

New report compares impact of propagation trays on tree establishment

January 10, 2023, TORONTO – What happens in propagation doesn't stay in propagation, according to a new report titled [The Impact of Propagation Trays on Tree Establishment](#). Published today, the report summarizes key findings from a five-year field trial conducted by Vineland Research and Innovation Centre (Vineland), in partnership with A.M.A. Horticulture Inc. (A.M.A.).

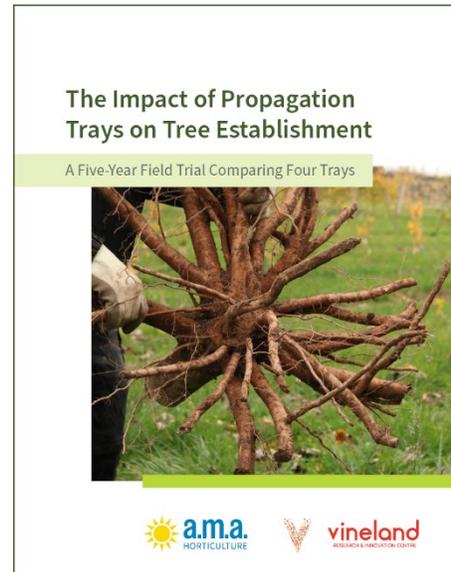
Researchers propagated black cherry and eastern cottonwood trees in four commonly used trays, including RootSmart™, an open-wall tray designed by Vineland for optimal air pruning and commercialized by A.M.A. Beginning in 2017, researchers dug up a row of trees each year to analyze the root systems for key traits that support healthy tree establishment.

The trial found that root defects occurring in propagation were persistent and sustained after five years in the field, creating permanent defects that [have been linked](#) with mortality in urban trees, including root girdling and root ball development. The RootSmart™ tray consistently produced high-quality root systems compared to the other trays, including better overall root quality and distribution, and a higher number of root-soil contact points.

“More air, less plastic. That’s what growers need to be looking for in a tray if they want to produce consistent, healthy roots,” said Craig Willett, Manager of Ellepots and Pre-Fill at A.M.A. and former nursery owner. “With the RootSmart™ tray, 80 per cent of the liner is exposed directly to the air with only 20 per cent coming into contact with the wall of the tray. This promotes air pruning and prevents root defects from being passed down the line to finishing growers and end users.”

Increasingly, governments and not-for-profit organizations are investing in large-scale urban tree planting programs and solutions are needed to help ensure trees will last their full life cycle. It has been [reported](#) that for every 100 urban trees planted, only 50 will live 13 to 20 years. Urban tree planting programs support the fight against climate change and producing quality nursery stock plays a key role in their success.

“As we look to green the landscape, we need to focus on promoting healthy root systems right at the beginning, when it counts,” says Rhoda deJonge, Director of Plant Responses and the Environment at Vineland. “These findings confirm that once problems occur in propagation, they continue to impact how the tree develops and can lead to poor stability and increased risk of windthrow – critical issues that are only becoming more prevalent with climate change.”





As part of the trial, researchers at Vineland noted the RootSmart™ tray provides a significant advantage when propagating trees with strong tap-rooting systems, such as oak, hazelnut, hickory and walnut. A full list of species – many native to Canada – is available in the report.

“Root health is the foundation of tree health,” said Rick Bradt, Managing Director of A.M.A. “As a horticulture industry, it’s up to us to ensure quality stock so that the trees we invest in today will still be healthy and thriving long into the future.”

Download the report and learn more at www.rootsmart.com/propagationtraytrial.

About Vineland

Vineland is a uniquely Canadian results-oriented organization dedicated to horticulture science and innovation. We deliver innovative products, solutions and services through an integrated and collaborative cross-country network to advance Canada’s research and commercialization agenda.

We are an independent, not-for-profit organization, funded in part by the Canadian Agricultural Partnership, a five-year, federal-provincial-territorial initiative. For the latest on our research and innovation visit www.vinelandresearch.com.

About A.M.A.

A.M.A. Horticulture Inc. is a dynamic, solutions-focused supplier that has been serving the horticulture industry since 1982. Our team of industry experts understands emerging trends, opportunities and pain points. We work alongside our customers to deliver innovative, custom solutions and cutting-edge products that improve growth and profitability. Visit www.amahort.com to discover how we can deliver solutions for your success today.

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