GROWERTALKS

Cover Story

10/1/2024

Making the Greenhouse Leaner & Meaner

Jennifer Zurko

I don't know exactly when we started discussing lean flow in these pages, but I do know that growers continue to invest in lean systems. The folks at FlowVision, the company that helps businesses improve their processes to be more efficient, are as busy as ever.

I was able to connect with a couple of FlowVision's most recent clients to find out where their pain points and challenges have been, and how implementing lean flow practices has helped their teams better serve their customers.



Pictured: The supermarket picking process at Millcreek Gardens.

Good lessons in lean

Even though peak is a small window, shipping continues to be a major challenge because of the sheer volume that goes out in such a short time. Many of you know that this is where the bottlenecks happen, and once there's a clog in the works, it takes a lot of time to catch up.

One of the more popular lean flow processes is referred to as the supermarket system. A traditional way of fulfilling orders was to go to where the plants were to fill a rack. But if you had product in multiple areas, staff would find themselves tugging carts all over the greenhouse. And as operations expanded, the distances became greater and took even more time.

The supermarket acts exactly as it sounds. Instead of going to different areas to pull one or two plants at a time, the plants are already there, lined up in the shipping area where staff can "shop" and pick from to fill racks in the same place. From there, filled racks can be pushed right onto the trucks.



It's a simple system that not only saves on the amount of labor you need, but also the length of time you need your staff to fill orders. The first thing Megan Armstrong and Fred Higginbotham of Millcreek Gardens said when I asked about their previous shipping process was that their teams were working 12 to 16 hours a day during peak to get orders out the door. They knew that wasn't sustainable.

Pictured: Prides Corner employees "shopping" from the racks in the supermarket system.

"It's totally transformed the way we process orders," said Megan. "Essentially for 40 years we pulled orders individually. We had four different teams that might pull one order. It was just much more labor intensive for us. And we had reached a point that processing orders was really cumbersome and inefficient for us to go make a million trips around the nursery to pull orders all day."

Workers were also challenged with trying to figure out how to arrange plants on the racks. The RIO software they started using from FlowVision did that automatically for them, removing all of the guesswork. The new process made them more efficient, but most importantly, it directly benefited their staff, too.

"Another thing that's probably hard to measure is just the morale in spring seems to be a little bit higher," said Fred. "In years past, the days could be daunting, but now we're not working as long. We hear a lot about work/life balance, and when you're working until 10:00, 11:00 at night—maybe working Saturdays, as well—it's tough to have that."

Pictured: The shipping area at Prides Corner.



And because those nights were so long, Megan said they found themselves asking employees who were done with their shifts in another area to come and help out with shipping afterwards. The shopping cart system helped Millcreek figure out how much staff they actually needed in the shipping area without having to dip into the deep end of their employee pool.

Before they implemented the supermarket system in their shipping area, Prides Corner was using conveyors to move finished product from one area to another. Owner Mark Sellew said that using that system, they were loading 30 to 40 trucks a day. Since they changed to the supermarket six years ago, they load 60 to 70 trucks a day with the same amount of labor. And it's cut down on the mistakes, too.

"We progressively move [the rack] through the supermarket and check the work that the shoppers do in real time. A lot less of our shopping carts are going to the penalty box," said Mark. "We have gone from shopping 100 carts an hour to like 225 to 250 now, so we do about 2,500 carts in a 10-hour day."

Mark stated simply that using the conveyors to move product around were prohibiting them from growing their business. Now, they're better able to handle not only picking from a larger area, but to expand the breadth of product that they offer, too.

"The supermarket model that we have developed has allowed us to have a much more diverse mix and still ship it," Mark said. "What we see with a lot of customers, they'd like to buy less per shipment and buy it more often from us. The lean flow model allowed us to be able to be more competitive in a marketplace with the ability to ship smaller."



Pictured: One of Pinelands Nursery's rack trailers loaded up and heading to the shipping area to be pulled for their supermarket system.

Mark said the added efficiency has also allowed Prides Corner to establish an e-commerce side of the business, which has continued to grow every year.

"When my son came to me and said, 'We've got to do this,' I said, 'You're crazy.' And now we're sending 2,500 boxes a day with a 24% increase in sales this year. We're flat to down in most other areas of the company. We could not have handled this increase in e-commerce without a lean flow model."

During the last few years, Prides Corner has implemented lean practices in other areas. They have a better tracking system for their plant tag library. And they've been doing what FlowVision calls "progressive sticking," where multiple workers take turns filling a tray. Before, one person would fill out one tray at a time—which seems like it would work fine. But, in reality, the work goes faster when you have a team working on the same trays together.

"People are basically social creatures. They want to be part of a team," said Mark. "And they are simply more productive working in that progressive fashion."

When Tom Knezick and his brother took over Pinelands Nursery from their parents, they took a step back to see where improvements could be made. Tom already knew about FlowVision, learning about lean practices from what other growers were doing in their own operations as a member of Dr. Charlie Hall's EAGL program. And he knew that there were areas in his operation that could use an efficiency upgrade.

"Our team was hungry for some changes, so we signed [with FlowVision] and had them come in pretty shortly after [my brother and I] stepped into our leadership roles," said Tom. "There was some stuff that we just instantly dove into."

One of those things was changing the way they split up their liner trays. Pinelands Nursery offers a lot of native plants for restoration projects, and as long as you ordered a full flat, you qualified as a wholesale customer. Tom said for years they were breaking apart other flats to fill in these orders. They knew it was costing them a bit more, but felt that they were making up those costs in the full sale. The FlowVision team pointed out that it was actually costing them more than just the cost of the flats.

"We were losing out on an additional $30, but then we were also costing ourselves extra in the time and labor it took to split those apart," explained Tom.

Pinelands Nursery has also adopted the supermarket system in their shipping area, which they started a year ago. Tom said that's worked very well for them and he's already thinking about other areas where he could use the lean flow model. With 30 acres of production, they consider themselves a smaller nursery, but Tom feels that if they improve on some of their efficiencies, they'll have a better chance for growth.

"My brother and I have a bigger goal of where we want to be," said Tom. "If we were to reach that goal, we look at that and say, that section in particular would have to grow so much in space, in equipment, in people, in time."

Constant improvement, constant movement

All of the growers I spoke with are extremely happy with the outcomes from investing in new lean systems, but they

admitted that there were some short-term growing pains. Fred and Megan said they did experience some turnover with some people leaving because they didn't like the new process. But they've been able to build a good team around this system and that also helps things run more smoothly.

"Each year, our shipping department has kind of made it their own and made some minor tweaks to improve the efficiency," said Fred. "Since we switched over to the system, they've been able to really focus on what they do. And it has spread out the workload a little bit as well, where not everybody's carrying the burden. Not that we're afraid of teamwork and helping each other out, but it's just gotten to that point where we just don't need to as much. And that's been a great thing."

I asked if the investments into adopting lean practices in their operations were worth it and none of them hesitated to say they would recommend it, regardless of the size of your business or the crops you grow. There are always areas that could use some improvements or even a whole new process.

"When we first implemented [the supermarket] in shipping, we were like, what if we fail? But you just stick with it. You keep working," said Mark. "It's been such a big game changer. And I think it would be helpful for any size grower."

Tom gave the example of Coca-Cola: more or less, they've always offered the same thing. But they spend the time and money to not only improve the product, but how they get it to their customers.

"They're constantly reinventing how they deliver the product. And, okay, we're a little nursery, but we need to be doing the same thing," said Tom. "A quote that I've always loved is if you aren't going forward, you're going backwards. You constantly need to look at things and improve." **GT**