ALSTROEMERIA

ROOTS
Sustainable Agricultural Technologies Ltd.

INNOVATING THE CLIMATE CONTROL LANDSCAPE

Root-Zone Temperature Optimization Technology for Alstroemeria

Roots - Sustainable Agricultural Technologies Ltd. (ROOTS)

ROOTS
Sustainable Agricultural Technologies Ltd.

Israeli based, publicly traded in Australia (ASX: ROO), ROOTS is a graduate of the Israeli Chief Scientist Technological Incubator program.

ROOTS is selling its disruptive, modular, cutting-edge technologies worldwide.

- Root Zone Temperature Optimisation (RZTO): Two-in-one root zone heating and cooling for indoors, greenhouses, hoop houses and outdoors.
- New product from Roots – sustainable agricultural technologies. The RZTO system combined with a state-of-the-art fertigation (irrigation and fertilization) system 2 in 1

Roots' technologies/systems assist growers increase yield, save energy, shorten growing cycles, provide supplies security and produce water for irrigation from humidity in the air. All designed to increase the grower's profitability and mitigate extreme weather effects on production and cultivation.

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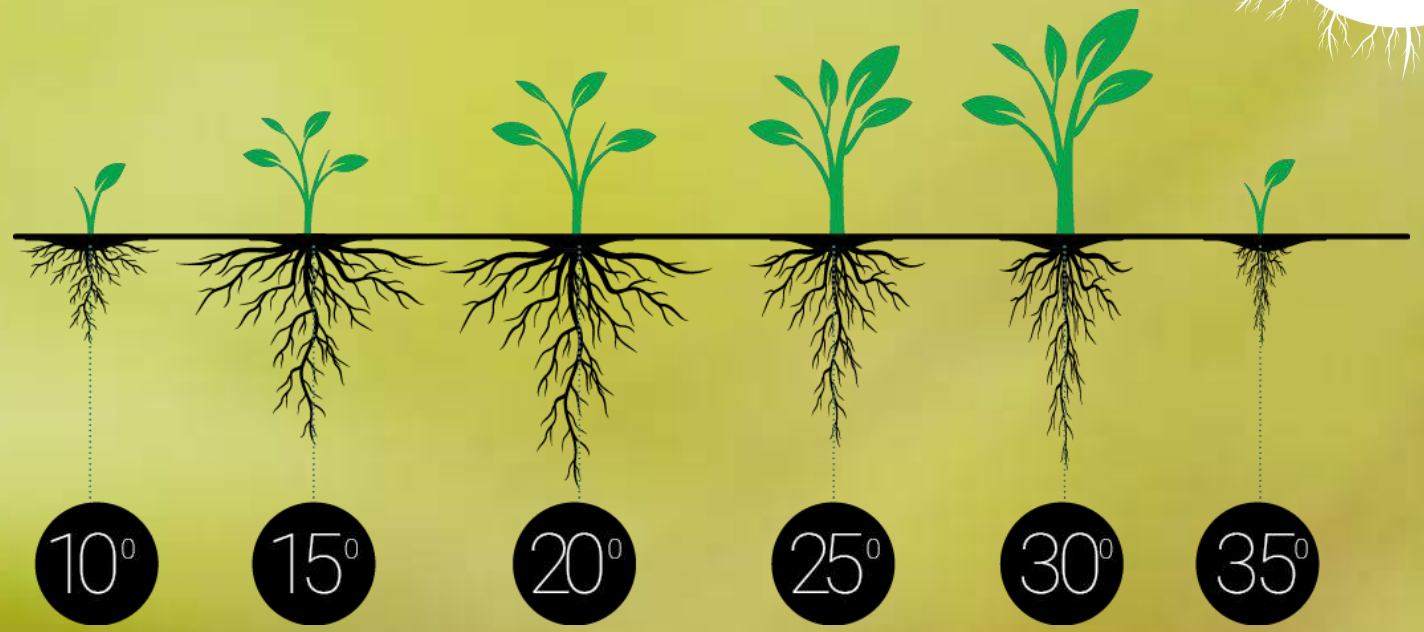
ROOT TEMPERATURE IS THE MOST INFLUENTIAL FACTOR IN PLANT PHYSIOLOGY FOR GROWTH, PRODUCTIVITY AND QUALITY. AN OPTIMUM TEMPERATURE RANGE IS ESSENTIAL TO PRODUCTIVITY, HEALTH AND OUTPUT QUALITY.



