GROWERTALKS

Features

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Making an Impact

Edited by Jennifer Zurko

Adaptability, sustainability, efficiency.
When you read the following essays from this year's *GrowerTalks*/Ball Horticultural Company Young Grower Award finalists, you'll notice a pattern.
We asked them to think about specific ways greenhouse businesses can make an impact and all three of them agreed on what's needed for our industry to continue to be successful:

- The willingness to embrace and invest in new technology because that's what will keep costs down in production and labor
- Diversifying the crops you grow and the products you offer helps growers stay nimble in a dynamic market where changes happen more rapidly and more frequently
- Continuing to participate in sustainable practices

This last one remains a vital part of career satisfaction for their generation. Not only does it fulfill their desire to be environmentally conscious, but it also allows for creative thinking, and exploring new ideas and adopting new technology. It scratches every Millennial itch.

One other comment I thought was interesting came from Ginger Thurston, who mentioned that passing on your knowledge and helping others learn from your successes and mistakes is another way to really make an impact. It shows that the younger generations are not only looking beyond the present and how they can make a lasting impact in the future, but that they take the responsibility of training the next generation seriously.

Our panel of judges will choose the 2025 *GrowerTalks*/Ball Horticultural Company Young Grower Award winner based on their nomination applications, their essays and a telephone interview. We'd like to thank our esteemed judges for their time and support of this award. This year's judges are:

Anna Ball
CEO & Chairman of the Board
Ball Horticultural Company
West Chicago, Illinois

Art Parkerson
Owner
Lancaster Farms
Suffolk, Virginia

Ed Overdevest
President
Overdevest Nurseries
Bridgeton, New Jersey

Drew Groezinger
2024 Young Grower Award Winner
Clara Joyce Flowers
Stockton, Illinois

> **Find out who the winner is for our 21st annual *GrowerTalks*/Ball Horticultural Company Young Grower Award at the Unplugged event during Cultivate'25 in Columbus, Ohio, being held at Gaswerks from 8:00 to 10:00 p.m. on Monday, July 14.**

Q. What are the three most impactful things greenhouse businesses can do over the next couple of years to be successful? Tell us why.

Isabela Chamorro
Age: 32
Title: Perennial Head Grower
Operation: Mahoney's Garden Center—Woburn, Massachusetts

The greenhouse sector has already proven its value in addressing food security challenges while reducing the environmental impact of traditional farming methods. In order to achieve long-term success, greenhouse businesses must focus on integrating sustainable practices, leveraging technology for efficiency and diversifying product offering to meet consumer demands over the next few years. These factors will be imperative for greenhouse businesses to attract and retain the next generation of consumers to this vital industry.

Water recycling in greenhouses is a fundamental practice for promoting sustainability in modern agriculture. Given the increasing scarcity of water resources and the need to optimize water use, greenhouses have adopted various recycling techniques that allow for the reuse of these vital resources. For instance, at Las Limas, Ball FloraPlant's production farm in Nicaragua, the fertilizer-laced wastewater used for irrigation falls into a gutter that connects to a pipe, which leads to a slow sand and gravel filter tank. This helps to separate fertilizer residue from the water. The filtered water passes through a UV filter or Priva filter, which ensures that no bacteria or viruses are present, and then finally falls into the clean water collection tanks (ready to be used again).

Currently, they obtain 60% recirculated water and 40% clean water. Using this method on their year-round production gives them a result of 25% to 30% waste on water usage, which is one of the reasons they still keep their A-MPS and OGCP environmental certification. In the long run, greenhouses that invest in water recycling technologies not only reduce their environmental footprint, but also create a model for others to follow, proving that sustainability and profitability can go hand in hand.

Another factor in this industry is that we're always looking for ways to improve our work efficiency by trying to reduce cost on production, but bulking up the growing numbers. Nowadays it's more challenging for companies to catch up with the demand. Automation is one of the biggest barriers for many businesses because of the cost of investment, but it will be a key factor to stay afloat.

The following cost analysis by John Bartok shows how in the long run this is a profitable investment: "Installing a $30,000 automatic transplanter that has a production of 200 flats per hour per worker, the transplanting cost per flat drops to 7 cents. This 21-cent savings will have a basic payback of about 1.5 years if you do 100,000 flats a year. You would need to have about 2.5 acres of growing space to handle this volume if you filled the greenhouse twice a year."

That said, the automatic transplanter is not just a labor-saving device, but an opportunity to streamline operations. With faster transplanting, fewer errors and a more consistent process, this technology enhances overall workflow. When paired with other automation systems in the greenhouse, such as climate control or irrigation, it can create a fully integrated operation that minimizes waste and maximizes yield.

Lastly, as a Millennial, I see diversifying greenhouse product offerings as more than just a business strategy—it's a chance to connect with consumers in a meaningful way. In today's world, where transparency matters more than ever, consumers want to know the story behind the food they buy. By sharing how products are grown, the farming techniques used and the environmental benefits of these practices, businesses can build a real connection with their customers. This isn't just about selling food; it's about fostering trust and turning customers into loyal advocates who care about the story behind their meals.

