

# Midwest groundcovers lean flow journey with Flow Vision<sup>®</sup>

M. Fredrickson<sup>a</sup>

Midwest Groundcovers, PO Box 748, St. Charles, Illinois 60174, USA.

Midwest Groundcovers is a wholesale nursery based out of St. Charles, Illinois that focuses on growing a wide range of products in five production nurseries in Illinois and Michigan. Due to concerns of decreasing labor availability, increasing labor costs, and increasing transportation costs; along with the desire to increase the capacity of order fulfillment, increase transportation capacities, and to eliminate all non-value added work, we explored how Flow Vision could help us to streamline processes to ease these concerns and to increase our overall profitability.

Midwest Groundcovers began working with Flow Vision in June of 2015. During the first assessment, Flow Vision identified five areas for Lean Flow redesigns. Distribution and shipping, the customer pick-up area, propagation, lean materials strategies, and cart optimization, possibly with Lean Flow's RIO software.

Because Midwest Groundcovers is spread out between five locations in two states, we decided to redesign our distribution and shipping processes and to implement a cart optimization program. We chose this process because all five locations would be equally impacted with the implementation. All company departments and employees would be equally involved because shipping and distribution is our most standardized process. Shipping capacities had been our greatest limitation on company growth and it would bring forth the greatest benefits to our customers. Another goal was to lower employee stress during the busy shipping season. And last it would bring Midwest Groundcovers the quickest return on investment. Although we had many good reasons to focus on distribution and shipping, we also found out that we chose the most difficult project to start with.

Midwest Groundcovers' shipping department is based out of the St. Charles, Illinois location. Before the Lean Flow implementation, inventories of all salable products from the outlying nurseries would be warehoused in the St. Charles nursery in what we call the holding area. Plants would be picked from this inventory to fill orders. We would transfer inventory from production nurseries to replenish the holding area based on predetermined minimum and maximum inventory set points. All orders were picked individually and all the plant material would end back at the shipping dock where it first arrived.

The first part of the redesign process was for us to map out our desired order pulling process. We did this by creating flow charts to indicate what everyone needed to be doing. This process needed to be mapped from the time that the sales department took the order to the time the order landed at the customers. Through this process we wanted to continue to guarantee customers that we would be able to deliver their order within 36 h. For this new process to work, we also determined that we needed to have firm order cut off times.

We implemented what Flow Vision calls a "pre-staged order" or what we are calling at Midwest Groundcovers a "Moving Supermarket". With the new process, all plant material is bulk pulled from the production nurseries (Figure 1). For example, with the old process, if there were 10 orders that each contained five flats of *Pachysandra*, 10 order pullers would go to the pachysandra house to each pick five flats. Now one order puller goes to the pachysandra house one time and picks 50 flats. All material for our shipping orders now stays on the shipping dock. All shipping carts are staged by truckload in a predetermined location. Paperwork is distributed to show the shipping employees how to load the carts so that they do not have to figure out how to load the carts. The transfer carts of bulk pulled material are moved through the dock and their plants are offloaded onto the pre-staged shipping carts. Bottle necks have been removed as workers can continue to load carts and do

---

<sup>a</sup>E-mail: mfredrickson@midwestgroundcovers.com

not have to wait to receive their next order, order pickers do not waste time driving through the nursery, or wait for their turn to get onto the dock.



Figure 1. Bulk pulled plant material from the production nurseries.

Changes made to the order picking process in remote production nurseries also helped. All order picking paperwork was changed so that it is now printed out in geographic order of the nursery, not in alphabetical order. There is also paperwork for all internal transfer loads to show workers how to load the carts. This has maximized our internal shipping capacity by making sure that all carts are filled to capacity. In order for this to work, our inventory department must now make sure that all salable plant heights are accurate in our ERP system so that our cart optimizer works properly. We have also seen a positive result of this with our sales team as they now always have accurate plant heights to use when selling.

Our Lean Flow implementation also forced us to evaluate how we label our plants. Because we warehoused our salable plants in the holding area before Lean Flow, we did not need to label plants until they were picked for an order; we also gave our customers six label options that would be attached when the order was picked. We now label all material in the production nursery at the time it is picked and have also reduced label options to only two. This initial change has saved us 62% on label stock and printer toner alone from the year prior. We also need less time and labor to prepare plant labels with the new process.

Since our implementation, we have increased our shipping capacity thresholds by 30%. Midwest hit a record for the amount of material shipped in one day only four weeks after our implementation. We have also decreased our holding area nursery by 33% and

converted this space into production space, increased the amount of cross-docked material by 40%, and improved product quality due to less transportation damage and decline from being in a holding area.

As it is easy to point out the successes of our Lean Flow implementation, there have also been many difficulties with this implementation. We went live on 20 April 2017. This timing was good to make sure that we couldn't back out, however we needed to learn and train new processes to our employees going into the busiest time of the year. We had to undergo very difficult computer programming to our ERP system and we were unable to get it complete in time. This caused two weeks of chaos until the program finished. Because this implementation involved changes to processes that worked very well in the past, it was difficult getting all employees engaged and involved and we had to constantly remind them that the old process wasn't bad, but that we had outgrown it. Managers and supervisors needed to give support and to show the results and improvements of the process change. Our next challenge is how to better redistribute employees and resources when the work is completed quicker than before.

Overall, Midwest Groundcovers is pleased with the results of our first Flow Vision process redesign. We now consider lean a part of our culture. It is a new way of working and we are constantly improving our processes. We are constantly reviewing our results and celebrating our accomplishments.

