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Nursery Management

Windmill Nursery's transition to regenerative agriculture demonstrates the critical role of leadership and culture in driving growth and success.

Todd Ellefson

A STREAM

SEEING IS BELIEVING

Michael Roe

PROFILE: CAROL REESE PG. 22

TAX WRITE-OFFS PG. 34



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ON A BRISK MID-OCTOBER DAY,

my son took part in the fifth annual "Punkin' Chunkin'" event at his middle school. The pumpkin tossing event is the brainchild of a 6th grade science teacher, destined to be remembered fondly forever because of fun projects like these. It's a big deal in our town. People bring lawn chairs, one of the local news stations usually drops by for a feel-good autumn feature, and the PTA has a captive and willing audience for its bake sale.

The kids pick which pumpkinhurling apparatus they want to build, develop the design, and then the parents typically get involved. I'm always up for a trip to the hardware store, but I have to admit I was intimidated when my son's group decided to build a trebuchet. Wouldn't a slingshot or even a catapult have been easier? But as usual, I got swept up in the excitement. Next thing you know, I'm researching medieval siege equipment and watching YouTube videos of bearded guys with circular saws.

After the supply run, we had all the kids (and some interested dads and grandpas) over to our house to see if we could actually build this thing. To our credit, the dads mostly stayed in supervision mode, letting the kids learn how to use the tools. My son is following in his father's footsteps in one way: he found a best friend who is really good at math. Thanks in no small part to his perfect measurements and calculations, this group of sixth graders assembled a trebuchet that worked on its very first try. After some tweaks to the release mechanism, it was ready for the big day.

SMALL PUMPKINS, **BIG DREAMS**

Give your team the freedom and resources to tackle big projects.

At the event, it launched a pumpkin 87 yards, good enough for a place on the medal stand and a bunch of happy 12-year-olds.

Now, they're ready to storm the gates of a neighboring kingdom.

I learned a lot from this challenge, and not just about the physics of launching a gourd across a field. Don't be afraid of big challenges. Your team may have more strength than you realize. If they propose a project, and they're passionate about it, give them the chance to prove they can handle it. And this may be tough, but let them do it their way. If you step in and solve every problem yourself, your team won't get the chance to develop those skills. Also, crucially, don't immediately pull the plug when the project hits a snag.

It reminds me of this month's cover story. Windmill Nursery made some major changes to its plant production process. Michael Roe, Windmill's VP of production, had a plan. He shared it with company president Todd Ellefson, who may have had his doubts, but let him run with the idea. It certainly wasn't perfect from day 1, but Michael was adamant it would work, and management had his back even through setbacks. Read more on pg. 15.

And if you have any ideas for what I should do with a pumpkin-launching trebuchet, preferably ones that don't involve massive property damage, shoot me an email.

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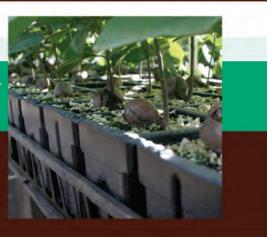


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MARK DWYER is currently the Garden Manager for the Edgerton (WI) Hospital Healing Garden after 21 years as Director of Horticulture at Rotary Botanical Gardens (Janesville, WI). He also operates Landscape Prescriptions by MD, a landscape design and consultation business. mcdwyer@zoho.com

CAULOPHYLLUM THALICTROIDES





The fruit of this undemanding perennial provides a burst of color to understory applications.

remember my first exposure to this plant in a state park in Wisconsin many years ago. As I was following a trail in early fall, I noticed groupings of plants featuring what appeared to be "floating" blueberries for lack of a better description. I was mesmerized by what I later identified as blue cohosh (Caulophyllum thalictroides). At that time, I also noticed the similarity in the foliage as compared to meadow rues (Thalictrum sp.); hence the logical species name. The groupings I noticed were all in rich, moist and well-drained soils which is exactly what this undemanding plant requires and deserves for maximum vigor and appeal. I've since used this plant extensively in appropriate understory applications as it tolerates both part shade and shade while offering amazing texture. The late season fruiting display is a colorful ornamentation and the primary feature of interest.

