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GREENHOUSE PRODUCT NEWS

Plant & **SOIL HEALTH**

p. 8

INSIDE:

Biologicals and better data
New tech at Cultivate'26
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SPECIAL SECTION

UNDER CONTROL

TOOLS & TECH FOR CEA SUCCESS

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Berger formulates its growing media to create physical and chemical properties that promote a healthy root zone. Photo courtesy of Berger.

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It's now available to view on
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Lighting, fall transitions,
sustainability and
efficiency upgrades.

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SPECIAL SECTION

Under Control: Tools & Tech for CEA Success

THE FOUNDATION OF SUCCESS

Healthy plants begin with healthy roots, and healthy roots begin with a strong growing environment. In today's greenhouse industry, rising input costs, labor challenges and shifting market conditions make every crop decision more important than ever. Growers know that producing resilient, high-quality plants that remain marketable longer can directly impact profitability. In this Plant and Soil Health issue, we explore how innovations in substrates, crop protection and technology are helping greenhouse operations improve plant performance, reduce losses and maximize efficiency.

BUILDING HEALTH FROM THE GROUND UP

A thriving root zone remains one of the most important factors in producing strong, sellable crops. On page 8, we examine how advances in growing media, water management and biological compatibility are helping growers create healthier root environments while improving resource efficiency. From optimizing air and water balance to supporting beneficial microorganisms and enhancing nutrient management, today's substrate innovations are providing growers with new opportunities to build plant resilience from the ground up.

RETHINKING CROP PROTECTION

Crop protection continues to evolve as growers face increasing pressure from resistant pests, emerging diseases and sustainability expectations. Page 14 explores how integrated pest management programs are combining biological controls, targeted chemistries, banker plants and new technologies to create more effective, preventative strategies. The result is a more balanced approach that helps growers manage resistance, protect crop quality and build long-term production success.

DON'T MISS NEW TECH AT CULTIVATE'26

Innovation takes center stage at Cultivate'26, and the products and technologies highlighted here give growers new ways to improve efficiency, monitor crop health and streamline operations. From advanced water and nutrient testing tools to on-demand labeling solutions and new propagation

technologies, attendees will have an opportunity to discover practical innovations designed for today's greenhouse operations. Be sure to see what's shaping the future of smart growing on page 26.



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SUBSCRIPTION INFORMATION

GPN (ISSN 1529-5524) is published monthly except combined in June/July and Nov/Dec by Great American Media Services, 75 Applewood Dr., Sparta, Michigan 49345. Subscription rates in the U.S. are \$10 per year (Canada is \$40 and all other countries are \$95 payable in U.S. currency). Reproduction of contents forbidden. Copyright 2026. Periodicals postage paid at Sparta, MI and additional mailing offices. Print in the USA. POSTMASTER: Please send address changes to Great American Publishing, PO Box 318, Lincolnshire IL 60069.



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A PARTNERSHIP GREATER THAN THE SUM OF ITS PARTS

With the rise of e-commerce, consumers now browse, compare, and purchase products from the comfort of their own homes. That convenience creates both great opportunities and challenges for the horticulture industry. The opportunity is obvious: plants are beautiful, photogenic, and perfect impulse buys. The challenge: a living product is not as easy to put in a box and ship as hardgoods. One company that stands out in mastering e-commerce for plants is Great Garden Plants, partially thanks to the right partners the company aligns with.

Founded in 2008 by Mary Walters and purchased in 2019 by Jeremy Deppe, Great Garden Plants encompasses roughly five acres of continuously covered growing space out of a dedicated corner of Spring Meadow Nursery's facilities in Michigan.

Great Garden Plants is an e-commerce company that specializes in growing and shipping perennials and shrubs, offering over 1,500 varieties through its online store (greatgardenplants.com). From landscape staples to exciting new introductions, their goal is to make high-quality plants accessible to gardeners across the country. The company currently ships to all 48 contiguous United States and recently started serving customers in Canada as well.

The demands of e-commerce leave little room for error and set particularly high standards on the quality and reliability of starter plants. That's why Great Garden Plants sources a large amount of its perennial and ornamental grass starter plants from Emerald Coast Growers of Pensacola, Florida.

"It's vital that the plugs arrive healthy and vigorous from the start, since any inconsistency can quickly impact our production schedule," explains Miranda Niemiec, Operations & Marketing Manager for Great Garden Plants. "Emerald Coast has consistently delivered quality plants and provides an attentive sales and customer service team we can rely on for support when needed."

Great Garden Plants began working with Emerald Coast Growers around 2019. Once the gardening boom hit in 2020, their orders with Emerald Coast really took off, and the partnership has continued to grow ever since.

"We were initially drawn to Emerald Coast Growers by their plant quality, reliability and depth of assortment, which we were trying to build at Great Garden Plants," explains Niemiec. "Over the years, the relationship has grown alongside our own business. What started as a smaller partnership has become a much more



"Emerald Coast has consistently delivered quality plants and provides an attentive sales and customer service team we can rely on for support when needed."

— Miranda Niemiec

consistent and collaborative one, and ECG is now an important part of our supply chain."

Niemiec sources a wide range of perennials and ornamental grasses from Emerald Coast Growers, from landscaping classics like Sagina, Carex, and Festuca to home gardener favorites like Echinacea, Anemone, and Gaura. The company primarily buys 72- or 50-cell plug trays that they shift into one quart containers, which have a quick finishing window.

Both companies share a similar philosophy, where quality, reliability, and excellent customer support take center stage. Both take great pride in helping their customers succeed, and they realize how important every step in the production process is to ensure great success for their customers.

As Niemiec states: "At Great Garden Plants, we pair high-quality perennials and shrubs with a customer experience designed to help gardeners feel confident and excited at every step. Whether someone is learning through our educational content, getting inspired by our social media, or shopping on our award-winning app, we aim to meet gardeners where they're at and make gardening feel more rewarding." That same philosophy guides the team at Emerald Coast Growers.

Emerald Coast Growers is proud to celebrate 35 years of success in the horticulture business. Known for their wide variety of perennial starter plants and specialty plants, Emerald Coast Growers still maintains the distinction of being one of the industry's largest suppliers of ornamental grass liners to North American growers and retailers.

"It's been exciting to see Great Garden Plants succeed in making gardening more accessible to today's consumers," states Cheri Markowitz, VP of Sales for Emerald Coast. "We are proud to work with Miranda and her team to bring exciting plants to America's gardens. We are already working together on a great lineup for the 2026/2027 season."

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STRENGTH BELOW THE SURFACE

From biological activity to water management, healthy root zones are key to producing resilient, market-ready plants

*Photos courtesy
of Berger.*

BY REGINA MOLARO

Healthy soil and root-zone conditions are essential for producing robust, sellable plants. As input costs rise and weather patterns become less predictable, growers are increasingly focused on growing media and production practices that support plant resilience, improve efficiency and reduce losses.

“The need for resilient plants will not go away. The longer plants can remain sellable, the better it is for growers,” said Matt Garrett, Profile Products global product manager.

BUILDING PLANT HEALTH FROM THE ROOT ZONE

In controlled environments such as greenhouses, peat-based substrates play a critical role in supporting plant health by providing a stable, well-aerated and naturally clean root environment, said Nadia Issiakhem, Berger product manager.

Berger formulates its growing media to create physical and chemical properties that promote a healthy root zone. When roots and shoots remain healthy, plants are less susceptible to pathogen pressure.

Although Berger’s products are considered clean, the company can test finished growing media for specific human or plant pathogens and retains samples from each production run for one year to verify product safety if issues arise.



Berger has focused on substrate physical properties to maintain a stable water-air balance to reduce root rot diseases.

SUPPORTING BIOLOGICAL SOLUTIONS

As the industry continues to adopt biological solutions, demand for substrates that support beneficial microorganisms such as Trichoderma, Bacillus and mycorrhizae continues to grow.



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PLANT & SOIL HEALTH

Beneficial microorganisms thrive in peat because of how peatlands are managed and how harvested peat is stored and processed. Peat moss can serve as an effective carrier for microorganisms, but it must be handled properly to maintain viability.

Maintaining low moisture levels during storage helps preserve the effectiveness of biostimulants and biocontrol agents. Excess moisture can trigger premature activation or degradation before products reach the grower.

Today's growers increasingly seek integrated solutions in which substrate, technology and biological inputs work together to improve crop performance while reducing inputs and environmental impact.

In soilless production, root-zone health is the functional equivalent of soil health. When the substrate provides clean, stable and biologically active conditions, plants develop stronger root systems and respond more effectively to beneficial inputs.

NEW PRODUCTS SUPPORT PEST MANAGEMENT PROGRAMS

Many companies are unveiling power products that assist growers in keeping plants and soil at its peak performance. Last year, Nufarm launched OpteraPro, an insecticide for turf and ornamentals and Simpelli, a broad-spectrum control for foliar pests including some that are traditionally among the most difficult to control and prone to resistance.

"The active ingredient in Simpelli, spinosad, is biologically derived and soft on beneficial insects and other non-target species. Its unique mode of action delivers a useful integrated pest management tool and resistance management solution in defense against caterpillars, thrips, mites, beetles, annual bluegrass weevil (ABW), fleas, leafminers and more," said Rick Fletcher, Nufarm technical services manager for turf & ornamentals.



Berger formulates its growing media to create physical and chemical properties to promote a healthy root zone.



IMPROVING EFFICIENCY AND PERFORMANCE

To meet evolving grower expectations, Berger has focused on optimizing substrate physical properties to maintain a stable water-air balance.

These improvements help reduce root diseases while supporting consistency in irrigation and fertigation programs. Stable air-water relationships improve access to oxygen, water, nutrients and beneficial microorganisms around the root system.

Berger has also developed product lines incorporating wood fiber, coconut coir and compost to help growers reduce environmental impact while maintaining performance.

Profile Products approaches plant performance from a similar perspective through products designed to improve rooting and water management.

"HydraFiber can be up to 98% porous, creating better airspace compared to other common growing media," Garrett said. "This enhances root development. An added benefit is that plants finish growing faster."



HydraFiber is a premium engineered wood fiber, helping grow healthier plants that last longer on the retail shelf. Photos courtesy of Profile Products.



A thriving celosia was grown using HydraFiber from Profile Growing Solutions producing strong root growth and development.

Dahlias respond well to controlled release fertilizer and flourish with HydraFiber advanced substrate.

Garrett said even modest inclusion rates can increase plant-available water while improving rewetting performance.

Profile Products also offers HydraTerra, which combines HydraFiber and peat moss into a single product. Garrett said the lightweight blend can help reduce freight, storage and handling costs.

HydraFiber's low bulk density and compression capabilities allow more products to fit on a truck. According to Garrett, one truckload can equal the volume of five truckloads of peat or 7.25 truckloads of perlite.

TRENDS AND OUTLOOK

Growers continue to face rising production costs, economic uncertainty and changing consumer demand, according to Rick Fletcher, Nufarm technical services manager for turf and ornamentals.

"Nufarm is constantly looking ahead with plans to introduce solutions to combat resistance and add value, including effective alternatives for neonicotinoids where that demand exists," Fletcher said.

Beyond managing costs, growers are also adapting to industry consolidation and increasing pressure to maximize efficiency.

"We don't have a lot of tools, so we're getting smarter about developing more efficient uses of existing chemistries," Fletcher said.

Garrett expects fertilizer costs to receive increased attention as geopolitical factors continue to influence input markets.

"Nutrition will be analyzed more closely as geopolitical factors are causing the cost of fertilizer and nutritional inputs to climb quickly," he said.

Water management will also remain a priority.

"Although it's more geographically based, saving on water, including on the labor of watering, is also an input to optimize," Garrett said. [gpn](#)

Regina Molaro is a freelance editor whose work has been featured in more than 20 publications. She can be contacted at reginamolarofreelance@gmail.com.



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"We developed SOL LUNA™ impatiens with the goal of creating uniform habits and consistent bloom time across the colors," says Mike Fernandez, North American Market Manager for Danziger.

That uniformity makes a real difference in production. The series are designed to support efficient growing, easier shipping, and cohesive retail displays that look full, colorful, and ready to sell.

For gardeners, the message is simple: SOL LUNA™ can be planted in sun or shade, delivering bold color

and beautiful blooms across a wide range of garden uses.

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SOL LUNA™ COMPACT is the naturally compact solution. It stays controlled, uniform and tidy with little to no PGR needed, making it ideal for small pots, pot-tight production and mixed planters. "This series was bred and selected to perform in small pots and pot-tight production," adds Fernandez. "SOL LUNA™ COMPACT maintains its vigor, structure and size over time, making it a great choice for small pots and mixed planters. It is ideal for controlled growth and nonstop color."

For growers looking for efficient production and reliable finished quality in compact formats, SOL LUNA™ COMPACT offers a strong fit.

SOL LUNA PRIME™ brings more vigor and earlier flowering, making it the right choice for larger containers, hanging baskets and landscape use. The series is also less sensitive to higher Electrical Conductivity (EC) and features enhanced wilting recovery, helping plants maintain their retail appeal for longer.

"SOL LUNA PRIME™ looks great longer on the retail shelf," says Fernandez.

SOL LUNA™ gives growers the ability to choose the right habit for

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From bright retail statements to softer mixed combinations, the color range gives growers and retailers the tools to create displays that attract attention and inspire gardeners.

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From top to bottom are: Orange Duet, Light Salmon, Dark Lavender and Orchid.

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Biologicals, BANKER PLANTS

2 better 4 data

New tools and strategies are driving the next era of greenhouse crop protection

Photos courtesy of Biotalys.

BY KEITH LORIA

It's no secret that greenhouse growers are facing increasing pressure from resistant pests, evolving diseases and tighter sustainability expectations. That's why crop protection programs are becoming more sophisticated and growers are turning towards new and innovative solutions.