Root-Zone Temperature Optimization Technology for alstroemeria summery

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- Cultivation of flowers 7 weeks earlier
- Added growth cycle
- Greater resistance to diseases
- Lower energy costs
- Suitable for any substrate
- Heating and cooling of roots in one closed cycle system
- Premium prices
- Remote control PC and mobile viewing

Click here to view farmer testimonial

Alstroemeria

Green house, Israel

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UP TO

6°C

DIFFERENCE BETWEEN COOLED ROOTS AND UNCOOLED ROOTS

COOLED ROOTS TEMPERATURE

AMBIENT TEMPERATURE

UNCOOLED ROOTS TEMPERATURE

RESULTS

Green house, Israel

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HIGHET COMPRESSION: COOLED VS. TREATED

CONTROL

COOLED

RESULTS

Green house, Israel

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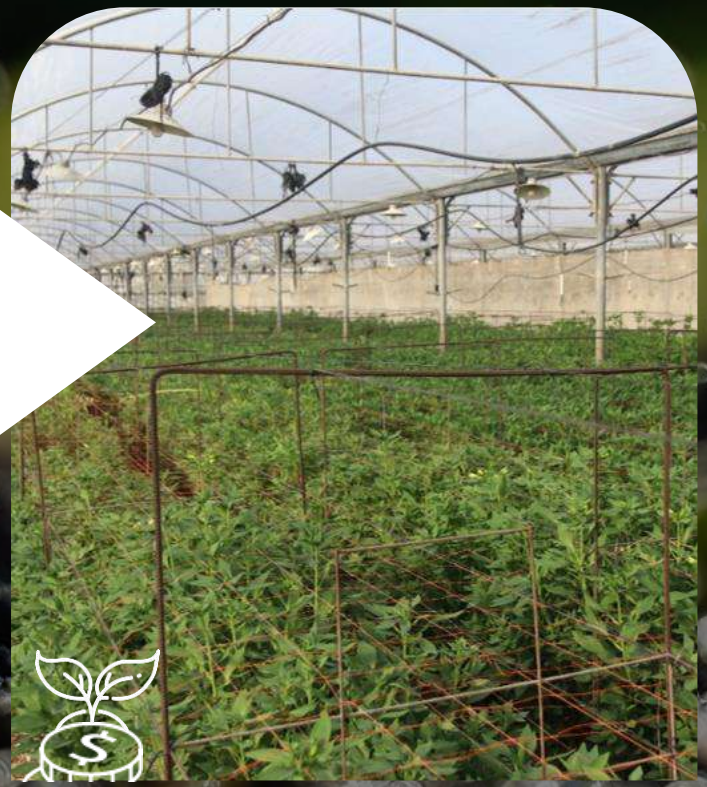
COOLED