Caulophyllum thalictroides is in the barberry family (Berberidaceae) and has a wide native range in the Eastern and Central United States and in parts of Canada. Spreading slowly by rhizomes and becoming bushy once mature, this many-stemmed, colonizing plant reaches 12-36 inches and features thrice-compound leaves with lobed leaflets. Spring foliage emerges smokey, purple-blue and matures to a bluish green by summer. The foliage can become bright gold in autumn. Inconspicuous, yellow-green to greenish-brown, star-shaped flowers appear in early spring in loosely branched structures. The blue, berry-like, fleshy seeds are held stiffly above the foliage and resemble small grapes (½ inch in diameter). It is important to note that the fruits, roots and leaves may cause skin irritation if touched and the fruits are mildly toxic to humans.

Once established in a favorable site, blue cohosh is long-lived and best left undisturbed. I've watched a patch of this perennial that I planted over 20 years ago continue to thrive and slowly expand from five original plants. That phrase, "moist but well-drained" is essential for this plant which prefers a neutral to slightly acidic pH but is quite adaptable. With no known insect or disease issues, this tough native is also deer resistant and has a long history of Native American use. While the fruits are toxic to humans, apparently birds and mice aren't shy about nibbling. NM

SPECIFICS

Name: Caulophyllum thalictroides

Common name: blue cohosh, squaw-root, papoose-root

Description: This wide-ranging native perennial prefers consistently moist, well-drained sites in shadier locations. Bluish foliage offers color and texture, and the bright blue, berry-like seeds offer colorful punctuation from late summer into fall.

Hardiness: USDA Zones 3-8

In the landscape: Utilize the hardy and adaptable blue cohosh in moist woodland situations where it will combine well texturally with other plantings and offer a colorful fruiting contribution late in the season. Consider small groupings to maximize impact.

Why grow Caulophyllum thalictroides?

- Choice, native option for your shadier garden
- Interesting foliage color and elegant, refined texture
- Conspicuous, bright blue fruits in late summer
- Nectar source in early spring for solitary bees

INTRODUCING

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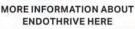
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LEADERSHIP PLAYBOOK



JASON BIZON is West Coast General Manager for Bailey Nurseries, where he oversees operations in Washington and Oregon. His column offers an inside look and advice about management within the horticultural industry.

THAT'S JUST CAPITAL

The bigger the spend, the bigger the risk, so planning is essential.

aking on large capital improvements can be a challenging task for any level of manager or any size operation. Over the course of my career, I have been fortunate enough to be part of some very large company spends. Whenever the fourth quarter starts and budget season looms, I always try to assess the true needs of capital outlay. Sure, most department managers want to shoot the moon with the requests, and it is my job to make sure the request will aid in whatever job is involved. There are other questions

that also need to be answered: what is the payback time, how will it save labor, what safety concerns loom, and what is the overall benefit to the business, specifically efficiencies? We

start our capital budgeting in October with an initial first-round table with key staff. This allows the whole group to be in the know about what requests are out there across the departments and divisions. It also gives us a chance to challenge the beneficial aspects of what is being presented. It takes a group of leaders willing to set their ego and pride aside and not take the groupthink as personal attacks but rather focus on the efficiency gains for the future.

> Taking the time to do the prework is essential to a successful pitch to owners or decisionmakers. The more detail and bid-outs we can present in our capital request packages, the

LEADERSHIP PLAYBOOK

more chance of approval. What I like to present is a well-thought-out plan down to the smallest detail. Did we think of everything that we need to pull off the project or item? Not only in the now, but five, 10, 20 years from now. Will it still be a relevant request, and will managers have any regrets that they wished they would have done things differently? Thinking of every detail and setting aside intentional time to visualize any project is important. Things I often consider are freight and or logistic costs. Using national vendors is an important part of what we do. Sourcing locally definitely has its advantages, but for some projects, the scope just doesn't allow it. We always consider our local vendors first from a support and logistics advantage. Freight can and is a real cost to most projects, both locally and nationally. The bid and budget process has to take this into account when considering the project's timelines and costs.

