

31 July 2019

Roots gains traction in North America's cannabis market

June 2019 Quarterly Report and Appendix 4C

Highlights

- **Received A\$114,000 in RZTO sales orders from three North American cannabis producers.**
- **RZTO's very strong cannabis yield increase results and quick ROI supports strategic expansion plan in the N American Sector.**
- **Showcased Irrigation by Condensation (IBC) and RZTO technologies to South Australian Government and Elders Limited delegation.**
- **Successful RZTO commercial demonstrations on Yard long beans and Tomatoes, increasing crop yields by 40 and 19 percent respectively.**
- **Secured over A\$1.6 million via private placement to commercialise RZTO opportunities.**

ROOTS Sustainable Agricultural Technologies (ASX:ROO, the "Company" or "ROOTS") is pleased to provide its quarterly update for the three months ending 30 June 2019.

Commenting on the company's progress over Q2 2019, CEO Sharon Devir said, "Our strategic focus on the North American cannabis sector is achieving results with our RZTO technology continuing to attract a high level of interest from industry leaders. Establishing a US-based team will further build momentum in this market as well as allow us to expand our sales opportunities to include producers of other high-value crops."

"This quarter we have commenced installation activity on our second project with Dagan in China, which we expect to complete by the end of the year. Dagan is an important distribution partner for us and allows us to effectively target the world's largest agricultural market."

"Roots is the only company to offer a commercial two-in-one heating and cooling technology that heats and cools the roots of crops, rather than the air. In addition to reduce operational costs, our RZTO technology has been proven to mitigate external weather conditions on crops to substantially increase crop yield and quality."

Financials

Roots continues to focus on commercialising its Root Zone Temperature Optimisation (RZTO) technology within its key target markets of China, North America, Israel and Korea. The company's cash balance as of 30 June 2019 was US\$538K (A\$769K)

In May, Roots received A\$1.066 Million from a secured private placement of \$A1.66 million, from which A\$600,000 of ROOTS and Everblu director's participation is subject to prior shareholder approval. The placement price of A\$0.070 per share represented a 20 percent discount to the 30-day volume weighted average price (VWAP) to 10 May 2019. The new CDIs will rank equally with existing CDIs on issue.



Funds raised will be used to commercialise RZTO in various jurisdictions, increase marketing and sales activity as well as pursue cannabis and hemp opportunities in North America.

Following the end of the quarter a further A\$216,343 was raised from Shareholders subscribing for Options to acquire Roots CDIs.

The attached Appendix 4C contains the company's cash flow statement for the quarter.

Operational updates during the quarter

North American cannabis expansion

Roots continues to build momentum in North America's high-value cannabis market, securing three RZTO sales orders in the June quarter with a total value of A\$114,000.

The growing trend towards outdoor and hoop house crop cultivation due to increased supplies and reduced product prices is putting pressure on growers to reduce capital and operational expenses. Roots' RZTO system allows cannabis producers to mitigate the impact of external weather conditions on crops, lowering capital expenditure hand in hand with increased yield and crop quality. Roots plans to capitalise on this operating environment and current sales momentum to secure additional sales in this market over the coming quarter.

As a result of its initial success in the North American market, Roots has commenced recruitment of US-based senior management and operations staff to handle increased demand, manage future installations and support sales initiatives.

Visit of South Australian Government and Elders Delegation

During the reporting period, Roots showcased its Irrigation by Condensation (IBC) and RZTO technologies to a government, departmental and business delegation headed by the South Australian Minister for Primary Industries and Regional Development, The Hon. Tim Whetstone MP, at its research and development hub in Israel.

The delegation also comprised senior representatives from the Australian agriculture sector including the Chief Operating Officer of the Office of South Australian Chief Entrepreneur, Dr Andrew Dunbar, Chief Executive of the Department of Primary Industries and Regions, South Australia, Scott Ashby, and Mark Allison, CEO and Managing Director of Elders Limited (ASX:ELD).

Top officials indicated great interest in the IBC technology, also in the context of potential help to produce food in remote Aborigines communities in water stressed regions in AU.

