

28 January 2021

December 2020 Quarterly Activities Report and Appendix 4C

Highlights:

- **Significant inroads made to expand the Company’s global cannabis footprint— buoyed by International regulatory shifts in the sector**
- **Second generation of revolutionary heat exchange probe introduced - combining root heating and cooling with irrigation and fertilisation through a single system**
- **Placement of A\$3.955m to institutional, sophisticated and professional investors to predominantly advance opportunities in Roots’ dedicated plant-based meat division.**

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

Operational Overview

Roots capitalises on positive regulatory shifts in the cannabis sector, securing significant international market opportunities

During the period, the Company welcomed a decision from the United Nations Commission on Narcotic Drugs, which accepted a World Health Organisation recommendation to remove cannabis and its derivatives from Schedule IV of the 1961 Single Convention on Narcotic Drugs.

Roots is confident that the decision will have a favourable impact on the sector more broadly, as many countries are expected to initiate national medical cannabis programs in full adherence with UN drug conventions.

Furthermore, the Company is expected to benefit significantly from the ruling as some existing cultivation operations are likely to increase production and new countries will enter the medical cannabis sector allowing commercial cultivation where Roots systems are successfully used.

The ruling has the capacity to unlock a number of near-term sales opportunities for the Company, which has a significant pipeline of sales opportunities established in the cannabis cultivation sector globally.

Following the UN decision to reclassify cannabis and the Court of Justice of the European Union (CJEU) ruling to unlock the European CBD market, the Company immediately expanded its sales efforts with new and existing partners to capitalise on the regulatory shifts.

On December 7, the Company announced a new sales contract for its RZTO technology valued at A\$58,000 from My Green Fields, a medicinal cannabis farm located in Northern Israel.

The sales contract consisted of over 1,000 units of Roots’ proprietary heat exchange probe, which were inserted into pots located around the farm. The technology was deployed to specifically assist grow larger cannabis plants and increase number of clones in the mother room as well as advance growth in the farm’s flowering room.

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The Company commenced the installation of over 1,000 heat exchange probe units with the My Green Fields cannabis farm on December 15 – marking the first deployment of Israeli-manufactured heat exchange probes on a large commercial scale (see Figure 1).

Also in December, the Company secured a non-binding Letter of Intent (“LOI”) with existing partner, smart technology provider, Humboldt CCTV (“Humboldt”) to integrate RZTO technology and revolutionary heat exchange stub product into Humboldt’s Smart Agriculture solution.

The development followed an initial non-binding LOI with Humboldt to market, sell and distribute root zone heat exchange kits in Northern California. Under the new agreement, both parties will collaborate to integrate Roots’ solutions into Humboldt’s SmartAg technology.

As part of the agreement, Roots will invest USD\$100,000 in Humboldt CCTV in return for 10% of its holdings. The invested proceeds will be devoted to marketing and sale initiatives in the CA USA Cannabis sector. The parties are negotiating to finalise the structure and financial aspects of a definitive agreement.



Figure 1: Heat pump and water tank (on the left) chamber installed at My Green Fields cannabis farm to be used for temperature control

Revolutionary heat exchange probe introduced

In October, Roots reported that it had developed a next generation agricultural solution combining plant irrigation and fertigation functions with the Company’s revolutionary heat exchange probe technology, merging a number of systems into one complete offering.

This represented a breakthrough in agricultural technology and Roots is confident that the new solution will significantly reduce costs for farmers, as they will now be able to use the one solution infrastructure for two functions.

The heat exchange probe is designed to be inserted into the tops of plant’s pots and grow bags to significantly simplify farmer’s working procedures and reduce cost associated with Roots’ Root Zone Temperature Optimisation (RZTO) technology installations (see figures 2 and 3).



The new, multipurpose solution now allows growers to couple various irrigation emitters including drip, nozzle and sprayers to its probe technology, as well as combine liquid fertilisers with the irrigation function also allowing for plant fertigation through a single piping system. The Company also anticipates that installation of the multipurpose solution will drastically reduce the cost to purchase two separate systems.



Figures 2 & 3: Heat exchange probe coupled with irrigation and fertigation functionality

RZTO pilot trial commences on grapevines in Israel

The Company commenced a pilot trial to test the effects of root zone heating of grapevines using its proprietary RZTO technology on Calmor grapes in North Central Israel. The pilot, which commenced in November, is well under way and will be undertaken on 220 plants over 2 years with results expected within 9 to 12 months.