Once we have identified and sourced our project, the real work begins. One of the first items we do is start our soft timeline. Without goal dates for completion, projects can linger even beyond the current budget year, so it is important to work with vendors and set some projections and deadlines. For me, the whole process is based on our *belief action cycle* from outcomes to completion deadlines. I learned about this process in early 2016 from a sales training group and have carried it through to how I approach managing in today's world. The cycle dictates that the outcomes you achieve are directly tied to the action you take. The decisions we make as managers are determined by the beliefs we have as an individual. To put it more simply, if you think something is going to be a failure, then most likely it fails. If you think something is going to be successful, then you have to establish your belief that your outcomes and decisions are going to positively determine the outcome you expect. Extenuating

beyond that is the effect of how the project is viewed and collaborated with your team and vendor. There is nothing that will take down a really exciting project more than pessimism, and it's crazy how that can spread throughout individuals and divisions. I call it going down the negative rabbit hole that never ends. Keeping your thoughts in a positive direction is the only way to get large projects done and within the timeline you need them.

Wasting time and dwelling on setbacks only stands to decrease your chances of success. Does that mean setbacks are not going to happen? No. In fact, of my 25 years in this industry, I don't think I can think of one major capital project that didn't run into some sort of issue or problem. It may be as small as not having the right power at the right spot or accidentally measuring a large building incorrectly for a project that was supposed to go inside it. It happens. Overcoming challenges and adversities is the foundation of big projects; the bigger the spend, the bigger the risk, and of course, everyone is watching how you respond. One of my early mentors, usually after making a mistake, would often ask me, "What do you do when you spill a large glass of milk? Simply clean it up and pour another one." I always appreciated that approach and knew that if I did my due diligence for a project and mistakes still happened, I could live with that. No matter how much planning goes into large capital projects, knowing that we will have to adapt and overcome at some point is just part of the gig. Don't get caught up in the issues that did not go as planned. Instead, just pour another glass and keep moving your team forward. NM





SUE MARKGRAF is a veteran journalist and industry marketing professional with decades of experience in strategic communications for the horticulture and agriculture industries.

MARKETING ISN'T SELLING

uring a recent industry presentation, it appeared to attendees that I may have lost my train of thought while I was making a point about what effective marketing is and what it isn't. But really, I was hesitating to say what I usually say because my statement is often met with guffaws and shaking heads.

Then came the questions.

A woman in an aisle seat four or five rows back raised her hand and politely said, "It appeared you lost your train of thought back there — but you didn't, did you, Sue? I really want to hear what you

WEEK 1

were about to say." Busted.

WEEK

"Marketing. isn't. selling." I leaned into the microphone, enunciating every word while looking her straight in the eyes. She nodded, smiling, and remarked that she couldn't wait to tell her managers that I just reinforced what she's been telling them.

I understand why that simple statement causes confusion. It turns upside down and inside out the general perception of a communications practice that is actually a specialized craft.

Marketing isn't selling. (Advertising is

WEEK

selling.) Nor is it a mathematical science to be measured against the bottom line by the company's numbers people.

Marketing is not logos or websites, slogans or taglines, social media or hashtags, brochures or postcards or even email newsletters. Those are marketing tools that are used to execute tactics born from strategy, which is the essence of the marketing function.

Effective marketing is nuanced. It informs business intentions that are value-based, relationship-driven and transactional. It is the healthy soil from which leadership brands grow.

10 questions to ask when developing your nursery's marketing strategy.



Marketing articulates the company's core values and reason for being. It marries strategy, planning and messaging for the purpose of unifying communications and directing internal goal setting.

Marketing inspires, educates and motivates targeted demographics to feel, to think and to do something. It pulls back the curtain and turns the spotlight on the company's people and its business beliefs. In my experience, most people would rather do business with human beings than with logos.