The industry's approach is no longer centered solely on reactive chemical applications. Instead, growers are now building integrated programs that combine biological controls, targeted chemistries, habitat plants, digital monitoring tools and emerging protein-based technologies.

That shift is being driven both by necessity and experience.

"I think that people used to think that thrips were the biggest challenge to control biologically," said Carol Glenister, entomologist with IPM Laboratories. "Today, the biggest challenge is aphids, but there are questions about the new thrips *parvispinus*."

Another thing driving change is the market's pivot to houseplants and the mealybugs that pair with them.

For many growers, crop protection means more than eliminating pests. The focus has shifted toward long-term prevention, resistance management and building systems that can remain effective even as regulatory pressures and consumer expectations continue to evolve.

BIOLOGICAL CONTROLS GAIN GROUND

In recent years, biological controls have steadily moved from niche tools to foundational components of many greenhouse IPM programs.

Glenister noted more than half of greenhouse growers now have at least some experience using biological controls. That familiarity is changing expectations across the industry.

Successful greenhouse protection still depends heavily on education and observation.





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“Growers have been gaining confidence in biological controls based on their experiences,” she said. “They understand that biocontrols are preventative, not curative, and have seen the positive results when biocontrol is started early enough to keep the pests down.”

While conventional chemistries still play an important role in managing outbreaks, many growers are becoming more comfortable using biologicals as the first line of defense.

“We all understand that chemistries are essential to address outbreaks, but growers are becoming more skilled at preventing those outbreaks,” Glenister said.

That prevention-first mindset is important as growers continue to battle resistance issues.

“The easiest way to avoid resistance is to minimize chemical use,” Glenister said. “We see time and again that whiteflies and thrips lose their chemical resistance when the chemical pressure is taken away.”

She pointed to spinosad-resistant thrips as one example.

“In crops that were not treated with spinosad for several months, the thrips will die off massively the first time that they are treated with spinosad,” Glenister said. “However, there is just one shot available there, because the resistant ones that did not die will create the next generation, which will once again be resistant.”

Similar patterns are occurring with sweet potato whiteflies and imidacloprid resistance. As a result, many growers are refining spray rotations, integrating more biologicals and reducing reliance on single modes of action.



Biotalys has developed a protein-based biofungicide platform to combine conventional chemistry with biologicals.

Photo courtesy of Biotalys.

NEW TECHNOLOGIES ENTER THE MARKET

While most growers are improving traditional IPM strategies, companies are developing entirely new categories of crop protection tools to help. One of the more closely watched developments is the emergence of protein-based biocontrols.

Belgium-based Biotalys has developed a protein-based biofungicide platform designed to combine the consistency of conventional chemistry with the environmental profile of biologicals.

The company's lead product, EVOCA, recently received approval from the EPA and secured its first state registration in Florida.

Carlo Boutton, Biotalys' chief scientific officer and interim CEO, noted growers increasingly want products that are both effective and predictable.

“Growers are absolutely right to expect both effectiveness and predictability, and that has historically been a challenge with many biological solutions,” Boutton said. “What we are doing differently at Biotalys is leveraging our AGROBODY platform to develop protein-based solutions that are highly targeted with the reliability of conventional chemistries.”

The company's products are intended to bridge the gap between conventional chemistry and traditional biological controls.

In more than 600 field trials worldwide, EVOCA has demonstrated consistent efficacy against diseases such as Botrytis and powdery mildew, according to company research.

Those diseases remain among the most significant challenges for greenhouse and specialty crop growers.

“Many current spraying protocols are under increasing pressure,” Boutton said. “Growers are dealing with resistance development, tighter residue requirements and the need to meet sustainability expectations from retailers and consumers.”

In his opinion, new modes of action will become increasingly important as resistance pressures continue to intensify.

“Many growers rely heavily on a limited number of fungicide classes, and over time this has led to reduced efficacy due to resistance development,” he said.

The Fungicide Resistance Action Committee (FRAC) has assigned EVOCA a new mode of action classification, further highlighting the industry's push toward diversified resistance management strategies.

EDUCATION REMAINS CRITICAL

Even as technology advances, successful greenhouse crop protection still depends heavily on education and observation.

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Anystis baccarum, the Craze mite, is a large, fast generalist predator that eats many pests including aphids, leaf hoppers and thrips. Photo by Adam Spencer at Applied Bionomics.

"In some greenhouses, the newer growers are the second or even third generation to be using biological controls," Glenister said. "Curiosity and careful observation are key to developing an understanding of what is happening with biocontrols."

Because greenhouse production involves managing living systems, growers often adapt quickly to the rhythms of beneficial insects and pest life cycles.

Still, experienced technical support remains valuable.

"It really helps to have an experienced coach to help set up release programs," Glenister said. "Many of the biocontrol suppliers give this kind of support."

At the same time, digital tools are making it easier for growers to scout and identify pests more accurately.

"Today, digital cameras magnify and save images of tiny insects and mites, making it easier than ever to understand our microscopic world," Glenister said.

Industry observers also point to growing interest in data-driven greenhouse management systems that combine sensors, imaging and environmental monitoring to improve crop health and pest prevention.

HABITAT PLANTS AND THE FUTURE OF IPM

Beyond biological releases and new chemistries, growers are also paying more attention to greenhouse ecology itself.

One emerging focus is the use of habitat and insectary plants to support beneficial insects.

For instance, Canadian researchers and growers have introduced several newer biological control species in

Micromus variegatus is a brown lacewing that is predacious as an adult and larvae, and even functions well in cold weather.

Photo courtesy of IPM Laboratories.



recent years, including the brown lacewing, *Micromus variegatus*, and the predatory mite, *Anystis baccarum*.

At IPM Labs, researchers are exploring how banker plants can provide a foundational food source for aphid predators.

"For the future, habitat for beneficials is a big focus of any greenhouse that wants to assure that its beneficials will flourish once introduced," Glenister said.

Over the years, growers have experimented with insectary plants such as sweet alyssum, marigolds and purple flash peppers. Glenister believes the industry is only beginning to understand the full potential of habitat-based strategies.

"Experienced growers will key in on new plants that serve as habitat, given the huge variety of plants that they are observing," she said. "I am excited to see what people uncover next."

That thinking also aligns with broader sustainability and marketing goals.

"As habitat becomes second nature to growers, they will become better at promoting these insectary plants to their customers to help manage pests in the landscape," Glenister said.

Meanwhile, companies like Biotalys see future crop protection programs becoming increasingly integrated and precision-driven.

"Over the coming years, we expect precision-targeted solutions like ours to play a growing role as core components of IPM programs rather than niche additions," Boutton said.

For greenhouse growers, the future of crop protection appears likely to involve a careful balancing act combining biologicals, conventional chemistries, data tools, habitat plants and new technologies into flexible systems capable of adapting to constantly changing pest pressures. [gpn](#)

A graduate of the University of Miami, Keith Loria is an award-winning journalist who has been writing for almost 20 years. View his recent writing at keithloria.contently.com.

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Turning Sustainability Aspirations INTO **SUSTAINABLE VALUE** FOR GROWERS

Sustainability has evolved from a marketing strategy into a fundamental part of managing risk and running a successful business. From recycling infrastructure to ever changing regulations, growers are looking for practical solutions that reduce complexity while supporting measurable environmental progress.

Tom Marting, Director of Sustainable Solutions at Growscape, says the industry conversation has become far more focused on turning sustainability into tangible value.

Q: How has the conversation around sustainability changed for growers in recent years?

A few years ago, the focus was largely on ambitious long-term goals and commitments. Today, growers are being asked to deliver measurable results on much shorter timelines. The conversation has shifted from aspiration to execution.

Growers are balancing labor shortages, freight costs, and evolving retailer expectations, so sustainability solutions must fit into daily operations. Sustainability done right should support both environmental progress and business performance.

Q: What is the EarthSafe platform, and why did Growscape develop it?

EarthSafe is our integrated sustainability platform built around three pillars: ReSource Recycling, ReTerra plantable bioplastic, and ReAssure regulatory compliance support.

We designed it to connect sustainability efforts that were often treated as separate initiatives. When recycling, materials innovation, and compliance strategies work together, growers can reduce risk while improving operational efficiency.

Q: Recycling continues to be a major industry topic. How is Growscape approaching it differently?

Through our ReSource Recycling program, we've expanded beyond plastics to support corrugate, paper, glass, pallets, and metal because growers manage multiple waste streams every day. We also prioritize regional recycling partnerships to help reduce freight distances and related emissions.

One of the biggest misconceptions is that being technically recyclable automatically means a product is getting recycled. Without infrastructure, logistics, economic incentives, and processing partnerships, materials can still end up in landfills.

Our national recycling network helps simplify collection and logistics while providing reporting that tracks landfill diversion and sustainability metrics.

Q: Growscape also introduced ReTerra this year. What makes that material unique?

ReTerra is a unique bio-based technology that promises a soil-degradable, plantable bioplastic growing container. It was developed through our partnership with Kaimarra Advanced Materials and scientists at the Warner Babcock Institute for Green Chemistry.

Unlike many bioplastics that are brittle or remain in soil for years, ReTerra degrades readily in active soil without leaving behind microplastics or toxic residues. It can be manufactured in multiple sizes, from plug trays to nursery pots, with degradation rates tailored to different growing applications.

We look forward to sharing results of trials as they progress.



Q: Regulations surrounding sustainability continue to evolve quickly. How is Growscape helping customers navigate that environment?

That's where our ReAssure program comes in. We provide education, compliance support, and guidance around evolving environmental regulations, particularly Extended Producer Responsibility (EPR) and post-consumer recycled (PCR) legislation.

Our role is to simplify the sustainability side, ensuring our products won't create regulatory compliance risks for anyone.

Q: How is sustainability influencing the way Growscape approaches operations and manufacturing?

For us, sustainability is embedded into everything we do, how products are designed, manufactured, and moved across the supply chain.

Our expanded Middlefield, Ohio campus is a good example. By centralizing production and distribution, we've reduced handling, minimized unnecessary freight movement and lowered transportation-related emissions.

That same approach influenced our Keystone Pot & Tray System. Its stackable and automation-ready design increases truckload capacity by up to 25% while incorporating high levels of PCR material, helping reduce freight costs, emissions, and product breakage.

Q: What do you see as the future of sustainability?

The horticultural industry is moving toward connected systems where recycling, materials innovation, compliance, and logistics are all intrinsically linked.

The growers best positioned will be those implementing practical, scalable solutions that deliver measurable long-term value. Progress isn't defined by one large initiative, but by instilling a values-driven culture of consistently seeking and improving sustainable systems over time.

For more information, please visit www.growscape.com.





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EarthSafe connects recycling, materials innovation, compliance support, and reporting into one practical platform designed to reduce complexity and support measurable progress.



ReSource

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ReTerra

Bioplastics innovation with balanced performance



ReAssure

Guidance for evolving compliance requirements



Sustainability Report

Measurable stewardship and clear reporting



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Standout 2026 ANNUALS FOR CONTAINER GARDENS

*Summer container trials identified
standout new introductions with strong
heat tolerance, color retention and
season-long performance*

1

BY VAUGHN FLETCHER

I have been container gardening since the early 1980s and have evaluated new annual and perennial varieties from domestic and international breeders each year since breeder trial programs began. Last summer, I grew and evaluated several new 2026 introductions that became available in the market this spring.

The explosion of container gardening has been driven by the need to maximize small urban spaces, increased interest in pollinator-friendly plants, aesthetic appeal, versatility, ease of maintenance and the introduction of varieties well-suited for container production.

In my annual trial, I used 22-inch plastic terra-cotta containers to provide additional root space, improve moisture retention and reduce root-zone temperature fluctuations.

I planted 3-, 4- and 5-inch liners during the last week of April 2025 in a growing mix containing sphagnum peat moss, composted pine bark, perlite, dolomite, water-holding crystals and a wetting agent. I incorporated a slow-release fertilizer and applied a biweekly fertilizer application of 24-7-15.

Since 1971, I have worked in multiple sectors of the industry and currently work in retail sales support. My primary focus is container design and plant selection.

When selecting varieties, consumers typically prioritize color before considering sun or shade adaptability, mature size, ease of maintenance, weather tolerance, pollinator value and season-long performance. Once I have ascertained consumers' needs, I help them create colorful plant combinations that meet their expectations, suit their growing environment and perform through early fall.

The following varieties, introduced for the 2026 season, demonstrated exceptional durability, flower production, color retention and heat tolerance in my container trials and in regional trial gardens I visited during the summer. Most remained in color until late October. While I evaluated many new introductions, these selections consistently delivered strong performance in both my trial and multiple regional evaluations.

1. APTENIA 'GOLDEN CASCADE'

Kientzler

One of the most exciting foliage spillers introduced for this spring was aptenia 'Golden Cascade.' Consumers tend to focus on visual impact and striking contrast, and that is what 'Golden Cascade' offers with its vibrant chartreuse color. It's one of the most physiologically





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containers it manifested heat and drought tolerance, non-fading foliage color, minimal deadheading and continual performance in hot summer container soils.

2. BRACTEANTHA 'SUNBRERO ORANGE'

Kientzler

Kientzler has introduced several notable series in recent years, and the new SunBrero series was among the strongest performers in both regional trials and my container evaluations. Summer and fall performance remained consistent across multiple locations. 'SunBrero Orange' received high marks in Penn State trials for uniformity, branching, color retention, heat tolerance and season-long flowering. In my containers, it served as an effective thriller alongside verbena 'Empress Sun Kiss Blue Charme' and lantana 'Heartland Neon,' producing abundant blooms until late October.

3. CATHARANTHUS 'SOIRÉE FLAMENCO ELECTRIC SALMON EYE'

Suntory Flowers

The Soirée Flamenco novelty series offers some of the most impactful catharanthus varieties in the industry. I grew the new Plum Velvet and Electric Salmon Eye

last summer. Both colors were exceptional performers throughout the summer and fall season and did not diminish in flowering until frost. This series demonstrated excellent heat and drought tolerance, strong branching, heavy flowering and low-maintenance performance throughout the growing season. I chose to highlight the Electric Salmon Eye because of its eye-catching, fringed, vibrant bicolor flowers.

