e-GRO Alert

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Setting Goals to Improve Productivity in Sticking Cuttings

Have you ever heard of the saying, “What gets measured, gets managed?” Peter Drucker, considered to be the founder of modern business management coined this slogan in one of his many books and articles. What does it mean? It means that if you cannot quantify something, then you will not be able to set a benchmark to determine if something is operating “well” or “not well” in the business.

How can this be applied to horticulture? As growers delve into the 2019 growing season, they should consider measuring the time that tasks take and consider how to do them more efficiently to work smarter not harder. Especially as many greenhouse businesses are reporting a labor shortage, many owners are operating with lean staffing and are concerned about how all of the work will get done. One of the most labor-intensive tasks occurring in many greenhouses right now is sticking vegetative cuttings. Some of the largest propagators have made substantial capital investments in robotic transplanting machines, which when running correctly, can out-perform their human counterparts (Figure 1). However, many greenhouses would not use the machines enough to justify the investment. In addition, there will always be some plant material that is too fragile or large for robotic transplanters, so crews of employees need to stick the cuttings by hand (Figure 2). It is a tedious and repetitive job, but is critical to success of the business. Managers should drive home that fact with their employees – they are an essential part of the team!

Last season, Dr. Roberto Lopez wrote e-GRO Alert 7.12 – Avoiding Cutting Losses by Prioritizing Sticking – and I wrote e-GRO alert 7.13 – Using Surfactants in Vegetative Cutting Propagation. These are guides show how to prioritize different plant species to cut down on losses of delicate vegetative cuttings and provide a review of commonly used adjuvants in greenhouse propagation. These are excellent resources for actual plant quality, but how do we get the job done faster and more efficiently?

First, do you know how long it takes to stick a set number of vegetative cuttings? Do you set goals for your employees and notify them immediately if they are meeting those goals? Some greenhouses have adopted different techniques in their planting lines: some greenhouses use progressive sticking while others have adopted individual performance systems.

Progressive sticking is a LEAN-flow technique, where the team works together to get as much done as possible in an assembly-line manor. Employees do not stick an entire tray themselves, but they get as much done as they can until the next person in line takes the tray from them once they are done (Figure 3). Managers should provide all of the supplies (cuttings, prefilled trays etc.) available to employees within arm's reach and restock them as needed throughout the day. Then, employees do not have to keep leaving the line in order to retrieve the next cutting batch or more trays. Managers should put their most experienced, fastest employees at the beginning and the end of the line as to drive the pace of the whole team. There is very little down time between each tray which increases efficiency. In this system, employees are often provided feedback as a team.

Figure 1. Robotic vegetative cutting machine used to stick vegetative cuttings.

Figure 2. Employees hand-sticking vegetative cuttings.

Figure 3. Employees sticking cuttings using the progressive sticking technique.

Figure 4. These white boards quickly show employees the hourly sticking rates of the team with respect to their goals.

One greenhouse operation posts the team's sticking rates at different times of the day on a white board which is visible to the staff (Figure 4). These provide counts of the number of trays that were done per hour and provides a percentage according to their goals. This greenhouse reports that using progressive sticking has over quadrupled their efficiency.

Figure 5. TV monitors above employees sticking vegetative cuttings provide instant feedback to individual employees about their performance.

Another method of measuring propagation rates is to develop goals for each line and/or employee. Another Michigan greenhouse uses color-coded TV monitors to alert staff of their pace (Figure 5). By setting goals for each employee and providing them instant feedback, employees are more likely to be driven to reach those goals. Some greenhouses that use this system offer bonuses for employees who may: 1) exceed the expected rate, 2) are the fastest in the team, or 3) are the most improved. Greenhouse owners can reward excellent performance and encourage employee retention.

While there is more than one way to manage employees, who are sticking cuttings or transplanting, it is beneficial to start developing goals for employees. It provides an active performance management and conveys to employees that their work is valued and important. This way, you can measure and manage better in the upcoming growing season.

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