When strategy is developed and executed with every member of the team participating, everyone in every function of the nursery understands the company's values, vision, mission and goals — and they know what to say about them. This creates an internal culture of caring that emanates from the business and reinforces the company's brand as a marketplace leader. Effective marketing generates goodwill and builds loyalty — and, yes, can sometimes — but may not always — generate sales.

"Sales" are desired byproducts of ongoing and long-term effective marketing strategies. But carving a niche that is memorable with customers – well, that is the point. You don't want a one-and-done sale. You want lots and lots of many sales over time. Those spring from strategically marketing a company culture that customers want to do business with. And for this reason, marketing is not selling.

With this clarification in mind, ask these questions when you're developing your nursery's marketing strategy.

1 What is our company's purpose or reason for being in the marketplace?

Most of us who lead businesses have a right to own altruistic reasons for doing so. We want to give back, make the world a better place and contribute to our communities. But ask, what drives our passion? Why was our company started? Why is our work important? Why do we continue to do what we do every day, 365 days a year?

What are our brand values?

Values drive the way we think, make decisions and contribute to relationships. They apply very much to day-to-day business. What do we hold most dear in the professional marketplace? Is it service? Quality plants? Training/education? Attention to detail? Kindness/empathy? How do we live these values as a company and demonstrate them on a daily basis?

3 What is the company's distinguishing characteristics?

Every business has strategic stories to tell — and no company is exactly like another. What sets us apart in the marketplace? What do we do really, really well? What are our unique quality controls, services or certifications?



4 What is leadership's vision for the company in three years? Five years?

Goal setting informs planning and strategic marketing helps you get from here to there. How do you want the business to grow? How will you get there? What do you need to do or put in place now to successfully achieve short- and long-term goals?

5 When we talk about our brand and our nursery's work, what do we say?

When you attend any type of event and the question is asked, "What does your company do?", the answer delivers a lot of messages — spoken and unspoken — about your brand. When asked that question, what does management say? What does staff say? Are we on the same page? Why or why not?

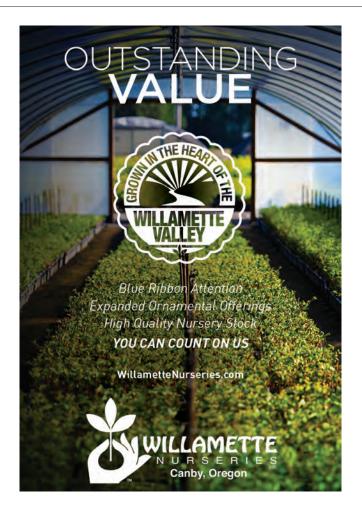


Getting everyone on the same page is critical to the marketing success of a company.

6 What do our customers, colleagues and partners say about our brand?

Listening to customers and writing down what each one says can be very helpful when developing a strategic marketing plan. Does what our customers, colleagues and partners say about our brand reflect our company's reason for being? Is there a common thread? Do the words they use accurately mirror our values? How do we want them to feel about our nursery? What do we want them to remember about our brand?





7 Who are the people that work at the nursery?

People are a brand's best asset. Are team members' personal values in line with brand values? What is our nursery's philosophy on hiring, training and continuing education? What team members have specialty skills or unique qualifications? Who are our internal "stars" or brand ambassadors?

• Who buys our products?

• Knowing your customer and speaking their language is Marketing 101. Do we grow plants for customers at retail, wholesale, landscape commercial, landscape residential, a mixture or for someone else? Is the language we use in our sales and service communications targeted or generalized? What challenges and opportunities does communication with our target customers present?

Where do we distribute product?

This really matters in an industry that sells live plant material. But does everyone on our team understand why we distribute product to the geography we target? What are our brand strengths in the market areas we serve – "local grown," "resource conscious," "climate experienced," etc.? How do we communicate the benefits of purchasing and receiving our products?

