

Staff deliver a Kaizen reportout at Peoria Gardens.

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Lean, but clean

Faced with a pandemic, Lean nurseries adapted to stay ahead of the curve

BY ELIZABETH PETERS

EARLY LAST SPRING WE sat in the office of an Oregon nursery client. As Lean consultants to this company, we were there as the owner faced a crisis. He worked through scenarios and pondered how to survive a possible massive interruption to their greenhouse business.

We had just flown in from a client in Ohio, where restaurants had been shuttered and the airport was like a ghost town. No one knew what would happen next.

Uncertainty was a common theme throughout 2020. Wholesale growers didn't know if their customers would be deemed "essential" — or if they would be forced to close their own doors to protect employees and risk total crop loss.

For nurseries who have begun to adopt Lean principles — also known as the Toyota Production System (TPS) — uncertainty is something to become comfortable with.

Lean's approach is "learn-as-you-go." Team members are trained to solve problems daily. Then, when a real crisis hits, habits of responding and learning from those responses are already in place to help deal with big problems.

Ben Verhoeven, president and owner of greenhouse grower **Peoria Gardens** in Albany, Oregon, said Lean has helped the nursery adapt.

"The Toyota Production System has given us a way to look past all of the difficulties and limitations of the pandemic," he said. "It is really forward-thinking; it's about the future, not the past. That is healthy for our company and the mental health of our team."

Plug and seedling grower **JLPN Inc.**, based in Salem,

Oregon, started reducing their exposure risk with Lean well ahead of the pandemic.

"By deploying Lean five years ago, we focused on doing more work with less resources, and making it easier to complete a process," said John Lewis, president and owner. "We were already doing many things in smaller teams than we did historically. Processes such as container grading and seedling grading are completed with teams of 5–9 people versus 8–12. The smaller teams decreased cross-exposure and improved the safety of our employees.

"When the restrictions of COVID-19 came into play, our practices already in place allowed us to essentially operate business as usual, which was a massive win."

Lean, the pandemic and waste

Lean is described as "the relentless pursuit of the elimination of waste." Waste is defined as any activity that does not add value in the eyes of the paying customer. There are seven identified forms of waste:

- Transportation of product, information, or raw materials
- Inventory of product, information, or raw materials
- Motion, or movement of people
- Waiting of people, product, information, or raw materials
- Overproduction — producing more than the customer needs
- Overprocessing — doing more than is needed
- Defects — rework or scrap

The pandemic forced nurseries to change their processes, often to protect the health and safety of workers by preventing the transmission of the pathogen. This has resulted in both increased





waste, and reduced waste, in nurseries.

“Clearly, we have increased motion and overprocessing with all of the extra cleaning we are doing this year,” said Shane Brockshus, the chief operations officer for **Bailey Nurseries**, the Minnesota-based breeder and grower that also has farms in Oregon and Washington.

“We have limited people in certain areas and on certain jobs — examples being our container shipping dock and a sticking line in propagation — to allow for distancing. This has meant either moving people around more to do the work, or just slowing down a process. We are sending extra vehicles out to the fields to limit passengers. We have people spending a lot of time managing masks, putting up barriers, creating hoop houses for distanced lunch spaces, etc. These are all important safety measures that we take seriously for the health of our employees, but they are also new burdens to the business and our managers that we did not have before COVID-19.”

Peoria Gardens “saw increased motion and transportation, as we had to stretch out some of our processes — transplanting and propagation in particular,” Verhoeven said. “We’re batching more in our shipping, which leads to more inventory and product waiting. Shipping loads were not level, with some very busy days and some very slow days. We also saw a few defects due to pushing production as fast as we could. We had to order excess inventory of tags, in order to respond to the higher demand and the long lead time required.”

Change presents opportunity

Most Lean nurseries view the pandemic as an incredible moment in history.

“We saw the pandemic as an opportunity to think broadly about larger wastes and how we could eliminate them,” said Verhoeven. “Some changes made during the pandemic are ones we want to keep, and some we want to stop. We pictured our business as a house, and we’re moving to a new place. What do we want to unpack – and not unpack when all this is over?”



“[Bailey Nursery’s Production Manager] Scott Cowan has worked hard at timely cleanliness of our container farm,” Brockshus said. “This, combined with the improved ship-through of the farm, has things more orderly and organized, which results in decreased waste in most all our processes.”

Green industry trade associations across the country were effective voices for keeping the industry running in 2020. Because of that, most nurseries experienced higher sales volume this year, as consumers sheltered at home and played in their gardens. This kept nursery inventories low, which Lean leaders recognize

as significant waste reduction.

“Something to celebrate has been reduced inventory to take care of every day,” Brockshus said. “We have been blessed with higher sell-through of container and greenhouse inventory. This gets product off the ground and at the right time, which directly reduces defects.”

