Innovating the Climate Control Landscape

Root-Zone Temperature Optimization Technology

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What is RZT technology?

Root Zone Temperature (RZT) is a micro-climate control agricultural system that relies on proprietary Ground Source Heat Exchange (GSHE) and/or heat pumps for optimization of root-zone temperatures year round.

The results: providing cost-effective, greater crop yield, better quality and dramatic energy savings, compared with other climate control technologies.

The RZT is a single system for heating & cooling

For more details, www.rootssat.com
Heating Cucumbers Roots
GSHE Cucumbers’ roots heating (*)

Harvesting - February to May

(*) Netafim experimental farm, Harvesting - February to May
GSHE Cucumbers roots heating (*)

Heating Winter Cucumbers
Yield [kg/m$^2$]

Significantly higher growth and yield rates observed with the heated root zone crops

(*) Netafim experimental farm, Harvesting - February to May
Cooling Cucumbers Roots
Cooling Cucumbers Roots Zone

© Cucumber, Ground Source heat exchange only, Greenhouse, Center of ISRAEL
Effect of Root Zone Cooling on Cucumbers

Cucumber Yield Increase (*)

- Cooled: 127%
- Control: 100%

(*): Data derived from 8 harvests; Plants data from the bed edges was discarded (Ext. and Cent.)

Cucumber, Ground Source heat exchange only, Greenhouse, Center of ISRAEL