10 How will you incorporate the answers to the above questions into your strategic marketing plans?

I've seen it many times over the years – leadership thinks one way about the marketing direction of their company, but the management, sales and administrative teams have very different perspectives. Like the conference attendee who was excited to have my validation of her counsel, getting everyone on the same page is critical to the marketing success of a company. So is listening to one another.

Fourth quarter is always time to evaluate how and why we do business and plan for new beginnings and fresh starts. Including everyone in the process of developing a strategic marketing plan gets everyone on the same page and ensures unanimous buy-in about what is real and what is assumed, which brings clarity to vision and success to the business. NM

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Leaf spot symptoms and damage vary depending on the type of hydrangea.

CERCOSPORA LEAF SPOT

This common disease can defoliate and discolor hydrangeas in the nursery.

ercospora leaf spot is an infectious disease that affects smooth, panicle, oakleaf and bigleaf types of hydrangea in both landscapes and nurseries. This disease is caused by the fungus *Cercospora hydrangea* and is perhaps the most common disease seen on this ornamental during the months of July through October. The disease rarely kills the plant, but if it is severe, it can reduce overall plant vigor by repeated defoliation. For bigleaf-type hydrangeas in the landscape, Cercospora leaf spot tends to be less severe under shady conditions, but in nursery environments under shady conditions, frequent overhead irrigation can intensify disease activity and subsequent defoliation and loss of vigor.

SOURCE: UNIVERSITY OF ARKANSAS

THE FACTS ABOUT CERCOSPORA LEAF SPOT

SYMPTOMS: Leaf spot symptoms can vary according to the type of hydrangea (panicle, smooth, etc.) that is infected.

In general, leaf spots are first visible on older leaves at the bottom of the plant then spread upward toward the top of the plant. Initial spots are purple and small with a circular shape. As spots enlarge, they often become irregular or angular in shape and develop a tan or gray center surrounded by a purple or brown border. Leaves that are severely spotted often become a yellow-green color.

Initial infection usually occurs during May, but symptoms don't become apparent until later in the season.



Midsummer environmental conditions contribute to disease severity. Rainfall and overhead irrigation are major factors that play a pivotal role in symptom expression and intensity. Late summer rainfall can be a major contributor to defoliation and decline.

The fungus produces numerous spores that are sometimes visible with the unaided eye as minute dark specks within the center of the spot.

MANAGEMENT: Sanitation is an important tool in disease management. Since the fungus can easily survive in infected leaves that fall and remain on the ground or that remain on the bush, removal of these leaves can help prevent future infections and disease outbreaks.

Spotted leaves should be removed any time during the growing season when they are present, especially before new leaves begin to form in the spring. If possible, irrigate plants using drip irrigation, since splashing water from an overhead sprinkler can spread the fungus from leaf to leaf and create an ideal environment for disease activity.



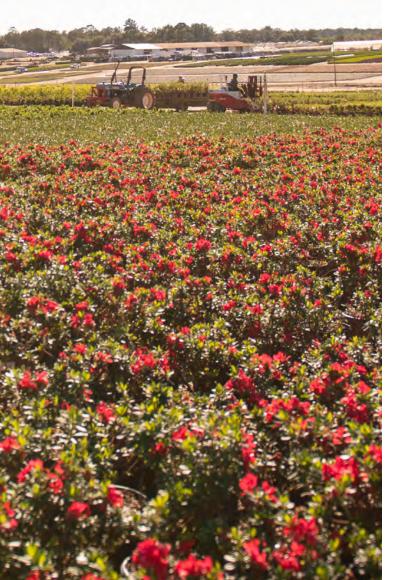
There are some fungicides available to help manage Cercospora leaf spot. Products containing chlorothalonil, myclobutanil or thiophanatemethyl are most effective when applied prior to or at the first sign of leaf spots. These fungicides work best to protect newly developing leaves, but they will not protect new growth that emerges after the application has been made. Consequently, to keep plants relatively free of the disease, multiple applications (usually every 10 to 14 days) may be necessary.

