Rack Up the Savings

If you’re looking for more ways to cut costs, one of the best places to start is your shipping area.

As you look for ways to save money in your greenhouse or nursery, the typical things come to mind: How can I get my employees to do more, in less time? What robotic piece of automated equipment can I buy to increase my productivity? There’s one area that’s sometimes overlooked: have you ever been to your shipping dock and noticed how your employees are putting plants on racks, assuming you ship out on racks? How much time do they spend figuring out how to piece the puzzle together of which plants go on which shelf and how many shelves can go on the rack? This job, in most cases, is left up to the employees in shipping. We give the employees the customer orders and, based on their experience, they assemble the racks. We often hear the shipping supervisor say, “They’ve been doing this for so many years they know what can go together.” This is what we call “tribal knowledge.” Although a good thing that the employee is extremely knowledgeable in what they do, it’s still not what we like to see in a Lean Flow environment. In Lean Flow, one of the key aspects is to make the job of the employees easy enough that anybody with minimal training can do the job.

The Issue

For greenhouse operations, shipping plants on racks has been a regular part of their business, something that’s a given. For nursery operations, it’s a new process that they’ve never really done before. In a lot of cases, B&B (ball and burlap), shrub and tree growers ship their products not on racks, but as floor stack, deck stack or California stack loads (also known as touch loads). As the trucking companies decide what types of products they should haul, the touch loads become less desirable.

With the change in DOT driving regulations, where truck drivers now have to keep an electronic log (e-log) of their driving, they cannot exceed the 11 hours of driving or 14 hours of on-duty time. This new regulation is making touch loads less attractive to drivers. In many cases, a driver pulls into a nursery to pick up a load and has to wait three to eight hours to get the semi loaded. This is valuable time that driver could be on the road driving—and making money. At the other end of the trip is the unloading of the plants. This also may take hours depending on the size of the order. Because of this, the nursery segment of the green industry is trending toward racks.

Now that rack loads will soon be the norm in the green industry, growers need to find a way to make the process of putting together the puzzle of building racks more efficient. They also need to ensure that they optimize every possible cubic inch of the rack to increase the payload. One of the things growers need to do is provide their employees in shipping a tool that will tell them what plants to put on the racks so they don’t have to rely on tribal knowledge.

The Lean Flow Solution

The more work that can be done in the office, the less time the employees will spend figuring out how to put racks together. Having seen the many different ways growers struggle with this, FlowVision decided it was time to help them make this process more efficient. The solution we developed was to take the customer’s orders and run it through an optimization algorithm that would tell them what plants to put on each shelf and how many shelves to put on each rack. The goal here was to increase the efficiency of loading the racks, as well as the payload of the trucks. A rack sheet is printed out for every rack. It tells the employee what plants go on each shelf of the rack. Since the height of the plants vary from week to week, a height range is used for each plant—no need to measure to the inch. This sheet is given to the employees, and in conjunction with our supermarket concept, they go and shop the “supermarket.” Think of the rack sheet as a shopping list. This rack sheet is attached to the rack and shipped out with the rack. When the customer receives the racks, they have a packing slip for each rack.

The results—
“Rack up the savings”

Based on the methodology that we’ve developed for our customers, the following benefits are achieved:

- **Easier-to-get trucks:** Growers are having an easier time getting trucks because they’re loaded on racks and not touch loads. When the driver pulls up to the loading dock, they can be on their way in about 30 minutes, compared to hours with touch loads. One grower was able to get 25 trucks guaranteed to them at peak, compared to 14 last year.

- **Greater efficiency loading racks:** Utilizing rack sheets to put together loads is at least 50% quicker. One grower we worked with would overbook a load with 59 racks when they knew only 50 fit on a truck. They would expect their employees to work their magic and get the 59 racks down to 50. Although this may seem like a good thing, it makes loading less efficient and many orders have to be shortened because they can’t fit it all on the truck.

Another grower would have their sales people build the racks by hand after taking an order, taking 10 to 20 minutes per order. This time spent building the rack by hand could be spent selling more products.

- **Less discrepancies and credits:** Having the rack sheet attached to the rack when it’s delivered helps the receiving process. When
An optimized rack has very little air in between shelves, using every possible cubic inch of the rack to increase the payload.

This rack has too much space between the shelves, so the payload is less.

the customer receives the racks, they look at the rack sheet and compare it to the rack. No more having to look at the bill of lading to see if all the plants ordered are on the racks. Quicker receiving and less mistakes.

One of our customers got a call from their big box customer asking what they did to drastically reduce the discrepancies. The answer was utilizing a rack sheet, along with the supermarket concept that was implemented.

Less time looking for trucks to haul your loads, faster loading of plants onto racks, faster loading of racks into trucks and less time to unload at the customer site with fewer discrepancies can save growers thousands of dollars per year.

As you implement Lean Flow in your operations, don’t forget the last step in your process—racking those plants and optimizing those racks and loads. GT

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Touch loads, also known as California stack loads, are time-consuming to load and unload, and allow for a higher risk for quality issues.