



Rooting for success with RootSmart™

Rick Bradt, managing director of A.M.A. Plastics (A.M.A.) in Kingsville, ON has seen what air currents can do to an orchard. Trees loaded with a crop standing tall one day and toppled over the next, giving in to gusts that blow through their heavy branches.

The problem has nothing to do with what is in the air. It starts below ground with poor root structure tracing back to when trees are propagated at the nursery.

Trees are typically grown in containers causing roots to drive down through soil substrate until they reach the walls and bottom of the propagation tray. With nowhere left to go, they circle around each other into a tangled, unstable mess.

It is a longstanding industry conundrum and Bradt was determined to finally crack it.

The solution was rooted in a partnership between A.M.A. Plastics, which has distributed propagation containers for the horticulture industry for 35 years, and Vineland Research and Innovation Centre (Vineland).



Rick Bradt, managing director,
A.M.A. Plastics

Bradt and A.M.A. Plastics were looking for research supporting new propagation tray structures capable of producing generations of healthy trees. Meanwhile, Vineland's nursery and landscape research scientist Darby McGrath was looking for an industry partner to develop such a concept.

"The goal is to end root girdling or circling in tree propagation," Bradt said. "There isn't really a good solution in the marketplace to end this critical problem."

The new propagation containers also cannot add to growers' labour costs and need to be recyclable.

With this in mind, McGrath and Vineland came up with prototypes after studying 14 different trays already on the market and their effects on roots. The Vineland team worked closely with A.M.A. over three growing cycles to come up with the winning concept.

RootSmart™, a wall-less, bottomless propagation tray, is set to be unveiled January 2018 at the Landscape Ontario Congress.

The innovative propagation tray meets all the requirements Bradt and crew set out to achieve, including limiting labour costs. It's being used in trials in Ontario and California, with the potential to be marketed worldwide by A.M.A., which holds the exclusive production and marketing licence to RootSmart™.

"Everyone in the industry knows about this problem and we wanted to find the solution," Bradt said. "Whether RootSmart™ is perfect or not, is for the industry to decide. What we're offering is an innovative and cost-effective product to address a longstanding problem."



RootSmart™ propagation tray

It's a solution that wouldn't have come as quickly or inexpensively without Vineland's help, he noted.

Other tray designs have been developed without the benefit of research because it can take too long or be costly, Bradt noted. A.M.A. could have tried tackling the science itself but then it would need to find designers to create something tangible.

Instead, Vineland researchers came up with the idea for RootSmart™ and helped A.M.A. bring it to life.

"I don't know what we would have done without our Vineland partnership," Bradt said. "They were able to do the research and recommend a winning innovation for the industry."

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