COVER STORY

SEEING I BELIE

Windmill Nursery's transition to regenerative agriculture demonstrates the critical role of leadership and culture in driving growth and success.

STORY BY MIKE ZAWACKI PHOTOS BY VANESSA RIVAS



fter a long, sweltering summer, the atmosphere at Windmill Nursery crackles with excitement and anticipation.

Windmill Nursery is thriving despite a crippling drought, rising inflation and a shaky economy. Its client portfolio of garden centers, rewholesale customers, and landscape contractors across a third of the U.S. seek out the Franklinton, Louisianabased nursery's containergrown shrubs, perennials, trees and ground covers. And demand is intensifying.

Windmill recently transitioned from a conventional to a regenerative pest management practice. Under the guidance and vision of vice president of production Michael Roe, Windmill adopted a soilfirst philosophy focused on nutrition and providing a sound growing medium for its plants.

"The fact that we just went through this major heat wave, lack of rain, the drought, and the plants in our nursery still look good is a testament that these practices work," Roe says. "And we're more profitable than we've ever been. We're turning crops out faster with fewer inputs — and less dollar amounts of inputs to get the plants to the finish line. It's unbelievable."

Windmill Nursery's story is more than just about a successful transition to regenerative agriculture. It is also a testament to the power of strong leadership, a supportive team and company-wide buy-in, even when the path ahead is uncertain and challenging.

An old gameplan

About 10 years ago, at an industry show in Mobile, Alabama, Roe was talking shop with an old boss from his days at Cherrylake, a Central Florida tree farm, lamenting his pest issues, including a battle with spider mites.

"So, he told me to spray kelp," Roe says. "I asked him if he'd lost his mind. So, he wrote down seven books for me to read and told me to call him back when I finished."

COVER STORY

And Roe did just that, ordering those books, many of them tomes from the 1950s and 60s, that took a more holistic than chemical approach to plant health practices. Within a month, he was calling for more reading suggestions, eager to implement what he had learned.

Roe also followed his colleague's advice to spray liquid kelp for spider mite control and was stunned by the results.

"I had some variegated pittosporum in a propagation house that was so bad with mites you'd have thought they were just spider webs," he says. "So, I sprayed them and forgot about them. A week later, my pest control guy called me out. Everything was gone. The eggs were gone. Everything was gone just from that kelp [spray]. I knew we were on to something."

And after 8,000 red tip photinia became infested with Entomophobia leaf spot — a fungus that causes premature leaf drop — days before 3,000 of them were scheduled to be shipped to Virginia, Roe knew that the conventional chemical approach had failed him. Ditching the "traditional" chemical route, he developed a solution focused on better nutritional practices and soil composition.

Inspired and encouraged by his newfound knowledge and passion, Roe began converting Windmill to regenerative practices, prioritizing soil health and using organic over synthetic inputs. Confident he could produce results, Roe progressed from small trials to nursery-wide adoption over the course of the next two years.

"I didn't want to alarm everybody by saying we were going to try something new," Roe says. "So, I kinda started under the radar and just started tinkering with it. When I saw it performing, I announced here's what we were doing and the [goal] we're moving towards. We're going to drop neonics because we don't need them, and we just proved it out. And we don't need glyphosate anymore, either. From there, we moved on to a larger scale [integration]."

And there were initial hesitations, Roe admits. Could he consistently achieve high-quality results with a sustainable approach? Could it be cost-effective?

However, Roe's carefully calculated risk paid off. As a result, Roe describes Windmill's crops as having a truer, more natural color, as opposed to what he describes as the artificial intensity produced by synthetic nitrogen and excess potassium. In addition, he says the plants flush new growth over much more extended periods instead of the initial burst that then waits for the next shot of synthetic nutrients to flush again.

