

Eliminating waste with Lean

BY RICK & ELIZABETH PETERS



Lean production methods look at all activities from the perspective of value to the customer. Overprocessing and motion waste occur when plants are “cherry-picked” in the selecting process, rather than “row-run” pulling everything available that meets the specifications of the customer.

PHOTO BY ELIZABETH PETERS

ANOTHER METHOD nurseries are using to become more efficient and improve productivity is called Lean.

Lean is a way of identifying, reducing and eliminating waste in business processes.

Also known as the Toyota Production System, Lean recognizes that the concept of “value” must be from your customer’s perspective, not yours. Value is created only when three criteria are met:

- The customer is willing to pay for the product or service, and
- The work transforms the product or service, and
- The work is done right the first time.

When one or more of these criteria are missing, that indicates waste, or “non-value added” activity. Many are surprised to learn that the typical business has about 95 percent activity waste. Even Toyota, which has been practicing Lean since the 1950s, estimates that 50 percent

of their activity is still non-value added.

Nurseries applying Lean can typically improve productivity for a given process by 40–80 percent or more. They do this by viewing processes from the customer’s perspective, and eliminating waste wherever possible.

Smith Gardens in Aurora, Oregon, is one grower that has adopted Lean.

“A key objective for us has been differentiating between ‘value added’ versus ‘non-value-added’ activities in order to understand and measure the waste that is being created,” said Andres Alamillo, inventory manager and Lean captain. “We were able to improve units per worker hour in our selecting process by 55 percent just by developing standard work — the ‘least waste way’ of doing the process.”

In their most recent improvement activity, Smith Gardens reduced worker hours by a third and improved productivity 475 percent.

Robinson Nursery in Amity, Oregon, 

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adopted Lean several years ago and has reaped substantial benefits. “Since we’ve applied Lean principles to our grading process, our company has experienced a 37 percent productivity improvement in that area of the business,” nursery manager Chris Robinson said.

A typical shipping process can illustrate the benefits of Lean.

Workers might start by grouping all orders scheduled to ship on a given day by location in the field. Crews go to the field and product is pulled from the growing area, brought to a shipping warehouse in batches, cleaned and stuck with a tag in batches, then sorted onto shipping racks before being loaded onto trucks.

Orders going out that day would wait for all product to come in, to fill in missing gaps in orders. Product gets loaded onto final shipping racks and verified. If too much or too little of a product is pulled, orders must wait for the correction to be made before trucks can be loaded and released.

This process, as described, is packed with waste. From the customer’s perspective, the only value-added activity is attaching a tag, watering and possibly cleaning the product. None of the sorting, batching, transporting, handling and re-handling adds value to the product. This is waste — the target of Lean.

What is waste?

Toyota defines waste as seven types of activities that do not add value for the customer. They are:

Transportation: Any action that moves product, information or materials from one place to another results in waste. In the example above, waste is created when moving plants from the field to the warehouse, re-organizing plants during cleaning and into customer orders, and moving plants into trucks.

Inventory: Accumulating more than the minimum needed for a process, such as batching product during pulling, during cleaning and tagging, and in the warehouse as it waits for the last group to come in, are examples of waste.

Motion: Movement of people often yields waste. The example above is full of motion waste — the product is picked up and put down excessively in the process.

Waiting: Waste happens when people, raw materials or product are idle. The product waits on racks for cleaning, then waits for the remainder of the day’s orders to be brought into the shipping warehouse. Crew members often wait for trailers or for instructions from supervisors on what to do next.

Overprocessing: Doing things beyond the needs of the customer is wasteful. This might be taking extra steps to clean the product beyond customer requirements, or searching the field to find the perfect product, rather than grabbing the first product that meets specifications of the customer.

Overproduction: Producing more than customers buy — or making it sooner than customers need it — are both forms of waste. Growing on speculation will naturally bring some overproduction and is a strategic choice you might find desirable. However, there can also be waste in your daily process. For example, when crews are pulling more product than is needed for a given order that is overproduction, which results in buildup of inventory.

Defects: Waste is made when a process has to be repeated or reworked; when a product must be fixed due to lack of information, standard work or knowledge about the process; and when mistakes occur. Waste is eliminated when the process is fixed, making it easy for people to do the right thing.

The goal of Lean is to eliminate as much waste as possible, in a way that respects the people working in the company. When you see any of the above in your business, you’ve just found an opportunity to learn and improve.

“Lean gives us the framework for improving productivity in our business,” said Mark Montville, nursery manager with PRT Oregon. “By looking at the seven wastes — and working to remove them — we are more productive and we give more value to our customer than ever before. By looking at value and waste

from this perspective, I see new opportunities to improve this business every day.”

Nursery professionals must learn to “see” waste in its various forms before it can be removed or reduced. The Japanese have learned to go to the gemba — the place where the work is done — to see waste as it is happening. Approach the gemba with a learning attitude and appreciation for the people doing the work.

Lean is not a cost-reduction program or one-time “fix it” tactic, but a long-term perspective on how to do business with a disciplined structure for eliminating waste. With this perspective, go to the gemba today and see how much waste you can find! After all, the customer does not pay for waste; the grower does. ☺

About The Labor Issue

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