The trial is utilising a heat pump to heat and cool water in the pipes running alongside the plants. If successful, the trial would leave Roots well placed to pursue opportunities with grape growers and wine producers globally. World wine production reached peak levels in 2018, with consumption continuing to grow. The total revenue generated in the wine market in Europe alone is estimated to reach US\$159Bn in 2020 and grow by 6.7% (CAGR 2020 – 2025).

LOI signed for the Balkans broadens European footprint

In December, the Company made significant inroads in expanding its global footprint with the signing of a Letter of Intent (LOI) with established agriculture and water treatment technologies supplier, Avital COO ("Avital") signifying the RZTO entry into Serbia and other countries in the Balkans.

Under the LOI, Roots and Avital will progress a demonstration of the RZTO and heat exchange probe technology at one of Avital's customer farms which is a commercial grower of blueberries (see Figures 4 and 5). Further, both parties agreed to progress the LOI to a binding agreement whereby Avital becomes Roots' preferred distributor for Serbia and select Balkan nations - meaning Roots will have a broader presence in Europe encompassing the Balkans, Italy and Spain.



Figures 4 & 5: Avital's customer site in Serbia

LOI secured with leading organic Czech Republic hemp producer to pursue hemp-based meat opportunities

In keeping with its robust business development pipeline, the Company secured a non-binding LOI with leading Czech-based organic hemp grower and hemp food manufacturer Hempoint s.r.o. (Hempoint) to progress opportunities in the lucrative organic plant-based meat market.

In the definitive agreement, Roots and Hempoint will review Academic IP, technical development and sourcing of protein from hemp for plant-based meat product initiatives. Both parties will review the current state of technologies to increase hemp protein content and will choose a specific technology to collaborate and potentially license to use to increase protein content.

The alternative meats market is an exceptional opportunity for Roots. Plant-based meat products are gaining considerable traction, driven by consumers seeking health dietary options and R&D efforts from health experts and food manufacturers. The market is anticipated to grow to US\$27.9Bn and to over US\$240Bn in the next two decades.

Corporate Overview

A\$3.955 million placement completed

In December, Roots secured firm commitments from institutional, professional, and sophisticated investors to raise up to A\$3,955,851 (before costs), through the issue of approximately 179,811,397 CDIs at an issue price of \$0.022 per CDI. EverBlu Capital Pty Ltd ('EverBlu') acted as lead manager and corporate advisor for the Placement. EverBlu received a fee of 6% of the total funds raised and, subject to shareholder approval, will be issued 3,000,000 CDIs for every \$1 million raised under the Placement, being a total of 11,867,553 CDIs.

The funds raised from the placement will be used to deliver more local and international sales, fund operating and administrative expenses, ensure patent maintenance and registering new IP, pursue experimental greenhouse maintenance and pilots, manufacture plastic mouldings in Israel, payout existing debt and expand the protein programs and pursue more global cannabis JV and M&A opportunities.

Financials

The Company's cash balance at the end of the quarter was approximately US\$3.067m. The Appendix 4C showing the cash flows for the quarter is attached.

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Commenting on the progress made in the December quarter, Roots Executive Chairman and CEO, Boaz Wachtel said: “The Company is reaping immediate benefits from the regulatory shifts in the cannabis sector with our growing business development pipeline and contractual sales secured in Israel.

“As we advised, the decisions by the UN and the CJEU led to many enquiries about our technology and its applicability in the cannabis sector, which will be a major demand driver for RZTO. And we will continue to aggressively pursue sales and business development opportunities to capitalise on this interest.

“We are delighted with the advancements we have made in our technology to increase functionality, and we are seeing significant uptake in a broader range of potential customers across both agribusiness and cannabis sectors. We look forward to further advancing those initiatives underpinned by a strong cash balance which provides significant optionality going forward.”

-ENDS-

ASX Listing Rule 4.7C.1

There were no material developments or changes in business activities for the quarter. Operational expenditure during the quarter was US\$0.663m. The majority of this expenditure was research and development, advertising and marketing, staff costs, product manufacturing and administration and corporate costs.