CONTROL

Innovating the Climate Control Landscape

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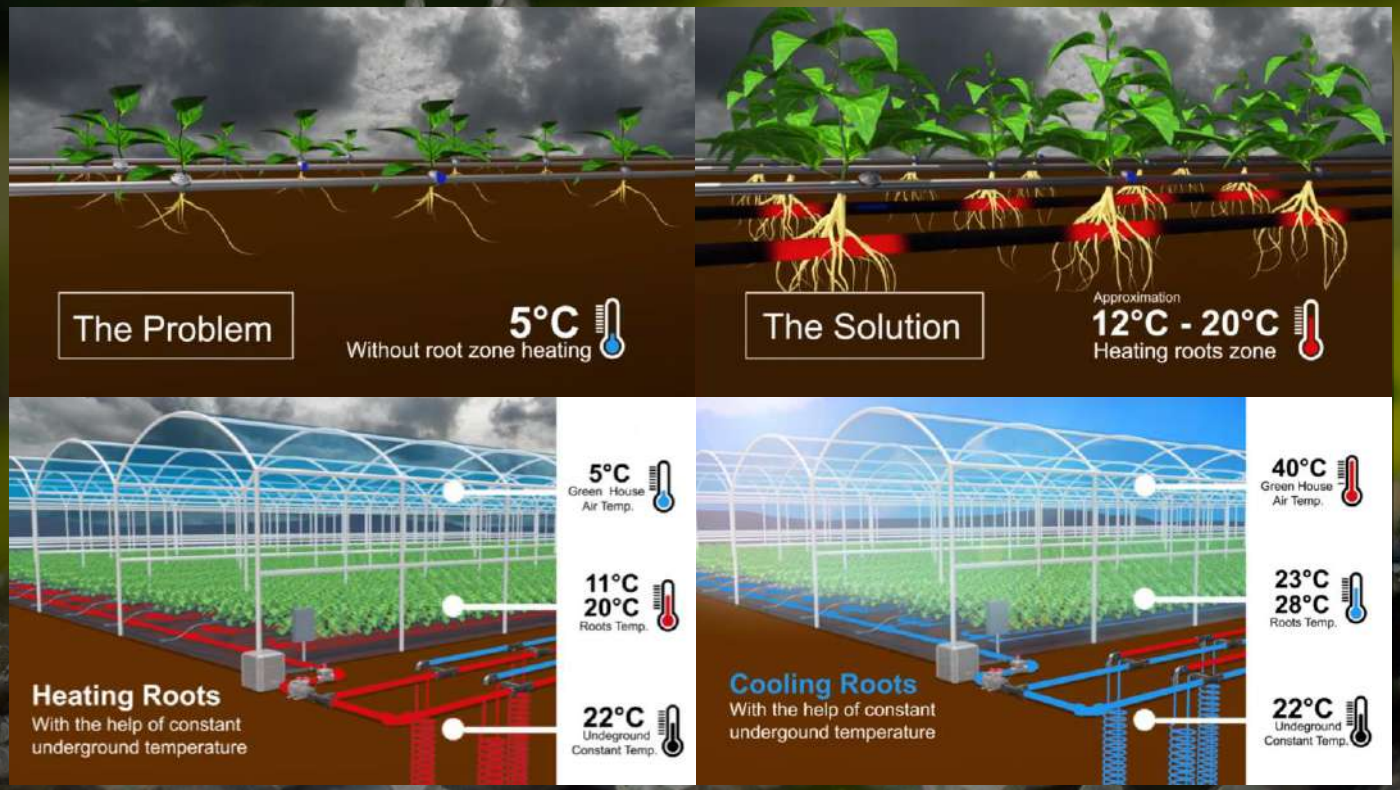
ROOTS' technology cools & heats root zone in one system to maintain an optimum temperature range year round

Click here to view technology' video



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Suitable for any substrate

Roots' proprietary stub enables producers to stabilize pot and grow bag soil temperatures year- round, increases pot maneuverability as well as significantly reduce costs associated with RZTO installation.

Heat exchange stub for various substrates – saves on entering the pots or grow bags from the side and allows free movement of the pots and substrates just by lifting the stub. Covered by ROOTS patent.

How does it work?

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Configuration A:

Heat pump

We install efficient heat pumps for root zone heating and cooling, remotely controlled operated either with electricity or gas.

Configuration B:

Ground source heat exchange (also called Geothermal):
Inserted coils pipe in soil at 10 Meters for heat exchange between water in the coils and soil at depth. Stable water temperature of water emerges from the underground exchange discharged near roots in any substrate. The only energy used to cool or heat by up to 10 degrees vs. control is a circulation pump.

Configuration C:

Hybrid – Inserted Geothermal coils + heat pump

For more accurate and influential results under more extreme weather conditions. Slightly more energy use compared with the basic configuration.

All three configurations come with a stable monitoring and control equipment available for viewing in app on mobile phone and PC.

THANK YOU

Roots Sustainable Agricultural Technologies Ltd
ARBN: 619 754 540
Beit Halevy 202, 4287000, Israel
ROOTS@rootssat.com | www.rootssat.com