4. DIPLADENIA 'SUN PARASOL FIREUP CORAL'

Suntory Flowers

Following the successful introduction of 'FireUp Orange,' Suntory expanded the series with 'FireUp Coral' for 2026. I used it as a thriller in combination with lantana 'Heartland Neon,' where it delivered abundant blooms, a dense habit and exceptional heat and drought tolerance through the first frost. Its distinctive coral flower color creates strong retail

appeal while continuing to perform under challenging summer conditions with minimal maintenance.

5. GERANIUM 'SAVANNAH SALMON' AND GERANIUM 'BIG EZZE PINK PANTHER'

Dümmen Orange

The Dümmen Orange geraniums evaluated last summer were included in a new variety sampler program. I planted them alongside calibrachoa 'Bloomtastic Honey' and verbena 'Empress Sun Kiss Blue Charme,' both new introductions for 2026. Historically, vegetative geranium performance declines as day and, particularly, night temperatures increase due to elevated respiration rates and rapid carbohydrate depletion. These two introductions remained floriferous throughout the summer, producing vibrant, highly saturated flower color. Occasional deadheading and weekly budworm management were sufficient to maintain appearance and performance.

Recent breeding advancements continue to improve garden durability in vegetative geraniums. The Savannah series offers earliness, uniformity and a well-branched upright habit across a broad color range, while the Big Ezee interspecific series provides exceptional heat

tolerance, durability and large umbels that rise above the foliage canopy, making it particularly effective as a thriller component in mixed containers.

6. GOMPHRENA 'FIREBALL PINK'

Kientzler

Kientzler introduced 'Fireball Pink' for the 2026 season, and I had the opportunity to grow it last year in my container trial. It is a vigorous, upright, and rangy variety that must be grown in a large patio container or utilized as a background component in landscape beds. It required all of my 22-inch container space to



6

grow and mature. I sheared it multiple times throughout the summer to maintain a compact habit and continual flowering. The plant flowered prolifically and the flowers were positioned well above the foliage canopy. It was the last plant among hundreds to maintain flowers until frost. I used it as a thriller and combined it with the compatible new introductions bidens 'Bee Pink Buzz' from Kientzler as a filler and the new Dark Blue and Pink Fanatix scaevola from Syngenta as spillers.

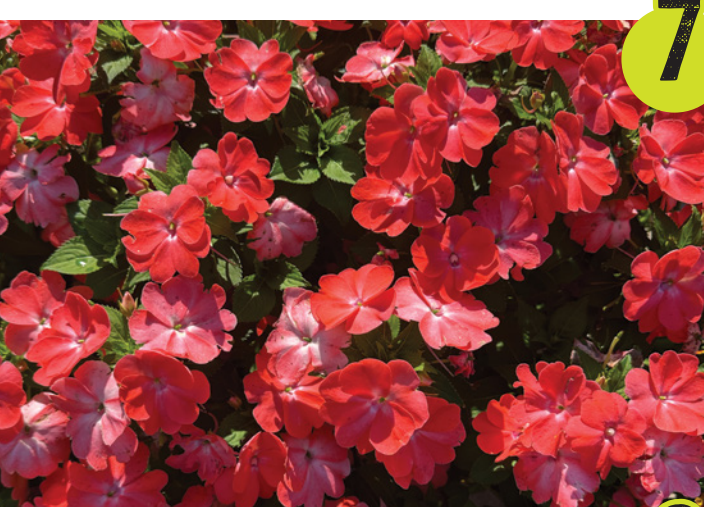
Kientzler plans to introduce gomphrena 'Spitfire Pink' for 2027 as a more compact alternative for patio containers. Gomphrenas perform particularly well under high-temperature conditions, offering strong drought tolerance, flower color stability, continuous flowering and pollinator value. As consumers increasingly seek resilient, low-maintenance plants, gomphrena remains a reliable option for both containers and landscape applications.

7. NEW GUINEA IMPATIENS 'SOL LUNA PRIME PEACH'

Danziger

The Sol Luna Prime series represents the latest advancement in Danziger's New Guinea impatiens breeding program. As part of a sampler trial program, I evaluated 'Sol Luna Prime Peach' and 'Sol Luna Prime Red' in both full-sun and filtered-shade conditions. Both varieties ranked among the strongest performers of the summer.

'Sol Luna Prime Peach' was among the most floriferous and heat-tolerant New Guinea impatiens in the trial, maintaining strong color, dense branching and continuous flowering through fall. The well-matched series flowers approximately seven days earlier than the original Sol Luna series and is currently available in seven colors, with 'Luxe Lavender' scheduled for 2027. The series offers versatility for both consumer and production applications, performing well in sun or shade and adapting readily to quart, 6-inch and mixed patio containers.



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8. PETUNIA 'SHOCK WAVE PURPLE IMPROVED'

PanAmerican Seed

PanAmerican Seed introduced two new Shock Wave petunia varieties for 2026, Rose Vein and Violet, with durability improvements to Purple and Rose Vein. I grew 'Shock Wave Purple Improved' as a filler and spiller in multiple containers, and it delivered as advertised. It was upgraded for cold tolerance and durability, and it demonstrated these attributes flowering profusely until frost.

The series now includes 11 colors and two mixes, providing growers with a resilient, weather-tolerant option for baskets and mixed containers. 'Shock Wave Purple Improved' demonstrated excellent flower



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coverage, color stability, rapid recovery following rainfall and minimal deadheading requirements. Recent breeding improvements have strengthened the series' value as a versatile component in container programs.

9. PETUNIA 'SLINGSHOT CHERRY TARTWHEEL' Ball FloraPlant

I have evaluated petunias in containers for more than 35 years, often under conditions of high temperatures and humidity. As the season progresses, many petunias experience cumulative stress from elevated respiration rates and root-zone overheating, resulting in reduced foliage quality and flower production. Recent breeding

advances, however, have significantly improved performance under these challenging summer conditions.

'SlingShot Cherry Tartwheel' is one of eight varieties in the collection and ranked among the strongest vegetative petunias in the trial. Initially used as a filler component, it developed an attractive cascading habit as it matured. The variety produced abundant flowers, maintained stable bicolor patterning and demonstrated excellent weather tolerance with minimal pinching requirements. The SlingShot collection offers distinctive flower patterns that lend themselves well to creative mixed containers and baskets.

The accompanying photos were taken in my trial in the Kansas City area in late October. [gpn](#)

Vaughn Fletcher is owner of Fletcher Consulting and has worked in the horticulture industry since 1971. His experience includes landscape construction, garden center and greenhouse management, broker sales, sales management, and has most recently been involved in broker sales training and retail sales support. He continues to travel nationwide visiting garden centers, greenhouses and trial sites. Reach him at vfletcher9@gmail.com.

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AT CULTIVATE'26

Exhibitors are showcasing technologies designed to help growers improve efficiency and production management

BY DAVID KUACK

Attendees at Cultivate'26, July 11-14 in Columbus, Ohio, will have an opportunity to see new products and plant varieties from national and international companies.

Over 20 companies will participate in the New Products Exhibitors display and more than 40 companies will participate

in the New Varieties Exhibitors display. These companies also will participate in the trade show, giving attendees a broader look at their products, plants and services offered.

Here are some of the companies showcasing new products in the New Products Exhibitors display.

BLUELAB

Bluelab is a New Zealand-based company that has been in business for over 30 years. It is a global company with customers in over 40 countries working primarily in the horticulture sector with an emphasis on water and nutrient testing. The company manufactures testing equipment focusing on pH, electrical conductivity (EC), oxidation-reduction potential (ORP) and temperature.



At Cultivate'26, Bluelab will be showcasing its new Bluelab pH PenPlus, a waterproof meter that delivers fast, reliable pH and temperature measurements. It also features a replaceable probe. The pH PenPlus has a pH range from 0-14, displays temperature in Celsius or Fahrenheit, and has a bright backlit display for easy reading. Its screw-cap probe design provides for quick replacement when the probe reaches the end of its life. The pen has a simple two-point calibration with a 30-day reminder.

"The Bluelab pH PenPlus builds on the success of the Bluelab pH pen, which is our top-selling SKU globally," said Kevin Willetts, Bluelab national sales manager. "It's been a mainstay for us.

"The primary difference between the Bluelab pH PenPlus and the Bluelab pH Pen is that the PenPlus offers a replaceable probe where the pH pen does not. This new product is for growers who want equipment designed for continuous use. The pH PenPlus enables growers to replace the pH probe at a marginal cost compared to replacing the whole pen."

Bluelab also offers the OnePen, which tests pH, EC and temperature. The OnePen also connects to Edenic, Bluelab's mobile app, to capture and log readings in real time. Like the new pH PenPlus, the OnePen has a replaceable probe.



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NEW Varieties
Exhibitors at
CULTIVATE'26



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“All of Bluelab’s testing equipment can be used with any type of substrate,” Willetts said. “Many ornamental growers test the pH and EC of the runoff once the nutrient solution has made its way through the substrate and is collected. Growers can also use a pour-through extraction where the substrate is saturated, the leachate is collected and tested to provide a snapshot of what’s occurring in the root zone.”

See the new **Bluelab pH PenPlus** at Bluelab’s **Cultivate’26 Booth No. 2509**.



DREAMTREE HORTICULTURE SERVICES

Dreamtree Horticulture Services has its roots in the United Kingdom, where the company has operated for more than 25 years, building technology solutions for commercial growers.

“Dreamtree has been providing technology solutions to U.K. growers that assist with production planning, inventory management and point-of-sale software,” said Gopal Ramanathan, Dreamtree cofounder and CEO.

“Our combined solutions effectively function as Enterprise Resource Planning (ERP) software. They help growers with accounting, purchase orders, customer orders, production planning, inventory management and label printing in an integrated manner. The applications we create help growers improve their operations.”

Dreamtree entered the North American market in June 2024 with its full set of solutions but decided to focus on its On Demand Label printing solution, which helps commercial growers reduce large inventories of plant tags and simplify tag operations.

“Dreamtree doesn’t focus on ERP in the North American market,” Ramanathan said. “We are focused on helping growers simplify and lean out their label operations using our advanced label design and printing technology. The U.S. is by far the largest market for plant sales, and it has a major challenge when it comes to printing and delivering plant labels.”

“Practically every grower operation has a label graveyard where unused labels are discarded each year.

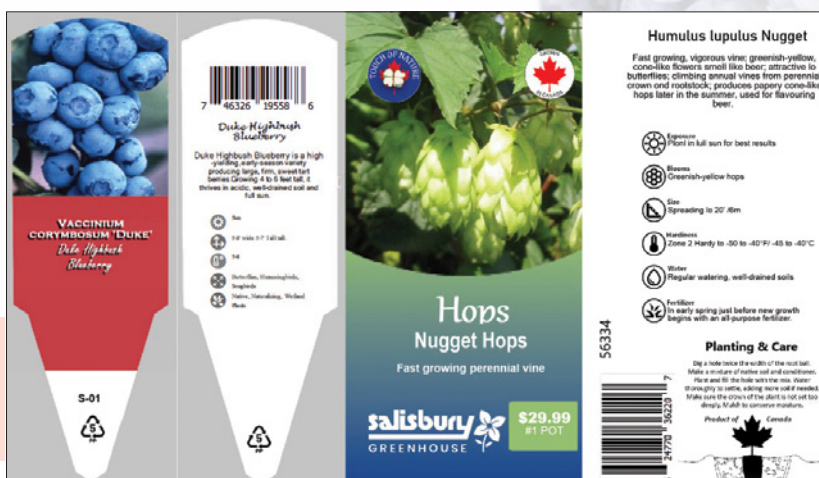
Growers are required to buy tags well in advance, often with minimum order quantities.”

Since many growers produce speculatively, they don’t always know which plants will sell each year. They also don’t grow the same varieties or quantities every year, leaving excess labels unused.

“Maintaining label inventories takes space and time because of the large number of plant varieties growers cultivate,” Ramanathan said. “In addition, customer requests such as barcodes and pricing often require thermal sticker labels to be added later, increasing labor and production time.”

Dreamtree currently offers growers the ability to print labels on demand within their own facilities using a combination of its software, recommended equipment and label substrate.





The company is also expanding into on-demand online ordering.

“Most growers need labels at the time of transplanting or when they are ready to ship the product,” Ramanathan said. “Regardless of what their workflow is, we can help growers print or order their own labels or order them only when needed so they don’t have to maintain large tag rooms. With our design software and ability to create custom labels,

growers can also market more effectively. This is a problem we have successfully solved for growers in the U.K. and now want to bring to the U.S. market.”

Through its new platform, Dreamtree is also looking to add an online ordering service. This will enable growers to receive labels from a Dreamtree certified print shop within two to five days.

“This ordering service will enable growers who may not want to run their own label print operations to receive labels quickly when they need them,” Ramanathan said. “Any print shop in the U.S. and Canada, regardless of size, can sign up on our platform to serve the horticulture community.”

Learn more about **Dreamtree Horticulture Services’** new plant label service at **Booth No. 2006 at Cultivate’26.**

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OASIS GROWER SOLUTIONS

OASIS RhizoPlug Sheet Propagation Kit

OASIS RhizoPlug sheets were introduced in November 2023 for the propagation of vegetative cuttings. The sheets, which typically come in cases of 20, have proved popular with commercial growers. Oasis Grower Solutions is introducing the OASIS RhizoPlug Sheet Propagation Kit to bring professional-grade substrates to small-scale greenhouses, home growers and retailers.

