](mailto:adi@rootssat.com)

P: +972 54 457 3679

**Released through:** Henry Jordan, Six Degrees Investor Relations, +61 (0) 431 271 538

**Forward looking statements**

This announcement contains forward-looking statements with respect to ROOTS and its respective operations, strategy, investments, financial performance and condition. These statements generally can be identified by use of forward-looking words such as "may", "will", "expect", "estimate", "anticipate", "intends", "believe" or "continue" or the negative thereof or similar variations.

The actual results and performance of ROOTS could differ materially from those expressed or implied by such statements. Such statements are qualified in their entirety by the inherent risks and uncertainties surrounding future expectations. Some important factors that could cause actual results to differ materially from expectations include, among other things, general economic and market factors, competition and government regulation.

The cautionary statements qualify all forward-looking statements attributable to ROOTS and persons acting on its behalf. Unless otherwise stated, all forward-looking statements speak only as of the date of this announcement and ROOTS has no obligation to up-date such statements, except to the extent required by applicable laws.