But the constantly depleted inventories kept growers on their toes, as they were forced to adapt and keep product available and moving.

“We’re working harder to put the

voice of the customer into our production planning,” Verhoeven said. “Our old way would have been to forecast 6–8 months in advance of the shipping season and ride with that through the year. This year, during the heavy season, we were re-visiting the plan as often as three times per week because customer demand far outstripped our forecasting.

While that might have been over-processing at the time, we’re building more flexibility into the production plan to respond to customer demand.”

Adapting to change

Change is at the heart of Lean. Many refer to it as “continuous improvement.” The companies that master this improvement will gain a competitive advantage.

Like our nursery clients, we have had to change as consultants. We have moved our training classes to online delivery, and we’re finding new ways to deliver value to Oregon Lean Consortium members, even as they can’t be together in the same room, face to face.

	TPS	7-wastes	5S/POU	Flow	VSM	SMED	TPM	Events
Tom	●	●	●	◐	◐	◐	⊕	⊕
Mark	●	●	●	●	●	●	●	◐
Karen	●	●	●	◐	◐	◐	⊕	⊕
Steve	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
Jose	●	●	●	●	◐	◐	⊕	⊕
Beth	●	◐	◐	⊕	◐	⊕	⊕	⊕
Jeff	●	◐	◐	◐	◐	◐	◐	⊕

Skill Level	
●	Can train others
◐	Can perform solo
◑	Can perform with supervision
⊕	Some knowledge of task
○	Can not perform task

A cross training matrix breaks down the skill level staff members have for each job duty. The key identifies people who can train others, perform solo, perform with supervision, have some knowledge of the task, or can not perform the task.

CHART COURTESY OF THE PETERS COMPANY.

for advancing critical skills needed in different areas of the business. This matrix shows the skills mastery level of each person in a visual format for all to see.

Improvement events look different

An important Lean practice is running regular improvement workshops, called “kaizen events.” These are rapid, highly focused change activities by selected individuals from inside and outside a process. The team makes dramatic improvements to productivity, safety, quality, or lead time in that area of the business.

Kaizen events have been a challenge this year, with six-foot physical distancing, sanitizing requirements and occupancy limits.

Traditionally, Oregon Lean Consortium members work together to run kaizen events in each others’ businesses. This year, all consortium activi- ➤

One way the group has adapted is developing ongoing private discussions with top executives at the member companies. Leaders discuss their challenges and how they overcame them.

A recent topic was leadership development opportunities that have arisen since the pandemic. As employees need to self-quarantine, either from known exposure to COVID-19 or showing cold/flu symptoms, nurseries have stepped up their cross-training of staff so work can continue.

“This experience has highlighted the

importance of multi-skilled employees,” said Verhoeven. “We take safety very seriously at Peoria, so you can’t come to work with even the sniffles. This means we have more people on sick leave, or coming in and out of quarantine. We currently have one person on a travel-based quarantine. We deal with all the absence by training up as many people as possible. Our goal is that three people are able to do every job, and one person is able to do three jobs.”

Nurseries deploying TPS use the cross-training matrix as a visual control



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ties are moved online and members have opted not to visit other companies. We're still facilitating kaizen events, following strict safety guidelines. However, member companies are not able to enjoy the benefit of sharing the experience.

Some nurseries are developing their business strategy using policy deployment.

"This year JLPN decided to focus less on specific process-flow kaizen events and to launch policy deployment," said Lewis.

"Having a Lean mindset is making the challenge of introducing policy deployment much easier," said Lewis. "Now we can focus on a macro-win scenario for JLPN that will be made easier by our previous Lean activities."

Policy deployment is a strategic decision-making tool that unifies and aligns resources on the critical initiatives needed to accomplish business objectives. It unifies and

aligns people and establishes clearly measurable targets and accountability.

"It is the difference between the owner having a bunch of ideas that wouldn't have fully come to fruition, and the team coming up with their own greater improvements, then committing to making them happen," Verhoeven said. "Policy deployment really helped us in 2020 to prepare for the pandemic. We introduced new services like pre-pricing. It helped us pick and load our deliveries to make them easier for customers to receive. These are all things that wouldn't have happened this year without a robust policy deployment in place."

Uncertainty will always be with us

We are so impressed with the resiliency and optimism of Oregon nurseries deploying Lean. These leaders challenge us out of the status quo — and that's the

same challenge the pandemic has offered us, as well. It's given us the chance to envision the improved condition of our industry, and discover new ways to provide more value to our customers.

"In spite of everything that has happened, we have made some big, exciting improvements," Verhoeven said. "I'm so proud of our team. I'm impressed that we can still make changes when so much is in flux. We're working hard toward a better future rather than gnashing our teeth about an uncomfortable present." ©

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