But there's more to it. Diversifying a greenhouse's product range can help businesses stay nimble. In a market where consumer preferences shift rapidly and unexpected disruptions—like extreme weather or supply chain hiccups—can throw things off track, having a variety of crops allows businesses to adapt and keep producing. It's the kind of resilience that not only helps greenhouses survive, but thrive, even in uncertain times.

For younger generations, particularly Millennials and Gen Z, sustainability isn't just a buzzword, it's a core value. These consumers are drawn to brands that reflect their commitment to ethical sourcing, eco-conscious practices and products that are kind to the planet. Whether it's reducing waste, supporting local communities or offering organic options, businesses that align with these ideals will capture their attention. After all, today's consumers want to make a positive impact with their purchasing decisions and they're looking for companies that share those same goals.

In conclusion, the greenhouse industry stands at a pivotal moment where sustainability, technological integration and product diversification are key to securing its future. By adopting water recycling practices, such as those demonstrated by Ball FloraPlant in Nicaragua, greenhouses can significantly reduce their environmental footprint while ensuring resource efficiency. Additionally, embracing automation, though initially costly, offers a valuable long-term investment that enhances operational efficiency, reduces labor costs and improves overall productivity.

Finally, diversifying product offerings is not only a way to meet the evolving preferences of younger generations like Gen Y and Z, but also an opportunity to build trust and foster stronger relationships with consumers who value sustainability and healthy living. By aligning with these trends, greenhouse businesses can not only stay competitive, but also play a pivotal role in the future of agriculture, ensuring a more sustainable and resilient industry for years to

come.

Ginger Thurston
Age: 33
Title: Stock and R&D Manager
Operation: Spring Meadow Nursery—Grand Haven, Michigan

Greenhouse businesses are in the unique position of producing products that inherently grow and change, and it's essential to evolve with resource availability and consumer demands. Over the next few years, the most successful growers will be those who invest time in documenting tribal knowledge to pass on to up-and-coming employees, embrace technological advancements and automation, and understand weaknesses in their supply chain, using sustainable practices to reduce waste and expenses.

Many businesses often started with a few key employees who've since stayed with the company for decades. These people have helped fuel success and have years of important horticultural and logistical knowledge for how to produce crops efficiently. Very little catches them off guard because they've already experienced a situation like it five, 10 or 20 years ago. They remember why a soil supplier was changed in 2018 or the trick to getting that old tractor to start. But when those people leave, all of that tribal knowledge leaves with them.

That's why it's so important to identify unwritten rules and tricks of the trade now and start documenting them. When a new person steps into the shoes of a veteran grower, they shouldn't have to make the same mistakes all over again. As I've taken on more responsibilities in my career, I've found myself digging through records to piece together the history and context behind why we do things a certain way. Some lost background knowledge is inevitable, but often we get caught up in keeping everything running day to day that we don't pause to capture the lessons we've learned along the way. I've been in the nursery industry for about a decade and even I sometimes assume something is common knowledge, when in reality, newer employees haven't had the chance to witness the mistakes that taught me those lessons. It's our responsibility to train the next generation and record information that helps them succeed.

Another important area that can be overlooked in the daily grind is technological advancement and automation. There's sometimes a hesitancy to embrace automation in the greenhouse industry because it can feel like we're stepping away from the hands-on work that makes us growers in favor of becoming factory workers running an assembly line. We also tend to stick with what's familiar, doing things the way it's always been done because it's worked so far. But labor costs continue to rise, making each hour more valuable.

At the same time, finding reliable employees in our industry is often a challenge. Investing in items that can alleviate physical demands of greenhouse work—like drill augers, potting machines or power trimmers—can improve workers' daily experience. Furthermore, automating repetitive tasks like watering with timers or moisture sensors can free up staff for other responsibilities (and maybe even give them their weekends back). Automation can also improve plant quality by using indicators like soil moisture levels or vapor pressure deficit to more accurately determine a crop's water needs, removing some of the guesswork from growing.

I also want to highlight the importance of sustainability in our industry. While sustainability can sometimes feel like a controversial buzzword (depending on your interpretation of its meaning), it has the potential to create meaningful environmental and economic benefits. We all experienced major supply chain disruptions in 2020-2021, when

suddenly plastic prices jumped over 30% and lead times extended by months. Then there are concerns over potential tariffs on peat moss and other imports. These kinds of things can bring production to a halt, so it's important to examine your supply inputs and explore what alternatives are available. It could be going with a container supplier selling blow-molded pots that use less plastic than injected mold and can thus offer product at a cheaper price.

Nurseries that shift plants up internally before sale might also consider redesigning their process to include a sanitation line, allowing for the reuse of pots. In addition to saving money, sustainable practices signal to customers that your business is taking steps to reduce its environmental impact, which is something we all care about in the green industry, right?

