

How to Make Plants Better With Automation

By Corwin Graves|February 28, 2018



Green Circle Growers ships thousands of orchids each week. Automating its processes has allowed it to produce, pack, and ship peak volumes of orchids more efficiently.

At Green Circle Growers (GCG), it's our goal to make every day better with plants. This means we also need to make every day better for our team. Automation helps us create a safer, better, and more efficient work environment for all our team members.

Improving Growth and Yields

Automation helps to achieve our growth curve, sustaining higher yields. Since we grow a variety of plant types from flowers to foliage, we need to make the most of our growing space. For example, an automated watering system allows us to grow plants closer together because we don't require space for a person to reach each individual plant.

"The improved setup on orchid potting has increased yield by reducing common planting errors, and the anthurium potting line has significantly sped up the potting process," says Director of Greenhouse Operations John Ploenes.

Orchid Grower Managers Frank Paul and Marcel Boonekamp add, "To be able to produce, pack, and ship peak volumes of orchids, we've streamlined and automated our processes, from semi-automatic potting robots to a vision grading system for consistent

sorting of plants. Within the production process, there are bottlenecks that can only be solved by automation.”



Automation at Green Circle Growers not only saves labor for other more skilled jobs, it also creates a safer, work environment. Photos by Green Circle Growers.

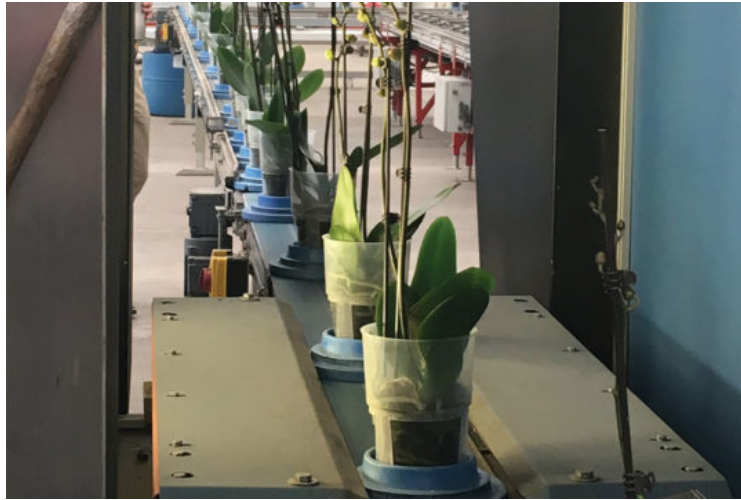
Tackling the Dirty Jobs

By implementing automatic solutions, we’re able to take care of some of the hardest (or least desirable) tasks in the greenhouse with automation.

Like many nurseries, one of our most significant challenges has been the availability of labor needed for common day-to-day jobs. Activities like potting, sticking, sorting, spacing, and packing require significant amounts of human capital, and oftentimes we simply can’t secure the necessary headcount to ensure that these activities are completed according to plan.

To make matters worse, these types of jobs are usually physically demanding, which exacerbates our ability to secure people to perform them. In response to these challenges, investing in automation has allowed Green Circle Growers to remain competitive while maintaining a high level of quality.

Automation is improving working conditions in our entire facility, especially the orchid range, Boonekamp says. “Orchids are set down on an automated table system, which places the plants at the perfect work height so employees don’t have to bend down,” he says.



With unemployment at historic lows, automation reduces the need for entry-level labor.

This allows us to bring the plants to workstations in concentrated areas rather than sending people out to the greenhouse. Working conditions in these stations can then be better managed. Also, many repetitive tasks have been automated, which helps reduce the manual workload. Ploenes adds, “The new boxing line for the orchid range automates the boxing process and stacking of heavy boxes onto pallets, which means that this heavy job will be handled more safely and securely.” With many hard labor duties and safety concerns addressed by automation, we have the ability to reassign our employees to more skilled labor jobs or give them the opportunity to move into leadership roles.

Addressing the Skills Gap

Green Circle Growers is always seeking skilled growers for the greenhouse with a variety of open positions. However, we are prone to some droughts in the labor pool.

“With the improvement of the economy over the past several years, it has become a challenge to attract enough talent into our organization,” Paul says. “With unemployment at historic lows, people have more options to choose where they want to work.

Automation reduces the need for entry-level labor positions, in turn creating more skilled job opportunities for technicians,” Paul says.

The Future of Greenhouse Automation

In recognition that the current set of challenges aren’t going away, we will continue to invest in automation where it makes sense for efficiency and safety. At the crop level, we will continue to provide our team of growers with tools to make their jobs easier, and we’ll invest to improve quality, reduce crop times, and reduce scrap. Greenhouses will be designed and built not only for efficient transport, but also to maximize plant health and performance. While automating our processes isn’t the answer to all of our challenges, we recognize that it’s an important piece of the puzzle, and it’s a philosophy that will help propel us into the future.

Automation makes work in the greenhouse more efficient, safe, and rewarding for our team, and it lets us consistently deliver high-quality plants to our partners and consumers.

Corwin Graves (cgraves@greencirclegrowers.com) is the Director of Growing at Green Circle Growers in Oberlin, OH.