“The new kit is for growers or home gardeners who only need a small quantity of substrate or may want to trial the OASIS RhizoPlug sheet before they buy a larger quantity,” said Sarah Miller, Oasis Grower Solutions product applications specialist. “We have had great success with the OASIS RhizoPlug technology, which is an engineered foam substrate. Oasis Grower Solutions took the sheet and designed an easy-to-use complete propagation kit.”

RhizoPlug sheets are intended for the rooting of vegetative cuttings, including herbs, flowering plants and tropicals. The propagation kit is available in 50- or



104-count RhizoPlug sheets. The kit also comes with 1020 plastic trays, including one primary tray with drainage holes and one solid bottom tray.

“The trays in the kit are standard 1020 trays, which the sheets were initially designed to fit,” Miller said. “If growers already have 1020 trays and are looking to buy the OASIS RhizoPlug sheets to trial, they can do that as well. Oasis Grower Solutions also offers refill options.”

The kit also includes instructions that provide information to growers or first-time users who may not be familiar with using engineered substrates.

OASIS Eleganz

Oasis Grower Solutions is also introducing OASIS Eleganz, a scalable cleaner and leaf shine product developed for use on tropical foliage plants. The product delivers an even coating on plant leaves and does not attract dust and dirt like some plant shine products. Rather than hiding any

chemical residues or calcium deposit spots caused by hard water, it removes them.

Available in 1-, 5-, 15- and 55-gallon containers, this liquid concentrate can be diluted at either 2% creating a light shine, or 2.5% to produce a brighter shine and a more active cleaning effect. Eleganz can be applied with irrigation booms, or backpack and handheld sprayers depending on the number of plants to be treated.

Eleganz is plant-friendly, nontoxic and doesn't negatively impact the plants' ability to transpire. It protects the leaves from excessive drying and keeps the leaves clean and firm to prevent wilting. *gpn*



For more: Check out the **OASIS RhizoPlug Sheet Propagation Kit** and **OASIS Eleganz** in person at **Booth No. 1315** during **Cultivate'26**.

David Kuack is a freelance technical writer in Fort Worth, Texas. He can be reached at dkuack@gmail.com.



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BIOSTIMULANT PROGRAM IMPROVES early poinsettia ROOTING AND SURVIVAL

Grower-led research demonstrates how early biostimulant use can improve rooting speed, reduce losses and enhance poinsettia finish quality

BY HEATHER MACHOVINA

Early-season propagation decisions can define the success of a poinsettia crop. A greenhouse trial conducted by Stevie Goesmann at Alexander Hay Greenhouses found that integrating an algae-based biostimulant into propagation and early production significantly improved rooting, reduced losses and enhanced overall plant quality.

The trial was from June through December 2025 at a commercial greenhouse in Apopka, Florida. Goesmann evaluated Wicked Green Hydro in both unrooted and calloused poinsettia cuttings under typical subtropical production conditions.

REDUCED LOSSES DURING PROPAGATION

Losses in unrooted cuttings varied widely by treatment. The untreated control group experienced 37 plant losses out of 60 (61%), while plants receiving only the biostimulant had 18 losses (30%) and those treated with a biofungicide had 21 losses (35%).

The most notable improvement came from combining the biostimulant with a biological fungicide, where total losses dropped to just four plants (less than 1%).

Losses were highest in the first two weeks after sticking, then stabilized as roots developed. The results



Poinsettias treated with Wicked Green (left), and Wicked Green and Obtego (middle) maintained similar sizes during the trial, while controls (right) were much smaller, had fewer bracts develop and delayed coloring when compared to treated plants.

Photos courtesy of Stevie Goesmann.

suggest early integration of biostimulants — particularly in combination with biological disease management tools — can significantly improve survival during this critical window.

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Poinsettia trial

DESIGN AND RESULTS

The trial was conducted under subtropical conditions using standard injector-based fertigation (1:100 ratio) with water pH maintained at 6.0.

Wicked Green Hydro was applied at 5 mL/gal in a rotational fertility program alongside 20-10-20 and 13-2-13 formulations. Propagation media (Oasis wedges) were pre-treated 24 hours prior to sticking, and most cuttings received a full drench at sticking.

Cuttings were also treated with Postiva fungicide (1 oz/5 gal for 15-minute soak); CapSil surfactant (1 drop/gal); and Obtego biofungicide containing *Trichoderma asperellum* and *T. gamsii*.

Unrooted cuttings (URC) of 'Amerana Early Glitter' and calloused cuttings (CC) of 'Poker Red Marble' were evaluated across multiple treatment groups (n=60 per URC group; n=40 per CC group).



Poinsettia callus cutting treated with Wicked Green (left) compared to a callus cutting treated with Wicked Green and Obtego (right).



Poinsettia callus cutting treated with Wicked Green (left) compared to a callus cutting control (right).

FASTER ROOTING ACCELERATES PRODUCTION TIMELINES

Root development differences were especially pronounced in calloused cuttings.

Plants treated with the biostimulant, with or without the biofungicide, developed strong root systems within two weeks and were ready for potting. In contrast, untreated plants showed minimal rooting at two weeks, required up to five weeks before potting and, in some cases, needed as long as seven weeks.

For growers, this represents a potential reduction of several weeks in propagation time — a meaningful advantage when targeting early markets or managing tight production schedules.

Propagation losses reduced

Losses in unrooted cuttings were tracked weekly (Weeks 24 to 27). Total losses per 60 plants were:

- Control (no inputs): 37 plants (61.7%)
- Wicked Green Hydro only (Trial 1): 18 plants (30.0%)
- Obtego only (Trial 2): 21 plants (35.0%)
- Wicked Green Hydro + Obtego (Trial 3): 4 plants (6.7%)

Rooting timelines shortened by weeks

Rooting differences were pronounced in calloused cuttings:

- Wicked Green Hydro (Trial 1 CC): rooted and potted at 2 weeks
- Wicked Green Hydro + Obtego (Trial 2 CC): rooted and potted at 2 weeks, with more aggressive root mass
- Control: minimal rooting at 2 weeks, potted at 5 weeks, with some cuttings delayed to 7 weeks

Pinch recovery and branching increased

Post-pinch performance showed measurable differences in lateral break development:

- Wicked Green Hydro (Trial 1 CC): 4 to 6 breaks per plant
- Wicked Green Hydro + Obtego (Trial 2 CC): 3 to 5 breaks per plant

Finished plant size, quality improved

In the URC finishing trial (8-inch pots, three plants per container), plants receiving Wicked Green Hydro (Trial 1 and Trial 3) consistently outperformed untreated controls with:

- Larger canopy size and fuller structure
- Earlier and more uniform bract coloration
- Reduced chlorosis incidence
- Control plants remained smaller, delayed in color development and produced fewer bracts, limiting overall marketability



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IMPROVED PINCH RECOVERY AND BRANCHING

Post-pinch performance also improved with biostimulant use.

Plants treated with the biostimulant recovered faster and produced more lateral breaks than untreated plants. Biostimulant-only plants averaged four to six breaks, compared to three to five breaks when combined with the biofungicide and just one to two breaks in untreated plants.

Faster recovery and increased branching contribute directly to fuller plants and improved marketability.

LARGER PLANTS, MORE UNIFORM FINISH

Differences continued through finishing. Plants treated with the biostimulant were consistently larger, fuller and more uniform than untreated plants.

Untreated plants remained smaller, exhibited more chlorosis and showed delayed bract development and coloring. In contrast, treated plants maintained stronger growth and more consistent development through the production cycle.

WHAT THIS MEANS FOR GROWERS

The trial highlights several practical takeaways for poinsettia producers:

- **Early application matters:** Treating propagation media and cuttings at sticking improved outcomes.
- **Rooting speed is a key lever:** Faster root development can shorten production time and improve scheduling flexibility.
- **Branching drives value:** Increased breaks lead to fuller, more saleable plants.

Untreated control plant.



Trial 3: Wicked Green Hydro and Obtego.



Trial 1: Wicked Green Hydro only.



Side-by-side comparison of Trial 1: Wicked Green Hydro (left) and the untreated control (right).

- **Integration is key:** Combining biostimulants with biological fungicides may further improve results.

While the trial was observational and conducted under commercial conditions, the consistency of results across multiple stages of production

suggests biostimulants can play a meaningful role in improving early poinsettia performance.

For growers managing tight timelines, variable cutting quality and disease pressure, tools that improve early-stage success can have lasting impacts through finish. [gpn](#)



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GREENER ROOTS FARM DOUBLES DOWN on vertical farming

*Hydroponic farming redefines
local produce in Tennessee*

*Photos courtesy of
Greener Roots Farm.*

BY KEITH LORIA

Greener Roots Farm stands as Nashville, Tennessee's first commercial hydroponic vertical farm. The company specializes in cultivating a variety of herbs and leafy greens indoors throughout the year, providing fresh, locally sourced produce to nearby restaurants and grocery stores.

"Our innovative farming techniques utilize 90% less land and water compared to traditional agriculture, enabling us to produce up to 10 times more yield per square foot," said William Crenshaw, president of Greener Roots Farm. "We are passionate advocates for urban agriculture, believing it is essential for broadening access to fresh, nutrient-dense food in the community."

Greener Roots' offerings are free from pesticides, herbicides and GMOs, and all of its food travels less than 50 miles from growth to consumption.

"With our advanced indoor farming systems and a cutting-edge greenhouse, we generate over 28 tons of high-quality produce each year, featuring a diverse

lineup of herbs and greens that enrich local dining experiences," Crenshaw said.

HUMBLE BEGINNINGS

Founded in 2014 by Jeffery Orkin in a broom closet of his rooftop apartment in Nashville, Greener Roots has evolved over the years.

"Jeffrey was growing lettuce and different herbs for chefs in the city, and it blossomed from there," Crenshaw said. "He put together a vertical farm that we still operate. In 2018, Greener Roots started to lease a 10,000-square-foot greenhouse in Franklin, and we've been growing lettuce there for the better part of seven years."

In 2023, a new chapter began as the farm transitioned to leadership under Crenshaw, a finance professional, who merged his business acumen with a passion for agriculture.

"Since I took over about a year and a half ago, we have continued to expand on a lot of the things that

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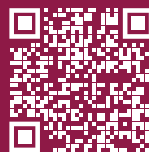
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GROWER SUCCESS STORIES

Jeffrey started,” Crenshaw said. “He is still involved in an advisory role; he moved out of Nashville, which was part of the necessity of his selling the business.”

Today, products inside the European-style glass greenhouse include microgreens, edible flowers, herbs and lettuce such as spring mix, green leaf and romaine. The company also produces specialty items like nasturtium leaves, marigolds, borage and its best-selling lettuce blend called Nashville Blend.

“We’ve been growing our reach in leafy greens and microgreens,” Crenshaw said. “For the vertical farm, we have about 6,000 square feet leased, and growth space is roughly 2,500 square feet. All in, we have roughly 10,000 square feet today.”

BUSINESS PHILOSOPHY

Crenshaw’s extensive business background includes finance, accounting, and mergers and acquisitions — and he’s still involved in that world. His goal is to bring a savvy business approach to Greener Roots and its greenhouse operations.

Growing up, a lot of his experiences with agriculture came from watching his Amish neighbors and producers and working with his family farm.

“I’ve seen all sorts of business cycles and different styles of investing and managing of family businesses and privately held public businesses, but I also grew up in an ag town with a lot of livestock, row crops and tobacco,” he said. “My philosophy for this controlled-environment business is long-term in nature. It’s a long-horizon play, and my interest is to get my family back in farming.”

The keys to success, he said, are to be patient, responsible with capital and show responsible growth.

The company enjoys a diversified mix of customers, and product goes directly to local restaurants, caterers, country clubs and hotels. On the retail side, Greener Roots sells to independent grocers.

“The growing part of our business is to wholesale distributors, and we sell to them and service the Nashville and Atlanta markets,” Crenshaw said. “We have a great reputation.”



The best-selling lettuce from Greener Roots Farm is the Nashville Blend. Products go directly to local restaurants, caterers, country clubs, hotels and independent grocers.

“A lot of everything that we do is predicated on human movement and we’re trying to lean into those principles to reduce movement between steps to make them the most efficient.”

— William Crenshaw



BY THE NUMBERS

Greener Roots is run by seven team members, including six full-time farm workers and a delivery driver.

The company produces approximately 40 to 45 tons annually, a number that has grown gradually year after year.

“As I took over, we built a new rack and optimized some systems, and our production took another leap in the last 12 months,” Crenshaw said. “Right now, a lot of our growth is focused in the microgreen space. We’re kind of tapped out on lettuce. The number of ounces we’re building should increase significantly.”

That will also be helped by the addition of a new micro tower that is expected to go up by the end of 2025.

RISE OF AUTOMATION

A majority of Greener Roots’ processes are still done by hand, though the company has automated on the harvest side of operations.

“There’s still labor involved, but we’ve brought in machines that have increased efficiency,” Crenshaw said. “The data tracking and sensors we’ve installed have allowed us to be more aware of the climate. We have also installed equipment, mainly in the vertical farm, to help manage temperature and humidity. That has helped us to have more consistent yield year-round.”

The company is actively considering adding automated seeding lines for microgreens and bringing in an additional harvester for microgreens as well.

“A lot of everything that we do is predicated on human movement, and we’re trying to lean into those principles to reduce movement between steps to make them the most efficient,” Crenshaw said.

TOP CHALLENGES

In Nashville, Crenshaw noted that occupancy costs for urban farming are the company’s greatest hurdle.

“Land, buildings and leases are expensive,” he said. “Another challenge is trying to fit in our lane and manage growth opportunities, predicting demand and doing all that while maintaining high quality. Finding the right customer mix is a fun challenge to solve.”

Each Greener Roots label comes with its own mileage number, something that Orkin began when he first started the company.

“You can go to the store and pick up our lettuce and see how far it traveled to get here,” Crenshaw said. “Bringing communities back to support their local agriculture is really important to me.”

Looking ahead, Crenshaw is bullish on building a farm of his own so there’s no longer need to lease space.

