

TO COMBAT LABOR SHORTAGE, More Growers Are Automating Their Greenhouses



Because they have a surplus of working capital, more greenhouse growers are automating their operations, said Charlie Hall, Ph.D., a Professor in the Department of Horticultural Sciences at Texas A&M University. Growers are also spending more on energy-saving measures and production upgrades, including irrigation systems and lighting components, according to Hall, who was a panelist in the recent webinar, “How to Use the Right Automation to Help with the Labor Shortage,” presented by Berger.

“Greenhouse growers are in the best working capital position I’ve ever seen them in,” said Hall, an expert in agricultural economics, including nursery and greenhouse crops. “Automation is among their top priorities in utilizing this excess cash flow.”

But growers aren’t spending on automation just because they have excess money to do so. They need automation because they can’t find the labor to perform many of the tasks inside the greenhouse, Hall said.

When the pandemic began in March 2020, greenhouse growers were wondering if their businesses would survive the economic shutdown to slow the virus, said Kevin Staso, Berger’s Sales Director for the Southern U.S. “But 2020 turned out to be a blockbuster year for a vast majority of growers,” he added.

Then in early 2021, the “Great Resignation” began, and employees began resigning from their jobs from many industries in large numbers. Declining birth rates and fewer immigrants, both of which have fallen sharply this century, have also contributed to the labor shortage, Hall said. Consequently, the big challenge among growers has been attracting labor.

Automated Solutions

The pandemic had an “eye-opening impact” on growers to consider automation, Staso stated. “Growers have found automation is a necessity if they want to continue to persevere in the industry,” he added.

There are different automated solutions for different growers, said Andrew Van Geest, a Greenhouse Irrigation and Automation Specialist for Zwart Systems. “I find that a lot of growers yield a lot of information from other growers. I can’t impress upon growers enough to visit some other greenhouses to see what they’re doing,” he added.

Pierre-Marc de Champlain, the Director of Technical Services for Berger, said growers will get a solid return on investment if they spend to automate the handling of growing media in the greenhouse. A first quick win is to switch from a loose filled mix format to a compressed one. Berger is committed to helping horticultural producers to improve production and

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“If you purchase a bale breaker machine, conveyors, hoppers or potting machine flat-fillers, you’re going to have more efficient transport and storage,” he said.

Because of such automated equipment, growers will achieve increased productivity from employees, who will no longer “be stuck on the soil line” and will be freed up to do other tasks, de Champlain added.

A bale breaker will also allow growers to achieve more uniform soil, which de Champlain said is “super important” for greenhouse production. A potting machine flat-filler will enable them to produce less-compressed and more consistent soil, whereas filling pots by hand can lead to the opposite.

“Properly calibrated equipment will lead to more uniformity in the greenhouse and make it easier to manage,” de Champlain said. ”

Uniform irrigation, whether it’s distributed from a boom or a pressure-compensated drip system, will enable plants to grow equally, Van Geest said. “So, when it comes to shipping, where growers are spending 50% of their labor to get product out the door, employees will spend less time cleaning leaves and threading their way through what is shippable and what’s not,” he added.

Automation for Every Grower

It was previously thought automation was only for larger growers and that implementing such processes was too complicated for smaller operations. But that is changing. Staso believes automation will become more accessible for smaller operations as it continues to evolve and become more affordable.

Growers need to devise an automation game plan that could be based on an operation’s biggest bottlenecks and areas that have the greatest number of touches, Staso said. He advised growers to begin small. “Start with the low-hanging fruit, looking first at some of those entry-level-type automated systems that can improve efficiencies,” he added.

From there, growers can evolve into automation for soil processing and then into conveyors and transplanters, Staso stated.

While growers are automating because they can’t find labor, they might be able to find the labor they still need because of the “cool factor” associated with an automated greenhouse.

Potential employees are more willing to work in a greenhouse if it has modern equipment to operate, Hall said.

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