

SPACING: A CASE STUDY

HOW DID ONE GROWER OPTIMIZE EFFICIENCY BY AUTOMATING ITS PLANT HANDLING? **By Matt Aprea**

Ken and Deena Altman began their plant collection in 1975 in their Los Angeles backyard. What started out as an innocent hobby, based on an avid interest in plants, slowly transformed itself into a wholesale nursery business encompassing over 880 acres in three states. The business began with a plant catalog of unusual succulents. Later, the Altmans would take their overflow plant material and sell it to local retail nurseries. The retailers loved the unusual and varied plant material and so did their customers. Altman Plants became more and more important to these retailers because of their quality plants and innovative products.

Today, Altman Plants supplies exciting plant

programs to large retailers with point-of-purchase materials, sales reps to assist with merchandising, a large distribution system that covers the United States, and expertise in growing plants from cactus to herbs, from grasses to perennials, and more.

As most nurseries have experienced at one time or another during the busy spring growing season, there are just not enough hours in the day to get to all the critical tasks that a nursery must attend to. Altman Plants is no exception. One of the major crops at Altman Plants is roses, with over 60 acres in production. Spacing on time is a critical task with roses; unfortunately, much of that spacing needs to occur during the peak shipping weeks, creating huge strains on labor availability.

Automating Plant Handling Tasks

Enter Harvest Automation with the HV-100 robots designed to perform a wide variety of the most demanding and critical plant handling tasks such as spacing, consolidation and collection.

The robots require minimal training to operate, while reducing production costs and improving productivity. They are flexible to deploy in a wide range of bed and plant configurations on all common ground surfaces including ground cloth, poly and gravel. The robots provide consistent spacing accuracy no matter how long the day is, without breaks, allowing growers to get quality work done whenever they need it.



These robots are manufactured to accommodate various production workflows and provide consistent spacing accuracy.



With the purchase of four HV-100s in early 2013, Altman Plants was able to space roses right in the midst of peak shipping without impacting labor availability. The simplicity of setup and ease of use of the HV-100 allowed

a single robot supervisor to easily manage four robots which spaced nearly 350,000 roses since the beginning of the year, a task that would have required dozens of workers if done manually.

“With the HV-100s we were able to space plants right on time, even with all the pressures of spring shipping,” says Jim Hessler, general manager of Altman Plants’ Lake Matthews operation, “The result was a higher quality rose and far fewer plants that needed additional pruning and another growth cycle.”

Optimizing Efficiency

To truly optimize efficiency the Altman team had to determine how to efficiently supply the robots with rose plants that were ready to be spaced. The team solved this problem by having four HV-100s continuously fed a fresh supply of plants by a single operator driving a fork lift equipped with bedding forks. This just-in-time delivery system allows for a highly optimized operation, where a single forklift driver with the four robots can move plants from wagons in a nearby roadway to a perfectly spaced position on the bed.

The HV-100’s allow an operator to configure spacing in both hex and square patterns with selectable spacing distance across and along the bed. For the Altman roses, Jesse Perez, Altman’s production manager, configured a hex spacing pattern with a 20x20-inch spacing, an ideal configuration for growing healthy, high-quality rose bushes.

Success with Robots

Harvest Automation’s customers have had great success operating robots under a variety of conditions from desert-like conditions at Altman Plants in the west, to more humid and tropical conditions in the southeast, to hoop houses and greenhouses in the northeast. Customers have moved plants as varied as roses, hydrangeas, azaleas, boxwoods and junipers in containers of all constructions from less


than 2 gallons and up to 5 gallons.

Due to differences in geography, plant type or field setup, some growers prefer to bring plants to a field and space immediately; others choose to lay plants down can-tight in pre-configured blocks for the robots to space later. The key to this diversity is the flexibility built into the HV-100 robots. With a few simple changes to the robot settings, a user can set new bed parameters and a different plant/container type and be up and running in mere minutes.

The robot also can accommodate many different production workflows, and it integrates well with existing nursery and greenhouse equipment. From bedding forks employed by Altman Plants to the drop trailers and cart systems that other growers utilize, the HV-100 robots will improve productivity for each. This productivity gain has been shown to ripple through an operation; nursery and greenhouse managers no longer worry about spacing tasks competing with shipping and other tasks for resources, affording them the opportunity to optimize these operations as well.

With the HV-100, a properly configured field and an efficient process, the Altman team has been able to increase both quality and sales volume, while simultaneously lowering their production costs. Jim Hessler and the team at Altman Plants look forward to utilizing the other features of the HV-100: consolidation through the summer and collection in the fall, and to the further benefits to productivity that they bring.

For more information about Altman Plants, please visit www.altmanplants.com.

For more information about Harvest Automation and the HV-100, please visit www.harvestai.com. 

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