“I’m enamored by the coffee crop and what people are doing with it in the controlled environment ag space, and I would love to do that at some point as well,” he said. [gpn](#)

A graduate of the University of Miami, Keith Loria is an award-winning journalist who has been writing for almost 20 years. View his recent writing at keithloria.contently.com.

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HEATING UPGRADES WITHOUT THE HEADACHE

Unit heaters offer a scalable, energy-efficient solution for upgrading legacy systems while maintaining continuous operations

*Photo courtesy of
Modine Manufacturing.*

BY JAMIE TUINSTR

For greenhouse operators, the heating system is one of the most mission-critical pieces of infrastructure in the facility. In many cases, it's also one of the oldest, in urgent need of an upgrade.

Boilers installed decades ago, oversized pipe networks and improvised heating solutions may still get the job done, but it's often at the expense of efficiency and climate precision. With energy costs rising, it's increasingly necessary for greenhouse growers to modernize older systems, simply to maintain an operational edge.

One of the most flexible options for retrofitting a greenhouse heating system is to install unit heaters. When installed properly, unit heaters provide a practical pathway to improved efficiency, safer operation and better climate control, all without the disruption and cost associated with full-scale infrastructure replacement.

LEGACY HEATING SYSTEMS POSE CHALLENGES

Many greenhouses still operate on aging burners or boilers that may have been robust at one time, but now lag in terms of performance and efficiency. On the surface, these systems may continue to seem basically functional, but problems can lurk just below the surface.

Common examples include:

- A high rate of energy consumption, whether due to heat loss or inefficient combustion
- Uneven temperature control, which can cause cold spots and undue stress on certain plants
- Limited control, making it more challenging for operators to adapt to unseasonable weather or sudden shifts in temperature.

The idea of ripping out these older systems and replacing them with something brand new can seem daunting, but

it's important to remember that retrofitting doesn't always mean starting from square one. Often, the best approach is to augment and supplement legacy systems by pairing them with modern solutions, bolstering existing heating infrastructure while delivering measurable performance improvements.

WHY UNIT HEATERS WORK WELL FOR RETROFITS

Unit heaters, whether gas-powered or fully electric, are increasingly popular in greenhouse settings because they make the work of retrofitting seamless. There are a number of reasons why unit heaters work well in this context.

Modular design

Unit heaters are operated independently of one another, which allows growers to install them zone by zone. This modularity is ideal for greenhouses with varying crop types, ceiling heights or thermal requirements. When expansion is required, whether due to production increases or layout changes, additional units can be placed simply, without redesigning the entire heating system.

Heating efficiency where it's needed most

Unlike centralized systems that distribute heat through long pipe runs, unit heaters supply warm air directly to growing spaces. Fans ensure active air circulation, reducing temperature stratification and helping maintain uniform conditions across different aisles or benches. This targeted approach means faster warm-up times and reduced energy consumption.

More consistent climate control

Modern unit heaters integrate easily with digital thermostats and greenhouse automation systems. This provides growers with precise control over temperature setpoints, night setbacks and zoned heating strategies, all of which can be critical for ensuring plants grow as they are meant to.

Enhanced safety and reliability

Finally, unit heaters can help to minimize the safety risks associated with warming older greenhouse spaces, particularly those that predate modern safety codes. Automatic shutoff protections and sealed combustion options help keep growing spaces safer and more compliant.

A RETROFIT-FRIENDLY INSTALLATION

One of the biggest hurdles to a successful heating system upgrade is downtime. Greenhouse operators simply cannot afford extended interruptions during production cycles. This is one area where unit heaters can be particularly useful.

Unit heater installation is typically less invasive than replacing more centralized systems. Units can be mounted, connected to existing gas lines or hot-water circuits and commissioned in phases. This allows growers to either retrofit during an off-peak season or to gradually transition toward a new system.

There are some practical steps growers can follow to further ease their transition. Whenever possible, it's wise to schedule work during shoulder seasons, between crop

cycles or during warmer daytime hours, reducing heating dependency during commissioning.

Zoning is another area of opportunity. Growers should install heaters one section at a time so that unaffected areas remain fully operational. Temporary heating solutions can be used during short switchover periods if required.

Finally, integrating unit heaters into existing climate control systems early allows for rapid testing and fine-tuning. This can ensure stable temperatures from day one, without risking major disruption to daily greenhouse operations.

ENHANCED HEATING SOLUTIONS

Modern greenhouses continue to rely on dated heating equipment; while that equipment may have served its purpose for many years, there can still be tremendous advantage to upgrading. Unit heaters provide a pragmatic approach to retrofitting, making them a cornerstone of reliable, adaptable climate control strategies. **▄▄**

Jamie Tuinstra is a product manager at Modine Manufacturing, where he oversees product development, profit optimization, and customer satisfaction for both new and established product lines. For more information, visit modinehvac.com.

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PUTTING LIGHT INTENSITY INTO PERSPECTIVE

A practical guide to managing sunlight, shade and supplemental lighting

BY ERIK RUNKLE

In the last two decades, most horticultural operations have transitioned from footcandles and lux to micromoles as the unit of measurement for light intensity.

The use of micromoles is a simplification of the photosynthetic photon flux density (PPFD), which is the number of photons within the 400 to 700 nm waveband delivered per square meter and second, or $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$.

This value is instantaneously measured by a quantum sensor, which is sometimes called a PAR (photosynthetically active radiation) sensor. PAR refers to the waveband of light primarily used by plants for photosynthesis.

Measurements in footcandle and lux units are based on the human eye's sensitivity to light. While there are similarities between peoples' and plants' perception of light, there are also important differences. Most notably, our perception of red and blue light is relatively low compared with green light.

In contrast, the utility of light for photosynthesis is similar for blue, green, and red photons; there is no significant bias. This key difference is especially important for light emitted by light-emitting diode (LED) fixtures.

We can (and should) manage greenhouses, and the crops grown inside, based partly on sunlight conditions. Management decisions can be aided by putting light intensities into perspective.

Transmission of sunlight into a greenhouse considerably varies, depending in part on parameters independent of the greenhouse (latitude, time of year, elevation, seasonal weather patterns, etc.) and parameters dependent on the greenhouse (glazing materials, shading materials, and overhead obstructions such as hanging baskets or lighting fixtures).

In addition to greenhouse-specific transmission of sunlight, crops vary in their response to light intensity as well as other environmental parameters that interact with it, such as temperature and carbon dioxide (CO_2) concentration.

GREENHOUSE TRANSMISSION OF SUNLIGHT

The maximum intensity of sunlight outside of a greenhouse is roughly $2,000 \mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ at solar noon on a clear, summer day (Fig. 1). The value can be lower or slightly higher, depending on altitude, humidity and air pollution.

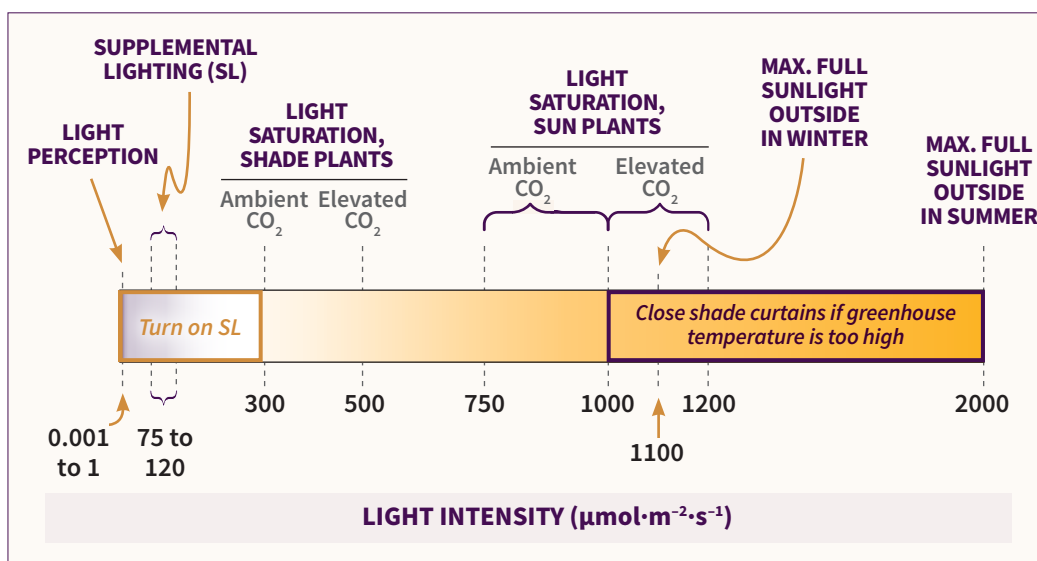


Fig. 1. Light intensity values for light perception, sunlight outdoors, supplemental lighting (SL), light saturation for photosynthesis, and operating SL and shade curtains inside greenhouses. Values are representative of ornamental plant production. Management decisions should also consider other environmental factors and varying responses among crops.

In the winter, the maximum value decreases by as little as 30% (southern U.S.) to as much as 60% (northern U.S.). While an average maximum winter light intensity is around $1,100 \mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$, it could vary from 800 to $1,400 \mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$.

Inside a greenhouse that maximizes solar transmission (e.g., clean glass glazing, minimal structure, no shading compounds or curtains), about 75% of sunlight reaches plants. In contrast, a triple-layer polyethylene greenhouse may only transmit 50% of sunlight, and even less if there are overhead obstructions or the poly is old.

Therefore, maximum sunlight levels inside a greenhouse could be as high as $1,400 \mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ on a clear summer day to as low as $500 \mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ in the northern U.S. in the winter. Most of the time, light intensities are lower because of clouds, the sun is at a lower angle, or both.

LIGHT INTENSITY AND PLANT GROWTH

Photosynthesis and plant growth rate typically increase as light intensity increases, until the plant's saturating value. The saturating light intensity depends on the crop, CO_2 concentration and temperature.

A saturating light intensity for shade crops, such as begonias, ferns and seed impatiens, is approximately $300 \mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ at ambient CO_2 . If CO_2 is enriched to 800 to 1,000 ppm, photosynthesis and growth of many shade crops increase with light intensity until around $500 \mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$. While some shade crops tolerate light intensities higher than saturation values, others can develop leaf scorch or bleaching.

Most floriculture and vegetable crops grown in commercial greenhouses are sun crops with a saturating light intensity at ambient CO_2 of around 750 to $1,000 \mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$. With supplemental CO_2 , light saturation increases by about 20%, to 1,000 to $1,200 \mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$.

Assuming 65% solar transmission for a commercial greenhouse in the northern U.S. and no use of shading materials, saturating intensities of sunlight for sun crops rarely occur from November through February, but occur an average of 1-2 hours per day in March and October, 3-4 hours in April and September, and 6-8 hours from May to August.

In much of the southern U.S., growers receive 1-2 hours more per day of saturating sunlight in the spring and fall, and 1-2 hours less per day in the summer. This provides perspective for the use of supplemental lighting and shading to manage the greenhouse light environment.

LIGHT INTENSITY AND SUPPLEMENTAL LIGHTING

The intensity of supplemental lighting installed by commercial growers has been creeping up. This is partly because growers have increasingly realized the benefits of supplemental lighting, especially in propagation during

the winter. With conventional lighting from high-pressure sodium fixtures, a typical supplemental lighting intensity for ornamental crops was 60 - $75 \mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$.

With more energy-efficient LEDs, more recent supplemental lighting installations are at 75 - $120 \mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$. While this intensity is low compared with saturating light intensities for sun crops, it meaningfully increases the daily light integral (DLI) when delivered for up to 16-20 hours per day. Note that supplemental lighting intensities are usually higher for some fruiting crops (such as tomato) and cannabis.

Ideally, supplemental lighting should operate based on time, the intensity of sunlight, and when possible, the DLI accumulated that day and/or the average DLI received the prior 3-4 days. This necessitates controlling the lighting with an environmental control computer. When only timers are used, the lights stay on even during sunny conditions, when the additional light is less useful.

The threshold for turning on supplemental lighting is somewhat situational, depending on the crop, target DLI, and DLI already or recently received. A typical setpoint for lights to turn on above ornamental sun crops is when sunlight is less than 150 - $200 \mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ inside the greenhouse or 200 - $350 \mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ outside the greenhouse. Setpoints could be lowered when the recent average DLI is below the target, and vice versa. Once the average DLI from the sun is above the target (often 10 - $12 \text{ mol}\cdot\text{m}^{-2}\cdot\text{d}^{-1}$), fixtures can be turned off.

LIGHT INTENSITY AND SHADING

Shade curtains and whitewash are primarily used to mitigate the temperature rise inside a greenhouse and to decrease plant temperature stress. In doing so, light intensity is often decreased by 40-60%. Thus, fewer hours of saturating sunlight are received once temperatures become warm, and in some cases, none during the summer.

Considering the trade-off that exists between temperature management and light intensity, shading decisions should be based on both. Program shade curtains to deploy based on the intensity of sunlight and the greenhouse temperature.

For example, deploy shade curtains if sunlight outdoors exceeds $1,000 \mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ and (not or) the greenhouse temperature is 4 - 6°F above the desired setpoint. If only one condition is met, keep the curtains open to maximize plant growth. 

GPN's Technically Speaking columnist Erik Runkle is professor and floriculture Extension specialist in the Department of Horticulture at Michigan State University. He can be reached at runkleer@msu.edu. Reference to companies, commercial products or trade names does not imply endorsement or bias against those not mentioned.

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STORY AND PHOTOS
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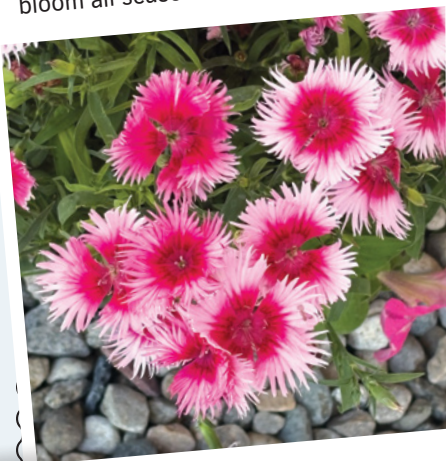
Cut flowers once again held an impressive presence at California Spring Trials. Here are some of the new introductions that caught our eye.

