Green Roof Technologies

Youbin Zheng

Greg Yuristy

University of Guelph

smart green technologies inc.
Content

1. What is green roof?
2. Why green roof?
3. Our research
4. Research to market
Estimated Growth of the North American Green Roof Industry - 2004 to 2013

Data: Green Roofs for Healthy Cities
www.greenroofs.org
WHY GREEN ROOF?
Reduce wastes to landfill
Stormwater Management

1) Retain precipitation (e.g. 15 cm can hold 7.5 cm rain); 2) Improve water quality? 3) Delay the time for runoff to get to sewer systems
Moderation of Urban Heat Island Effect
Improve Air Quality
New Amenity Spaces
Local Job Creation
National Research Council of Canada found that an extensive green roof reduced the daily energy demand for air conditioning in the summer by over 75% (Liu 2003).
Increase Biodiversity
Vegetation Installation Types - Trays
Vegetation Installation Types-Plugs and seeds
Our Research
OMAFRA-UofG 2010
OCE (TPS) 2013
OMAFRA-POP 2014
Research in our group

• Plant species selection;
• Substrate development for plant production and installation;
• Fertilization protocols;
• Irrigation protocols;
• New production and installation system development.
S. ‘Dragon’s Blood’
Sedum Mats Field (Day 63)

Clark and Zheng, 2014a

Nutricote® Total 18–6–8 + minor nutrients 100CRF
LiveRoof Tray Production

0  5  10  15gN/m²
<table>
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<th>20</th>
<th>25</th>
<th>30</th>
<th>35gN/m²</th>
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Nutricote® Total 18–6–8 + minor nutrients 100CRF Clark and Zheng, 2014b
OCE TPS – Residential Green Roof
Substrate Block Invention
OMAFRA POP
THANKS

Ontario of Agriculture, Food and Rural Affairs

Sedum Master

smart green Technologies Inc.

CARROT COMMON

LiveRoof Ontario Inc.

Landscape Ontario Horticultural Trades Association