Successful companies build on experience while adapting to meet changing needs. It's important to understand the wealth of knowledge gained from decades of trial and error by experienced growers, and to distill those insights into resources that younger generations can learn from as they grow in their careers. At the same time, staying open to innovation allows us to improve efficiency and free up time to focus on producing higher-quality crops.
Finally, examining our supply chains and adopting more sustainable practices can lower costs, reduce waste and show customers we're committed to environmentally responsible production. By focusing on these three areas, businesses in the green industry can ensure their growth is resilient and prepared to meet future challenges.

Daniél Villegas
Age: 34
Title: Grower
Operation: Van Belle Nursery—Abbotsford, British Columbia, Canada

The horticulture industry is facing important and crucial challenges that will continue to intensify unless improvements are made. Specifically, greenhouse businesses have historically done a great job providing top-quality crops such as vegetables, ornamentals, fruits, etc. However, the industry remains at risk due to persistent challenges during the production and growing cycles. These challenges affect the final product directly—problems related to diversification, order fulfillment, crop timing and quality, climate change, labor shortages and lack of standardized processes. Here are the main factors the industry should focus on during the coming years to ensure its success:

Market diversification and trends. One of the primary factors that make greenhouse businesses fail is the misunderstanding of the markets and its trends. Understanding the current situation and anticipating the drivers of this growth is essential. External factors could have indirect effects on the customer's needs. For this reason, it's important to have open communication between sales and production teams in order to adjust their production plans accordingly. Moreover, product diversification could offer opportunities to increase company profitability and reduce the risk of relying on a limited product range when customers are seeking diversity.

Also, it's crucial to understand the current worldwide economic situation and how external factors may impact the cost of production and final pricing. Growers are continuously concerned about rising input costs and are always seeking better efficiencies. A resilient business that understands the markets and the economic trends is better equipped to react to external drivers and it will be less vulnerable to market fluctuations.

Technology adaptations. Horticulture is considered a high-risk sector because crop performance is heavily affected by weather conditions, which are often unpredictable. Greenhouses provide crop protection and the option of controlling many variables that affect crop performance, such as water, shading, lighting, heating supply and ventilation. To maintain high crop performance and navigate through the labor scarcity mentioned above, it's crucial to adapt efficient technologies and automation, leading to more sustainable production. Three categories of technology are particularly impactful:

1. Robots: Efficiency and automation with robots can be an essential tool for greenhouse operations to reduce labor and resource needs. Robots are being used for tasks like sticking cuttings, transplanting, weeding, monitoring crops, and harvesting and shipping.
2. Growing lights: Many greenhouses are using lights to produce crops year-round. These lights enhance crop uniformity across seasons. For example, in British Columbia, LED lights have improved plant growth during the winter season when daylight hours are limited. It's been possible to receive new early and off-season orders, and increase revenue.
3. ntegrated pest management (IPM): Prevention is one of the most important factors in pest management. Some strategies include regularly scheduled periodic scouting, bio-control releases and physical control (such as sticky traps, pruning and good water management). In 2023, Van Belle reduced its use of chemical sprays by 30% through adopting a holistic and preventative approach. Additionally, an ongoing trial with ultraviolet-C (UV-C) light for preventing and treating phytosanitary problems (specifically bacterial disease) has shown promising results, with further testing planned for 2025.

Labor scarcity. It's well known that labor scarcity in the agricultural sector is a reality. Growers have shared that labor availability is one of the biggest concerns that greenhouses have been facing in recent years. Also, external factors such as increasing wages and production costs, transportation and government regulations have affected and modulated the future of the industry.

According to the Canadian Agricultural Human Resource Council (CAHRC), the industry was unable to fill 2,800 jobs in 2017, which resulted in production losses and delays valued at approximately $103 million in lost sales. Jobs in this industry tend to be highly intensive and seasonal, including sticking and transplanting, moving, grading, pruning, fertilizing, picking and shipping. As a result, the industry requires foreign worker programs to supply about 40% of the workforce in the North America market. Additionally, local workers are often not willing to work in the agricultural sector due to extreme weather conditions, the physical workload and a lack of defined processes.

To address labor challenges, the industry could implement the following strategies:

1. Training: Educate staff in operation processes and provide regular feedback. You could offer more opportunities and team reliability. Also, encourage cross-training in the team so that they're more flexible and have the opportunity to do diverse activities.
2. Labor forecasting: Accurate labor forecasts help identify potential shortages and their impact on operations.
3. Process efficiency: Creating and reviewing standard operating procedures (SOP) is an efficient way to have reliable and consistent processes.

The horticulture sector is facing serious challenges that are impacting its performance and sustainability. For that reason, I strongly agree that if the industry doesn't understand the roadblocks and take action it may affect the business and impact the profitability. Market diversification and trends, accurate labor forecasting and technology

adaptations are three of the most impactful strategies that could lead the industry to stay competitive and future ready. **GT**