Plant breeders continue to bring new cut flower varieties to the market as consumer demand remains strong. As the many genus displayed at California Spring Trials this year showed, bold colors, fragrance and sturdy stems are among the most sought-after features.

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This early-flowering perennial has early flowers that continue to bloom all season.



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Selecta One

Bold, golden yellow flowers stand out against dark foliage in this well-branched series.



DAHLIA 'COFFEE SHOP LAVENDER LATTE'

Syngenta Flowers

Cream-to-lavender blooms contrast with dark foliage for a dramatic look. Strong stems and fully double bloom: hold up throughout the season.



SNAPDRAGON 'SNAPSTAR CHAMPAGNE F1'

Sakata

One of four colors in the new series, Champagne has highly uniform double flowers on strong, upright stems.



GERBERA 'GARVINEA SWEET PASTRY'

HilverdeFlorist

Sweet Pastry offers abundant flowering and strong, weather-resistant performance. From early spring to the first frost, it shows excellent tolerance to rain, cold and diseases. [gpn](#)

Harvesting solutions in a LABOR-STRAINED INDUSTRY

Agriculture leaders highlight how automation, AI and smarter data strategies are helping growers navigate uncertainty

BY REGINA MOLARO

Today's growers face many hurdles, from ongoing labor shortages and rising costs to legislative issues, processing delays and regulatory uncertainty. Amid it all, they're trying to plan for upcoming seasons.

Over the past several decades, U.S. agriculture has shifted from small, family-run operations to larger, more technologically advanced farms tasked with feeding a growing global population, said John Hollay, president and CEO of the National Council of Agricultural Employers (NCAE). While this evolution has improved efficiency, it has also introduced new complexities — particularly around labor, cost structures and regulatory pressures.

The good news: Growers are adapting. Industry insiders discuss some of the key issues impacting the industry, including wage rates and how they're overcoming obstacles.

"One of the challenges with the H-2A program has been the wage rate. It has been exploding for years," said Michael Marsh, then-president and CEO of the National Council of Agricultural Employers (NCAE).

Last year, the U.S. Department of Labor updated its rule affecting wage rates and housing cost deductions, alongside a broader shift in how farm wages are measured. That shift includes moving away from the outdated Farm Labor Survey — recently discontinued by USDA — in favor of the more comprehensive OEWS data, which better reflects modern labor practices, including the use of farm labor contractors, said Zach Rutledge, assistant professor and Extension economist at Michigan State University.

"The wage rate generated by the Farm Labor Survey was disconnected from the marketplace," Marsh said.

"It put us in a negative position in relation to our competitors in Mexico or Canada. They were paying significantly different rates, which allowed them to expand production and take market share from American farmers and ranchers. Hopefully the change will keep farmers and ranchers in business. By moving to the OEWS rate, they're going to have significant cost savings."

The new rule includes an Entry-Level Skill Level 1 and Experience-Level Skill Level II rate that enables the Adverse Effect Wage Rate to vary based on skill levels and duties. In addition, employers can apply an adjustment for H-2A housing costs.

"We estimated that nationwide in 2026, H-2A employers will save about \$1.5 billion," Rutledge said.

Beyond the wages, the government shutdowns also took a toll on worker arrival timing. Growers who were mid-process with their applications were hoping to get their workers in the country on time. When shutdowns halted the process, growers had to jump through regulatory hoops.

"Engage with your members of Congress and let them know how important it is that we have American-produced food on our tables," Marsh said. "Encourage them to pass their appropriations bills so we're not shutting the government down again."

DIGITIZED DATA

The same ag labor experts also pointed to the power of AI and the importance of gathering good data for efficient planning and increased production and profitability. Growers tend to collect a lot of data; however, it's often spread across multiple systems or even scribbled on notepads.

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“Ensuring that all data is digitized and in one central location is one of the best investments a grower can make. This enables other opportunities from labor planning and yield prediction to optimizing crop circumstances,” said Tomas Geurts, general manager at Source.

“The growers who have done this five years ago are now leveraging decision support tools driven by machine learning models and AI, to make better decisions, to automate, and to scale certain decisions better,” Geurts said.

After implementing these changes, companies will see measurable financial benefits. Geurts has witnessed many larger growers scale up within the course of one season.

“The greenhouses that work this way typically have a payback time of about 12 weeks. That’s when the accuracy gain in yield predictions allows their sales or procurement departments to get better pricing and pay back their initial investment,” he said.

Experts agree that just having data isn’t enough, though.

“You must have somebody who can interpret it and do analysis that’s going to be useful. I think there’s room for improvement,” Rutledge said.

“The robotic space is moving very fast, and that, combined with all the developments around AI — I think we’re really up to a very interesting decade ahead,” Geurts added.

“Unfortunately, Congress doesn’t update quite as quickly as necessary. With AI that’s going to be a whole new frontier for members of Congress to wrap their heads around,” Marsh said.

“Automation and robotics are increasingly present across commodities, but we are decades away from these technologies replacing human workers, especially in specialty crops like fruits, vegetables and nuts, which require unique handling,” Holloy said. “Diversified farming operations, which grow a variety of crops, would need dozens of specialized solutions — often costing millions of dollars and pricing even moderate-sized farms out of business.”

TIPS FROM KEY PLAYERS

Labor shortages are another topic of ongoing discussion among industry experts. Rutledge advised growers to ensure they’re up to date on regulations, and that they understand what they need to do to utilize the H-2A program. Geurts pointed to developments around

“ The robotic space is moving very fast, and that, combined with all the developments around AI — I think we’re really up to a very interesting decade ahead. ”

— Tomas Geurts

robotics and automation, which can help growers reduce labor needs.

Marsh advised growers to become fluent in the regulatory schemes they’re operating within and to always follow the rules.

“You don’t want to be violative of the Migrant and Seasonal Agricultural Worker Protection Act, Fair Labor Standards Act, or get in trouble with any of the regulatory agencies with regards to the H-2A regulations,” he said. “That can lead to the disbarment of the entity, and you can’t participate in the program if you’re disbarred.”

Increasingly, agricultural labor is viewed not just as a workforce issue but as a matter of economic stability, food security and national security — especially as labor shortages drive greater reliance on imported food, Holloy said.

Rutledge also addressed competition with importing countries that produce similar goods.

“We’re finding strong statistical evidence that as wages rise in the U.S., it’s leading to more import dependence,” he said. “There are policy options on the table that could potentially help promote domestic production, but some of them would raise prices for consumers while others would not.” **gpn**

Regina Molaro is a freelance editor whose work has been featured in more than 20 publications. She can be contacted at reginamolarofreelance@gmail.com.

Watch GPN’s **Labor Roundtable** for more practical insight to help balance labor costs, policy risk and technology investments while planning for the seasons ahead.



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THE LABOR STORY *CONTINUES*

When growers share, the entire industry benefits from better benchmarks, stronger insights and a clearer view of emerging trends

BY HEATHER MACHOVINA

The greenhouse industry talks a lot about labor, but understanding what is actually happening across North America requires more than anecdotes. It requires growers willing to share their experiences.

That is the value of the annual GPN Labor Survey.

Each year, growers provide insight into the workforce challenges, labor costs and operational decisions shaping their businesses. Taken together, those responses create a valuable benchmark for the industry, helping identify trends, highlight emerging issues and provide context for the decisions growers are making every day.

The findings from last year's survey revealed an industry continuing to adapt to a complex labor environment. While many growers reported having enough workers to meet production needs, 43% said they experienced labor shortages. For some operations, those shortages resulted in reduced harvests and crops left unharvested.

The survey also shed light on the ongoing challenges surrounding the H-2A program. Growers reported concerns about administrative requirements, legal complexities and rising labor costs associated with the Adverse Effect Wage Rate (AEWR). More

IMPACT OF LABOR SHORTAGES

Of those without enough labor:

23%

down 8%
compared
to 2024

experienced
a 10% to 19%
**decrease in
harvested
crops**

12%

had 20%
to 29%
unharvested

down 16%
compared
to 2024

“

While many growers reported having enough workers to meet production needs, **43% said they experienced labor shortages.**

”

LABOR SOLUTIONS IN 2025

How growers plan to address shortages:

45%

Hiring interns or local seasonal workers

45%

Doing the
work
themselves

39%

Growing fewer crops

34%

Investing in
automation

\$\$\$

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More than half
of respondents indicated that
legal processes and regulations
presented challenges.



than half of respondents indicated that legal processes and regulations presented challenges, while many reported that wage and regulatory changes had influenced their labor strategies.

At the same time, growers demonstrated a willingness to adapt. Many respondents reported hiring interns or seasonal workers, while others explored automation opportunities in planting, irrigation, spraying and harvesting. Some adjusted production plans or crop mixes to better align with available labor resources.

These insights matter because labor conditions do not stand still. Workforce availability, wage pressures, automation investments and regulatory requirements continue to evolve, and the industry's understanding of those changes is only as strong as the information growers are willing to share.

That's why GPN is once again asking growers to participate in the 2026 GPN Labor Survey.

Whether you're struggling to fill positions, adapting to rising labor costs, investing in automation, improving employee retention or finding new workforce solutions, your experience helps create a clearer picture of labor trends across the industry. The survey explores staffing levels, recruitment efforts, wage pressures, retention strategies and other workforce issues affecting greenhouse operations of all sizes.

The survey takes only a few minutes to complete, but the information you provide helps build a resource that benefits growers throughout North America. By participating, you help identify emerging trends, establish industry benchmarks and contribute to the conversations shaping the future of greenhouse labor. **gpn**

H-2A PROGRAM USE

Of those using H-2A:

68%

have **hired a third party** to manage the process



up 14%
compared to 2024

75%

are **NOT** using H-2A



TOP AREAS FOR AUTOMATION

65%

PLANTING

47%

SPRAYING

up 34%
compared to 2024

53%

IRRIGATION

41%

HARVESTING

up 16%
compared to 2024

**SHARE YOUR
LABOR STORY**

**TAKE THE 2026
SURVEY TODAY**

The **2026 GPN Labor Survey** is now open. Your input helps GPN track workforce trends, identify emerging challenges and provide valuable benchmarking data for greenhouse growers across North America.

Whether labor has become easier or more difficult to manage, your experience matters.



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Assessing seed trends for profitability

As a small grower, is it wise to jump on seed trends?

The idea of adding a new seed variety into your rotation can sound both risky and exciting. Trends bring opportunity, and a successful pursuit can turn a profit. But aggressively adopting the latest fads to boost sales can have the opposite effect, while avoiding new varieties all together means you could miss out on good opportunities. The trick is determining whether trending varieties can scale within your specific growing environment.

Predicting what consumers want from year to year is a guessing game, but building an economically feasible growing schedule that incorporates trending varieties doesn't have to be. Strategic seed introduction is key to capitalizing on the latest trends.

“ Be careful about making old crops obsolete just because there is something new and shiny on the market. ”

IS MY GREENHOUSE RETAIL READY?

It's a good idea to keep an eye on growing trends. Deciding to integrate a new crop can stem from multiple market influences. As a grower looking for expansion opportunities, you may see strained trade relationships, supply chain hiccups, environmental challenges or changing buyer preferences — all potential gaps you can grow to fill.

This year, you might be wondering how much produce Mexico will export or watching the development of resilient, high-yield seed varieties. As a small grower, you likely hold a unique position in your region and have a pulse on local demands as well as growing challenges specific to your area. Without reading extensive reports, you may already have a good idea of which trends have the potential to be profitable. This is valuable information that should be used when making decisions.

The overarching question remains the same: What do your customers expect from you? Customer relationships are built on trust. They trust you to carry the stock they need at a quality they've come to expect.

Do they expect you to have new products available? If so, how much will they purchase? Because unlike most goods, unsold greenhouse products cannot be stored until demand returns.

Thinking critically, generic marketing strategies might be promoting high-protein, plant-based alternatives to animal protein — but that doesn't mean your greenhouse should start growing an abundance of edamame. Local consumers might not purchase enough to support profits.

DEFINING GREENHOUSE PROFITABILITY

On my podcast, we like to use the analogy of building a recipe: I can make a fancy new meal, but if my kids don't like it, I've wasted both time and money. Sometimes the best approach is to stick with a growing formula that yields predictable profits and allows you to scale. Other times, it pays to tweak your recipe and try again.

Adding a new seed variety has the potential to diversify your operation, reduce risk and provide supplemental income. The concept of building your greenhouse "recipe" involves examining comprehensive loss or profit of crops over a lifecycle of at least three years.

True success means you have built trust with customers who now expect you to come to market with specific goods, your seed varieties grow well in your existing environment and you haven't overextended yourself on inputs.

Once you've established that there is potential for profit, determine how much space you can afford to devote to new crop trials or experiments. Avoid making old crops obsolete simply because there is something

new and shiny on the market. Smart producers start small and test the waters.

Breaking even or taking a marginal loss in the first year is acceptable for new trials. Some growers consider year-one profits a bonus. If the new seed cultivars do well in the growing environment, year two is a chance to tweak your recipe by modifying scheduling, input use or expanding slightly for increased profitability. By year three, the crop should be dialed in, allowing you to make strategic decisions about crop diversification or consolidation in your greenhouse. Success is truly measured by looking at overall profitability during the three-year period.

A diversified greenhouse holds many benefits and trendy crops can create income opportunities. Only strategic seed introduction and a good handle on your numbers will reveal if trends are worth the investment. [gpn](#)

Michelle Klieger is an agricultural economist and strategist, and president of Stratagerm Consulting. She can be reached at michelle@stratagerm.com.