The Australian agricultural market offers significant opportunities for Roots' technologies and is valued at US\$45 billion at the farm-gate with nearly 80 percent of produce exported to global markets.

RZTO increases yield on tomato crops by 19% and yard long beans by 40%

Commercial demonstrations and proof of concepts on new crops, growing conditions and territories



are an important part of the commercialisation process. During the quarter, Roots announced results for commercial demonstrations on yard long beans in Israel and tomatoes in Spain.

Roots' RZTO heating technology was used to stabilise the roots of Yard long Beans at the optimal growing temperature of 20 degrees to increase yield by more than 40 percent compared to unheated control crops. These results were achieved despite air temperatures frequently dropping to five degrees with the commercial demonstration conducted by a grower in Southern Israel who purchased Roots' technology. Yard long beans are very nutritious and contain the vitamins A, some B vitamins, and vitamin C, minerals - including iron, magnesium, manganese, phosphorus, and potassium. The beans are also low in calories and a good source of protein and dietary fibre. According to [onegreenplanet.org](https://www.onegreenplanet.org/vegan-food/vegetables-that-can-substitute-for-meat/) the **beans are one of 10 crops that can substitute meat.** (<https://www.onegreenplanet.org/vegan-food/vegetables-that-can-substitute-for-meat/>)

RZTO was also used to successfully mitigate external weather conditions on greenhouse-grown tomatoes in Almeria Spain, increasing plant yield by 19 percent during winter compared to unheated crops planted in control plot.

Roots' RZTO technology stabilised the tomato crop root temperature around 21 degrees, despite ambient air temperatures in the greenhouse frequently dropping to 10 degrees.

Dagan sales activity in China

During the reporting period, Roots commenced work on its second project with Dagan in China. Roots is initiating the instalment of its RZTO technology in 10,000 sqm greenhouses, where it will be used to grow five crops including tomatoes, herbs and flowers.

The sale follows the successful completion of Roots' first agricultural project in China with Dagan in 2018 and form part of Dagan's exclusive distribution arrangement, conditional on US\$19 million in sales over a five-year period.

Outlook

Roots remains focused on increasing its presence in the North American market and expects to secure additional RZTO sales in the near future. The establishment of a US-based team will further assist in increasing sales activity in this important market.

The company continues to execute on its RZTO commercialisation strategy, pursuing opportunities within its key target markets of China, Israel, Korea, Spain and China where it offers the only commercial two-in-one heating and cooling technology.

Commercialisation of Roots' Irrigation by Condensation (IBC) technology continues to progress and the company is currently in advanced discussions with potential partners to bring a solar-operated version to market later this year.

-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

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Appendix 4C

Quarterly report for entities subject to Listing Rule 4.7B

Introduced 31/03/00 Amended 30/09/01, 24/10/05, 17/12/10, 01/09/16

Name of entity

Roots Sustainable Agricultural Technologies Ltd

ABN

619 754 540

Quarter ended ("current quarter")

30 June 2019

Consolidated statement of cash flows	Current quarter US\$'000	Year to date (6 months) US\$'000
1. Cash flows from operating activities		
1.1 Receipts from customers	5	73
1.2 Payments for		
(a) research and development	(75)	(94)
(b) product manufacturing and operating costs	(19)	(61)
(c) advertising and marketing	(223)	(408)
(d) leased assets	(189)	(366)
(e) staff costs	(124)	(259)
(f) administration and corporate costs	-	-
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	-	-
1.5 Interest and other costs of finance paid	1	(1)
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other (institutes)	29	(17)
1.9 Net cash from / (used in) operating activities	(595)	(1,133)

2. Cash flows from investing activities		
2.1 Payments to acquire:		
(a) property, plant and equipment	-	(6)
(b) businesses (see item 10)	-	-
(c) investments	-	-