ASX Listing Rule 4.7C.3

The following table sets out the information as required by ASX Listing Rule 4.7.3C regarding payments to related parties of the entity and their associates:

Related Party	Amount	Description
Directors (Executive)	US\$49,007	Periodical Director Fees in accordance with Director Agreements
Directors (Non-Executive)	US\$115,363	Periodical Director Fees in accordance with Director Agreements
Everblu Capital Pty Ltd	US\$182,909	Capital Raising Fees
Everblu Capital Pty Ltd	US\$38,540	Corporate Advisory Fees

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 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.Rootsat.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.

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

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.

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Appendix 4C

Quarterly cash flow report for entities subject to Listing Rule 4.7B

Name of entity

Roots Sustainable Agricultural Technologies Ltd

ARBN

619 754 540

Quarter ended ("current quarter")

31 December 2020

Consolidated statement of cash flows	Current quarter US\$'000	Year to date (12 months) US\$'000
1. Cash flows from operating activities		
1.1 Receipts from customers	47	131
1.2 Payments for		
(a) research and development	(12)	(129)
(b) product manufacturing and operating costs	(23)	(65)
(c) advertising and marketing	(435)	(1,300)
(d) leased assets	-	-
(e) staff costs	(113)	(496)
(f) administration and corporate costs	(219)	(782)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	-	-
1.5 Interest and other costs of finance paid	(7)	(3)
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other (institutes)	99	74
1.9 Net cash from / (used in) operating activities	(663)	(2,570)
2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) businesses	-	-
(c) property, plant and equipment	(21)	(21)
(d) investments	-	-
(e) intellectual property	-	-
(f) other non-current assets	-	-

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Consolidated statement of cash flows		Current quarter US\$'000	Year to date (12 months) US\$'000
2.2	Proceeds from disposal of:		
	(a) entities	-	-
	(b) businesses	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) intellectual property	-	-
	(f) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	8	(46)
2.6	Net cash from / (used in) investing activities	(13)	(67)
3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	2,979	5,332
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(178)	(320)
3.5	Proceeds from borrowings	-	243
3.6	Repayment of borrowings	(59)	(59)
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	(37)
3.10	Net cash from / (used in) financing activities	(2,742)	5,159
4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	795	341
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(663)	(2,570)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(13)	(67)

Consolidated statement of cash flows		Current quarter US\$'000	Year to date (12 months) US\$'000
4.4	Net cash from / (used in) financing activities (item 3.10 above)	2,742	5,159
4.5	Effect of movement in exchange rates on cash held	206	204
4.6	Cash and cash equivalents at end of period	3,067	3,067

5. Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts		Current quarter US\$'000	Previous quarter US\$'000
5.1	Bank balances	3,067	3,067
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	3,067	3,067

6. Payments to related parties of the entity and their associates		Current quarter US\$'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	203
6.2	Aggregate amount of payments to related parties and their associates included in item 3	183

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.

7. Financing facilities

Note: the term "facility" includes all forms of financing arrangements available to the entity.

Add notes as necessary for an understanding of the sources of finance available to the entity.

- 7.1 Loan facilities
- 7.2 Credit standby arrangements
- 7.3 Other (please specify)
- 7.4 **Total financing facilities**

	Total facility amount at quarter end US\$'000	Amount drawn at quarter end US\$'000
7.1	-	-
7.2	-	-
7.3	-	-
7.4		

7.5 Unused financing facilities available at quarter end

-

- 7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.

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8. Estimated cash available for future operating activities**US\$'000**

8.1	Net cash from / (used in) operating activities (Item 1.9)	(663)
8.2	Cash and cash equivalents at quarter end (Item 4.6)	3,067
8.3	Unused finance facilities available at quarter end (Item 7.5)	-
8.4	Total available funding (Item 8.2 + Item 8.3)	3,067
8.5	Estimated quarters of funding available (Item 8.4 divided by Item 8.1)	4.63

Note: if the entity has reported positive net operating cash flows in item 1.9, answer item 8.5 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.5.

- 8.6 If Item 8.5 is less than 2 quarters, please provide answers to the following questions:

8.6.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?

Answer: N/A.

8.6.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?

Answer: N/A.

8.6.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Answer: N/A.

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 28 January 2021

Authorised by: The Board of Roots Sustainable Agricultural Technologies Limited
(Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.