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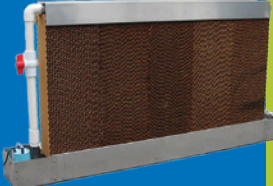
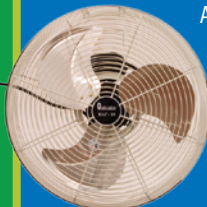
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Are insect growth regulators effective against mealybugs?

Question: Can insect growth regulators be used to manage mealybugs in greenhouse production systems?

Answer: Before addressing whether insect growth regulators (IGRs) can manage mealybugs, it is important to understand how these compounds work.

IGRs mimic insect hormones, disrupting molting or modifying insect development. They interfere with normal growth so insect pests die before reaching adulthood. IGRs also reduce pest populations over time by inhibiting metamorphosis and affecting female reproduction.

These materials are primarily active on immature life stages, including the nymphs or larvae of fungus gnats, mealybugs, scales, thrips and whiteflies.

IGRs are grouped into three categories based on mode of action: 1) chitin synthesis inhibitors, 2) ecdysone antagonists and 3) juvenile hormone mimics. Chitin synthesis inhibitors interfere with enzymes responsible for producing chitin, an important component of the insect exoskeleton. As a result, insect pests die during the larval or nymphal stages or develop into sterilized females lacking chitin.

Ecdysone antagonists disrupt molting by inhibiting metabolism of the molting hormone ecdysone. Juvenile hormone mimics prevent development, causing insect pests to

remain in the larval or nymphal stage and preventing completion of the life cycle. IGRs registered for use in greenhouse production systems are listed in **Table 1**.

IGRs directly affect mealybug nymphs, also known as crawlers, and may indirectly reduce female egg production. Mealybug nymphs are susceptible because they lack the waxy covering (**Figure 1**) that protects later life stages from insecticide exposure. However, once nymphs develop the waxy



Photos courtesy of Raymond Cloyd.

Figure 1. Mealybug nymphs are susceptible to insect growth regulators because they don't have the waxy covering that protects them later in development.

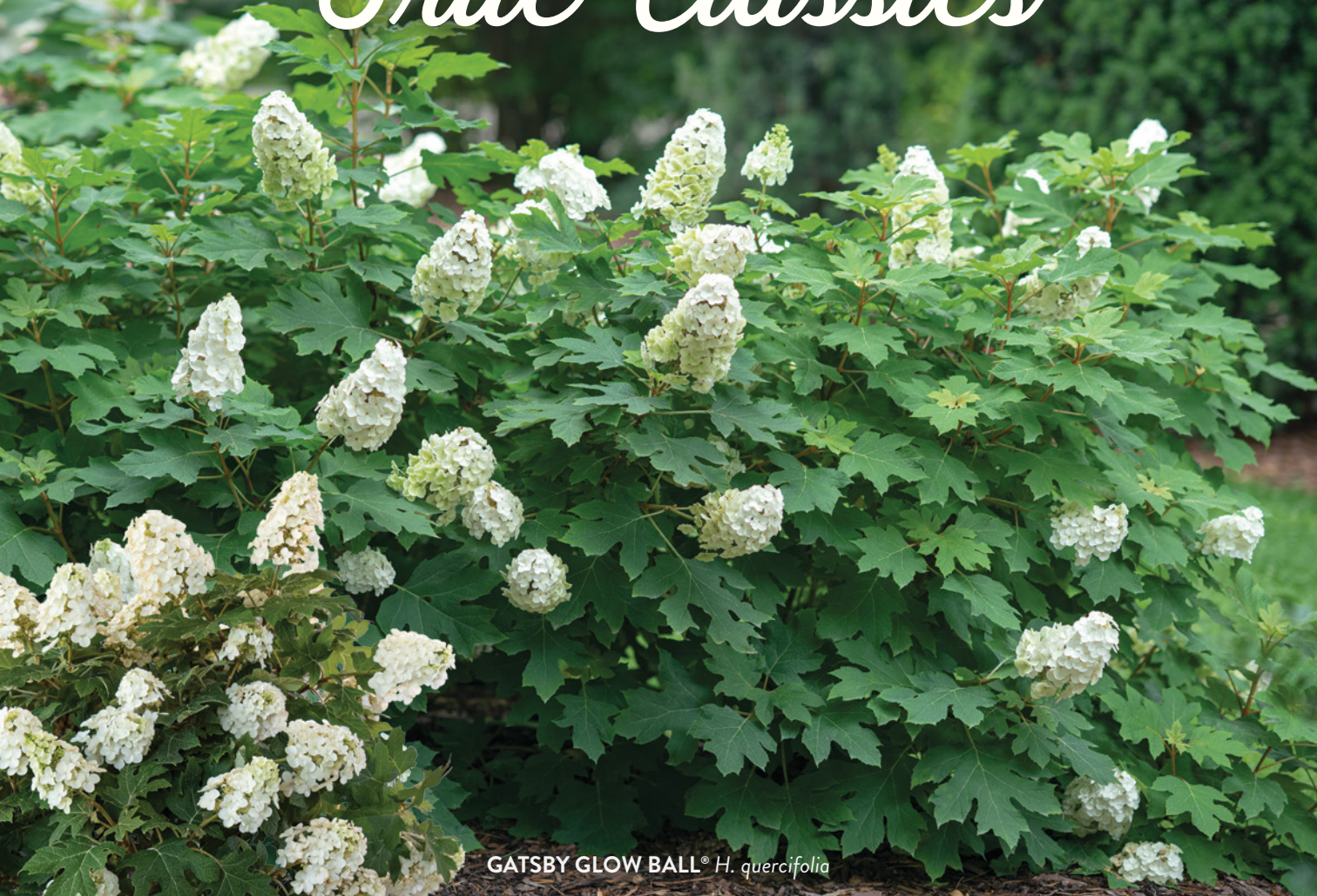
covering, IGRs become less effective at maintaining citrus mealybug populations below plant-damaging levels.

Table 1. Insect growth regulators labeled for use in greenhouse production systems, including common name (active ingredient), trade name and mode of action [Insecticide Resistance Action Committee (IRAC) mode of action classification].

COMMON NAME	TRADE NAME(S)	MODE OF ACTION (IRAC CLASSIFICATION)
Buprofezin	Talus	Chitin synthesis inhibitor (16)
Cyromazine	Citation	Chitin synthesis inhibitor (17)
Diflubenzuron	Adept	Chitin synthesis inhibitor (15)
Novaluron	Pedestal	Chitin synthesis inhibitor (15)
Azadirachtin	Azatin, Molt-X, Ornazin ¹	Ecdysone antagonist (UN)
Fenoxycarb	Preclude	Juvenile hormone mimic (7B)
Kinoprene	Enstar II/AQ	Juvenile hormone mimic (7A)
Pyriproxyfen	Distance	Juvenile hormone mimic (7C)
Spirotetramat	Kontos	Juvenile hormone mimic (23)

¹Additional trade names include: AzaGuard, Azatrol, Aza-Direct and AzaSol.

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Figure 2. Having overlapping generations present simultaneously is common — eggs, nymphs, pupae and adults — making control more challenging.



Figure 3. Mealybug eggs are not affected by insect growth regulators because they are protected by the ovisac.

In addition, overlapping generations are common, with eggs, nymphs, pupae and adults present simultaneously (**Figure 2**). Eggs are generally not affected because they are protected by a waxy egg sac, or ovisac (**Figure 3**).

IGRs have been tested against mealybugs, including the citrus mealybug, *Planococcus citri*, with mixed results. Buprofezin (Talus), depending on the application rate and level of exposure, may inhibit nymph emergence from eggs and affect subsequent development and survival. Egg production also may decline when female citrus mealybugs are exposed to buprofezin.

Research showed buprofezin was more active on mealybug eggs and young nymphs than on adult females. However, another study indicated that buprofezin and spirotetramat were more active on mealybug nymphs than eggs.

A laboratory study showed that exposure to kinoprene (Enstar II/AQ) reduced female reproduction and lowered citrus mealybug populations. However, another study demonstrated that azadirachtin (Ornazin), kinoprene, pyriproxyfen (Distance), novaluron (Pedestal) and buprofezin had minimal effect on female citrus mealybug egg production.

Differences among study results are likely associated with how mealybugs were exposed to IGRs. For example,

some studies immersed mealybugs in insect growth regulator solutions or treated leaf disks, whereas others exposed mealybugs on plants to spray applications. In addition, the application rate and the life stages exposed, including eggs, nymphs or adults, may have contributed to conflicting results.

IGRs can be used to manage mealybugs in greenhouse production systems. However, applications must begin early in crop production, and repeat applications will likely be necessary to reduce populations over time and maintain mealybugs below plant-damaging levels. [gpn](#)

For more information, refer to the following Extension publications:

Cloyd, R. A. 2013. *Insect growth regulators for use in greenhouses*. MF-3094. <https://bookstore.ksre.ksu.edu/pubs/MF3094.pdf>

Cloyd, R. A. 2011. *Mealybug management in greenhouses and interiorscapes*. MF3001. <https://bookstore.ksre.ksu.edu/pubs/MF3001.pdf>

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Agriculture and mental health: Talking is healthy

Today's guest is Lisa Foust Prater, executive editor of Family & Rural issues at Successful Farming (SF) magazine. Lisa earned her bachelor's degree at Grand View University in mass communication and started her career at a PR firm in Des Moines, Iowa, before joining SF magazine in 1999.

Peter: Lisa, your writing for Successful Farming comes from a life full of firsthand experiences in family farming in the Midwest. The physical characteristics of a farm in your region may differ from mine in New England, but let's talk about the similarities. Our farm descriptor includes ranches and greenhouses.

Lisa: I grew up in Indianola, Iowa, apart from seven years in Shadehill, South Dakota, a town of 8 people in the northwest corner of the state. While my parents weren't farmers, they both came from farming families, and many of my extended family is involved in farming and ranching. My husband was raised on a farm in southwest Iowa, and we had our own cattle operation for 20-plus years. We eased back a bit so our three sons could each raise their own herd, which went toward their college tuition. After their herds were sold, we decided to take a break. I'm enjoying winters without busting ice on water tanks or having to fix fences and chase escaped cows, but I do miss it. I'm not saying we'll never have cattle again, but it's easier to enjoy life as empty nesters without those chores.

After joining Successful Farming, I had three sons in four years and needed to step back. I switched to a part-time, remote role so I could be home with our boys. When my youngest graduated from high school in 2023, I came back on a full-time basis. I'm so thrilled to be back, traveling again, and visiting farmers and ranchers all over the country.

Peter: Here's a wonderful part of farm life that I'm happy to hear lives on in your story. You and your husband gave your boys the opportunity to raise their own cattle to pay for college. My parents gave me the same opportunity in the 70s to manage our field vegetable production to

pay for college at the University of New Hampshire. The opportunity they gave me and the responsibility they entrusted me with were awesome to have.

Also, Lisa ... I bow to you. I was the middle of three sons, my mom was the only female in our house, just like you. Seeds were planted in me that grew into an inspiring appreciation for the position of matriarch in a family farm operation. I'm in awe of my mom, you and other women for being such strong and inspirational mentors of the family farm unit.

As a writer and editor what topics do you cover for SF magazine? What inspired you to focus on mental health for growers across agriculture's diverse sectors?

Lisa: I love writing feature stories on interesting farmers and ranchers, and I also cover a wide range of topics relating to family and rural issues: health and safety, succession planning, parenting and other issues.

I have a particular interest in promoting mental health, since such a high percentage of those involved in ag struggle with those issues, and since the suicide rate is so high in our industry. I've interviewed many folks who have mental health struggles themselves or who have lost a loved one to suicide, and those stories stick with you. It's so important to keep talking about mental health to help end the stigma surrounding it.

Peter: Historically, agriculture has revolved around family operations where the line separating work and family is blurred, if there is one at all. We'll touch on non-family agriculturists in a minute, but what would you like family business units to pay more attention to regarding mental health?

Lisa: It can be really difficult to keep farming and family separate, which means work disputes can negatively impact personal relationships. No business is worth a falling out with a sibling, parent, child or other family member. Life is too short for that kind of conflict.

Before it gets to that point, I recommend families use a mediator to help sort things out. Regular business

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“ I encourage readers to treat their mental health like their physical health and to see a professional when needed. ”

— Lisa Foust Prater

meetings are also a good tool, as long as everyone has the chance to be heard. It's important for the older generation to listen to what their children and grandchildren have to say, and vice versa. We can all learn from each other, and simply being willing to actively listen and learn can go a long way.

I also encourage readers to treat their mental health like their physical health and to see a professional when needed. There's no shame in getting help, and thanks to telehealth, you can do that right from the cab of your tractor. I have written about going to therapy myself.

Peter: I mentioned non-family agriculturists as these issues apply to everyone on a farm. Members of this group have reached out to me expressing their message: Don't make us feel different just because we weren't born into a farm family; it doesn't mean we're less passionate or dedicated.

Lisa: Finding and keeping good employees is a challenge, so once you find one, it's important to treat them well. While they may not be part of the succession conversation, employers need to keep an open dialogue going and make sure their employees are kept safe and healthy, including mentally. We all need to do a better job of listening, paying attention to how those around us are doing and offering an ear or support for finding resources.

Peter: Is there a “below the radar” concern that you'd like to highlight?

Lisa: Children's safety is near and dear to my heart, and there are underlying issues that contribute to this issue. One is the lack of available childcare in rural America. Farmers often feel like they have no choice but to take their small children along with them while they work, and that can be dangerous.

It's so easy to become complacent with safety measures, and that can be deadly. I've interviewed mothers who have lost their children on the farm and others who have children who have lost limbs or suffered other traumatic injuries. A few things to keep in mind with kids is that they should be doing age-appropriate chores, and just because a child may be physically large enough to do something like drive a tractor doesn't mean they're mentally equipped with the decision-making skills required to do that job safely.