Consolidated statement of cash flows		Current quarter US\$'000	Year to date (6 months) US\$'000
	(d) intellectual property	-	-
	(e) other non-current assets	-	-
2.2	Proceeds from disposal of:		
	(a) property, plant and equipment	-	-
	(b) businesses (see item 10)	-	-
	(c) investments	-	-
	(d) intellectual property	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other	-	(1)
2.6	Net cash from / (used in) investing activities	-	(7)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of shares	731	731
3.2	Proceeds from issue of convertible notes loan converted to CDIs	-	573
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings (convertible loan converted to CDIs)	(88)	(88)
3.7	Transaction costs related to loans and borrowings	(80)	(157)
3.8	Dividends paid	-	-
3.9	Other (IAA related)	(3)	(3)
3.10	Net cash from / (used in) financing activities	560	1,056

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of quarter/year to date	573	593
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(595)	(1,133)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	(7)

Consolidated statement of cash flows		Current quarter US\$'000	Year to date (6 months) US\$'000
4.4	Net cash from / (used in) financing activities (item 3.10 above)	560	1,056
4.5	Effect of movement in exchange rates on cash held	-	29
4.6	Cash and cash equivalents at end of quarter	538	538

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	538	573
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)	538	573

6. Payments to directors of the entity and their associates

- 6.1 Aggregate amount of payments to these parties included in item 1.2
- 6.2 Aggregate amount of cash flow from loans to these parties included in item 2.3
- 6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2

Current quarter US\$'000
(76)
-

Salaries and wages paid to Directors and/or Director related entities

Corporate advisory fees paid to a Director related entity

US\$ 55

US\$ 21

**7. Payments to related entities of the entity and their
associates**

- 7.1 Aggregate amount of payments to these parties included in item 1.2
- 7.2 Aggregate amount of cash flow from loans to these parties included in item 2.3
- 7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2

Current quarter US\$'000
(12)
-

Payments for research and development to a related entity.

8. Financing facilities available <i>Add notes as necessary for an understanding of the position</i>	Total facility amount at quarter end US\$'000	Amount drawn at quarter end US\$'000
8.1 Loan facilities	573	573
8.2 Credit standby arrangements	-	-
8.3 Other (please specify)	-	-
8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.		

On February 2019, the Company has received a financing commitment by way of execution of a convertible securities agreement with CST Capital (hereafter: the Investor), in which the Company borrowed a total amount of up to AUD 1.62 million (\$1,212 thousand) via the issue of convertible notes (hereafter: the Notes). The Notes will be issued in two tranches with a face value of AU\$1.00 per Note (Face Value), with 1,650,000 collateral CDIs over fully paid ordinary shares (CDIs) to be issued to the Investor prior to the first purchase of 900,000 Notes. The first tranche is for an amount of AU\$0.81 million. A subsequent tranche of up to AU\$0.81 million will be issued at a later date subject to mutual consent between Roots and the Investor. The Notes will be interest-free and convertible.

The Notes can initially be converted at 130% of the 5-day VWAP prior to issuance of the applicable tranche. From 65 days following the date of issue, the Notes can be converted at the lower of 130% of the 5-day VWAP prior to issuance of the applicable tranche and 90% of the lowest daily VWAP during the 15 trading days preceding the conversion date. Other than with the prior written consent of the Company, in any calendar month, upon issuance of a tranche, the Investor will receive options equal to the face value, multiplied by 0.2, divided by the closing VWAP prior to issuance. The options will be exercisable for 18 months and have an exercise price equal to 160% of the 5-day VWAP prior to issuance of the options.

On 19 February 2019, the Company issued 1,935,484 Unlisted Options (exercisable at \$0.14 on or before 19 August 2020) being the Options relating to the first tranche of Notes.

9. Estimated cash outflows for next quarter	US\$'000
9.1 Research and development	187
9.2 Product manufacturing and operating costs	-
9.3 Advertising and marketing	124
9.4 Leased assets	-
9.5 Staff costs	179
9.6 Administration and corporate costs	99
9.7 Other (provide details if material)	-
9.8 Total estimated cash outflows	588

10.	Acquisitions and disposals of business entities (items 2.1(b) and 2.2(b) above)	Acquisitions	Disposals
10.1	Name of entity		
10.2	Place of incorporation or registration		
10.3	Consideration for acquisition or disposal		
10.4	Total net assets		
10.5	Nature of business		

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.

Sign here:

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(Company secretary)

Date: 31 July 2019

Print name: Sarah Smith

Notes

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly 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 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.