This is a tricky thing to talk about since I don't want to come off as judging other peoples' parenting, and I'm not perfect either, but when a parent who has had to bury a child asks me to keep spreading this message, that's what I'm going to do.

Safety is also a concern as farmers and ranchers age. It's so hard when elderly parents suffer cognitive or physical decline and tough decisions have to be made about safely operating machinery and dealing with livestock. Having been a member of the sandwich generation, I know how hard it is to care for kids and aging parents at the same time, especially if dementia is part of the equation. If that's you, make sure you have a support system, whether it's a friend to vent to, a support group or a therapist.

Another thing that ties into mental health is the fact that farmers and ranchers often feel like their occupation is their whole identity. There's so much generational pressure to keep the farm going, and their workplace is also their home so that's even more pressure. If the business is in jeopardy, that can quickly lead to suicidal thoughts, because without the farm or ranch, who are they? We all need to keep an eye on each other, and if we see signs that someone is struggling, we need to let them know they are more than their job and that they're important and valuable no matter what happens with the business.

Peter: You've touched me with your comments, Lisa. My mom's final years were a battle with dementia. It took several years after losing her to put the grief in its right place. Talking about it helps a lot. Thank you again for discussing this important topic. [gpn](#)

Peter Konjoian is president of Konjoian's Horticulture Education Services and creator of Small Greenhouse and Farm Technology (SGAFT). His career spans four decades as a commercial grower, researcher and consultant. He can be reached at peterkfes@comcast.net.

Lisa Foust Prater is executive editor of Family & Rural issues at Successful Farming (SF) magazine.



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hydrangea series

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Hydrangea 'Fairytrail Fresco Cascade'

Photos courtesy of Spring Meadow Nursery.

BY NATALIE CARMOLLI

The Fairytrail Cascade hydrangea series from Proven Winners ColorChoice Shrubs offer growers distinctive cascading hydrangeas with strong retail appeal and efficient production timing.

Unlike the upright, rounded habit of conventional bigleaf types, Fairytrail Cascade varieties produce long, arching stems that cascade downward with age, creating a weeping or garland effect. Flowers appear at every leaf node along the arching stems, creating a high flower count and a display with strong visibility from a distance.

For growers, the series offers fast production, reliable vernalization response and strong consumer appeal.

AND THEN THERE WERE FOUR

The series currently includes four varieties, each with its own flower form and color.

'Fairytrail Bride Cascade' hydrangea is the original, featuring large white lacecap flowers on a strongly horizontal, spreading habit. This is sold as 'Runaway

Bride' in the EU. It has won multiple awards including Plant of the Year at the Chelsea Flower Show.

'Fairytrail White Cascade' is a mophead form with bright white, snowball-like flowers at every leaf node. It can be used for hanging baskets, containers or spilling over retaining walls. It's a late spring bloomer, and grows 3 to 4 feet tall with a 4 to 5 foot spread.

'Fairytrail Green Cascade' is a mophead form with abundant lime-green blooms. The loose habit lends itself beautifully to mass plantings and use in pollinator-friendly gardens.

'Fairytrail Fresco Cascade' hydrangea is an early blooming and pH-responsive mophead. The flowers shift between pink and blue depending on aluminum availability in the substrate or soil.

All varieties are hardy in USDA Zones 5 to 9, and reach a mature height and spread of approximately 4 to 5 feet. Mature plants are vigorous and production is straightforward — they are fast to finish and easy to ship in bud and bloom.

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'Fairytrail Green
Cascade'



Hydrangea
'Fairytrail White
Cascade'



Hydrangea
'Fairytrail Bride
Cascade'

PRODUCTION CONSIDERATIONS

Fairytrail hydrangeas bloom primarily on old wood, so vernalization is required to trigger bud set. Plan accordingly because liners that have not received adequate cold will underperform at retail.

Target finish times from liner to saleable container depends on container size. A 1-gallon finished plant from a transplanted 4-inch quart liner takes 6 to 8 weeks of active growth. Producing a 2- or 3-gallon finished Fairytrail hydrangea will take 12 to 16 weeks of active growth from a 4-inch quart liner.

Rooting out temperatures of 65° F to 72° F are optimal, and overwintering should be held at 35° F to 45° F. Vigor is rated as fast, making these an efficient crop to turn.

CULTURAL REQUIREMENTS

Light

Moderate light levels are sufficient in production. In landscape or outdoor retail settings, part to full sun is appropriate.

Water

These are moderate to high-irrigation crops. In containers, check soil moisture more frequently, as containers dry faster than ground-planted material.

Fertility

Target is average to high nutrient levels, with an EC of 1.5 to 2.0 (2:1 extract) and a pH range of 5.0 to 6.0. Apply a balanced, slow-release fertilizer in early spring and continue feeding a 200 ppm nitrogen feed through August. Cease fertilization after that point to allow new growth to harden off before dormancy.

For Fairytrail Fresco specifically, soil pH management is the mechanism for flower color, so a lower pH with aluminum sulfate will produce blue tones.

White blooming varieties do not shift color with soil pH. However, the addition of aluminum sulfate will produce a notably cleaner, brighter white if desired.

PRUNING AND SCHEDULING

Fairytrail varieties should be handled with the same care as any old-wood bloomer. Be mindful that excess pruning is the most common cultural error.

In greenhouse production, pinch 1 to 3 times total. Avoid heavy cuts. Entire branches can be removed to manage habit or reshape the plant.

For container overwintering, store in a low heat or unheated structure at 35° F to 45° F.

PEST AND DISEASE CONSIDERATIONS

Grow with adequate spacing to promote air circulation, and practice sound sanitation. Subirrigation will reduce fungal pressure on foliage. No unusual pest pressures beyond what would be expected in hydrangea production like aphids, spider mites or thrips.

RETAIL AND POSITIONING NOTES

The cascading habit and high flower count make this series an exceptional spring container specimen. It photographs well and has a strong point-of-sale impact. **gpn**

Natalie Carmolli is public relations specialist at Spring Meadow Nursery. For grower specifications and additional series information, visit springmeadownursery.com.



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Stop guessing and start growing with data

One of the things I love most about horticulture is that no two growers approach growing exactly the same way. Every greenhouse has its own rhythm, every crop has its own needs, and every grower develops instincts that can only come from time spent with plants.

Long before I worked in technical support, laboratory analysis and fertility troubleshooting, I learned horticulture hands-on. I started in my high school greenhouse, later learning and working in production greenhouses at Longwood Gardens, and eventually spending time growing in and walking through local greenhouses throughout Pennsylvania's Lehigh Valley.

Those experiences taught me how to truly observe plants. You learn how foliage color responds after a feed change. You recognize subtle differences in flower timing or shifts in irrigation demand with weather changes. There is absolutely a skill to "reading" plants, and experienced growers know that crops respond constantly through environmental changes.

But as valuable as grower intuition is, I also learned that visual observations can only take you so far. When true crop steering decisions need to occur, especially under production pressure, it is critical to have data supporting the next step.

That is where laboratory analysis becomes one of the most valuable tools available to today's growers.

BE PROACTIVE

Too often, growers only think about testing when something has already gone wrong. At that point, testing becomes reactive rather than proactive. But laboratory analysis is most powerful when it becomes part of a grower's regular management strategy, not just an emergency response.

Understanding water quality is a key first step in any greenhouse operation. Irrigation water is the foundation of every fertility program, yet many growers operate without fully understanding what is coming through their hoses or booms. Alkalinity, pH and sodium can all influence substrate EC, nutrient availability and overall fertilizer performance. Without accurate water data, growers are essentially building fertility programs without seeing the full picture.

The same can be said for media analysis. A substrate may look great visually while still hiding underlying

imbalances in EC, pH or nutrient availability. This becomes even more important as we continue seeing wood fiber step in as a partial replacement for peat in many substrate blends. While the media may appear healthy on the surface, laboratory analysis helps growers better understand starting pH, EC and nutrient levels within the mix.

Tissue analysis adds another layer by showing what the plant is taking up. Together, water, media and tissue testing provide a clearer picture of overall crop health.

THE VALUE

The real value of laboratory analysis is not just collecting numbers. It is understanding how those numbers translate into management decisions. Data without interpretation is simply information. Data paired with technical knowledge becomes a strategy.

For example, media testing may reveal sufficient iron in the root zone but a high pH, allowing a grower to adjust acid rates before nutrient deficiency occurs. A tissue sample may identify a micronutrient deficiency before

“Data without interpretation is simply information. Data paired with technical knowledge becomes a strategy.”

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visual symptoms impact marketability. Water testing may explain why a grower constantly battles rising substrate pH despite following a sound feeding program. These insights help growers make targeted corrections rather than broad guesses that may create additional problems.

Understanding water quality is a key first step in any greenhouse operation. Photo courtesy of Kaitlyn Sterner.



As someone who has worked both on the production side and now in technical support, I have seen firsthand how empowering data can be. Some of the most successful growers are not necessarily the ones with the newest facilities or most advanced technology. They are the ones willing to ask questions, track trends and combine experience with measurable information. They understand that testing is not a sign of failure — it is a commitment to improvement.

Experience and intuition will always have a place in horticulture. Crops still require observation, care and the human ability to recognize subtle changes within the greenhouse. But pairing those instincts with laboratory analysis creates a stronger, more proactive approach to production.

In an industry where margins can be tight and crop quality is everything, guessing is expensive. Data gives growers the confidence to make informed decisions, steer crops with purpose and ultimately grow better. **gpn**

Kaitlyn Sterner is director of technical support at Jack's Fertilizers and a member of GPN's Forty under 40 Class of 2026.

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Business coaching comes to Cultivate

Running a horticultural business today means making decisions in real time, often without the chance to evaluate the bigger picture. Confronted with the ever-present challenges of running a business, it's easy to stay mired in the day-to-day.

That's exactly the space where business coaching can make a meaningful difference.

This year, Cultivate is introducing Coach's Corner. Experience 15-minute, one-on-one coaching sessions with more than a dozen industry experts and Cultivate speakers. It's a chance to go beyond the education session and have focused conversations about your business with someone who has experience and advice for your particular concern.

"We're always looking at how we evolve education to deliver more real-world value," said Meagan Nace, senior manager, education program development for AmericanHort. "We know attendees don't just want ideas. They want to know how to apply those ideas. Coach's Corner was designed to bridge that gap by creating space for more personalized, actionable conversations that help move businesses forward."

These coaching sessions are more like a targeted working conversation than a casual meet and greet. Attendees can book appointments in advance with a consultant in an area of expertise that suits your situation.

WHY COACHING?

"It's easy to get bogged down in the day-to-day running of your business," said Katie Elzer-Peters, owner of The Garden of Words, a digital marketing agency for the horticulture industry. "Talking with someone beyond the circle of your daily grind can draw out opportunities

and solutions that are hard to see when you're in the thick of it."

Coaching offers something many business owners don't often receive: an outside perspective grounded in experience.

Horticultural sales and strategy consultant Neal Glatt sees it in practical terms.

"Coaching enables small businesses to go where they otherwise couldn't by gaining insight from people who have already accomplished what they hope to achieve," he said. "Having an impartial viewpoint on a business hurdle can provide insight to overcome it without the trial-and-error cycles that would otherwise be required."

This level of access to experienced coaches is included with the All-Access Pass registration.

"It's a great chance to dip your toe in to see what it is like to work with a coach and to gain a handful of personalized, tangible action items to try at home," Elzer-Peters said.

FROM INSPIRATION TO APPLICATION

At industry events such as Cultivate, education sessions are an opportunity for horticulture professionals to learn

“Coaching becomes specific to you at your level, for your challenge.”
—John Kennedy



new techniques and business strategies to bring back to their operations. Attendees are energized but can still wonder how to apply what they've learned to their own situations. That's because many of these sessions are designed for a broad audience.

"In any conference setting, you make the messaging as generic and as applicable as possible," said frequent Cultivate education session speaker John Kennedy, co-founder of business consultancy BoomerWrangle. "Audience participation in a large event is a macro approach to education. Coaching consults are more of a micro approach."

That micro-approach is where the transfer of knowledge shines — turning general ideas into specific, actionable steps tailored to an individual business.

"Coaching becomes specific to you at your level, for your challenge," Kennedy said of one-on-one sessions. "It's where you help me build your toolbox so that you leave with the specific tools you are looking for. And everybody's toolbox is different."

MAKING THE MOST OF YOUR SESSION

With 15 minutes allotted for these coaching sessions, preparing for your consultation is key. Come with a clear question, a specific challenge and enough context to make the conversation productive.

For Glatt, that means being ready to dig in. "No questions are off-limits regarding sales, profitability, scaling, management and leadership," he said. "This is an opportunity to delve deeper into the questions attendees have about their business than we could possibly address in the Q&A sessions."

Ultimately, coaching is about accelerating progress and helping businesses move forward with clarity instead of guesswork.

"It's more of a 'How do we serve you at the level that's important to you?' so that you leave better than you came," Kennedy said. *gpn*

Cultivate '26 All-Access Pass Holders can learn more and sign up for a coaching session at americanhort.org/cultivate-coachs-corner.

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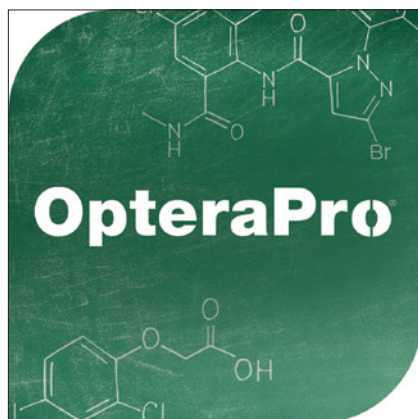
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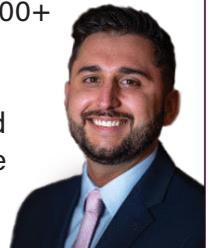
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