Roe says that from a financial perspective, organics are less expensive than conventional products. Windmill uses 75% less chemical insecticides, miticides and fungicides; 40% less herbicides than it did before nursery-wide adoption of Roe's practices, which he says translates to around a 35% to 40% cost decrease. In addition to monetary savings, Windmill brings to market healthier and more sellable products with fewer undesirable plants. And then there are the intangible benefits, such as the positive impact on bees and other pollinators and creating a safer work environment.

"We still have some problems, and we're not flawless by any stretch," Roe adds. "But we've proven we can get product grown quicker and available [for market] a lot sooner for less money and labor. And the quality has gotten better

 than it ever has been. All of this is a testament that this [process] works."

While Windmill's regenerative program continues to evolve to address new challenges, its foundational principles remain intact. So, what does Roe's process involve?

Roe explains that growing mixes remain relatively simple, consisting primarily of pine bark and blended with supplemental gypsum, lime and softrock phosphate. Windmill's propagation mix is an 85/15 mix of pine bark fines and perlite, respectively, and the nursery mixes its own soil.

Roe still relies on a small amount of Nutricote 18-6-8, a controlled-release homogeneous fertilizer with macronutrients and essential micro-nutrients, to ensure plants grow evenly, and supplements with organic nutritional and microbial foliar sprays from Advancing Eco Agriculture. It's an ongoing process to dial in and tweak nutritional programs for the various plant species Windmill produces.

Plants in propagation receive mycorrhizae to strengthen root systems and improve plant nutrition. Newly potted crops are sprayed with microbes, which are watered in to get them into the soil and promote a solid root mass.

Natural products are always the first line of defense at Windmill for insect mitigation to control the occasional aphid and white fly outbreak. Red-headed flea beetles continue to be a problem that receives attention via plant nutrition. And any conventional pesticide application is accompanied by a nutritional solution to strengthen the fertility program, Roe says.

And despite its location in the steamy south, fungal issues are rarely a problem, which Roe attributes to Windmill's nutritional practices and strong plant health.

Leadership

Windmill Nursery has a rich history. It's family-owned, with five generations leading the company over its 100-plusyear history. President Todd Ellefson, the great-great-grandson of legendary nurseryman and founder John Wight, has been working in some capacity in the family business since he could walk and has been in upper management since 2003. Under his leadership, Windmill has doubled in size and scope thanks to an ambitious growth strategy.

Ellefson subscribes to a macromanagement philosophy, a leadership style that empowers employees to take ownership of their work and make decisions. He provides them with the context and resources to prioritize and execute high-impact work and achieve high-level results.

"You cannot micromanage a nursery, and you have to let the leaders that you put in place make decisions and support those decisions," he says. "It's hard, and change is tough, but if you don't let them have ownership and show you support them, then you're always going to micromanage the business."

"You want your people to feel they have the ability to make the changes that will impact the nursery for the better," he says, adding that it's crucial to encourage risk-taking for the greater good and not just to appease ownership. "It's not about Todd. It's about Windmill Nursery."

This approach fosters one of Windmill's greatest strengths: an open culture encouraging employees to challenge the status quo and seek innovative ways to improve. This top-down support was

inthe stand (L-R) TODD ELLEFSON AND MICHAEL ROE



essential for Roe to take the company in a new agronomic direction.

"I knew how strongly [Michael] believed in what he was proposing for the nursery, and he was willing to take ownership of that decision," Ellefson says. "So, I had to be willing to give him the authority to do what he believed was right first on a trial basis and then full-time. It was as much me supporting him as him supporting me and, together, what we wanted to achieve for the nursery."

Was Roe's process perfect from start to finish? Absolutely not, Ellefson says. New approaches are bound to have hiccups, but this is expected.

"Anytime there's change, in this case eliminating one practice for another, you're going to have some regression as you move forward," Ellefson says. "For us, it was always a question of how do we move forward and continue to buy into this to make our nursery greener?"

Ellefson knew he needed to provide unwavering support, even in the face of setbacks. He recognized he was setting the example for others to follow during the process.

"Certainly, there were times when I just kind of scratched my head and asked [Michael] to sit down and help me understand a little better what he was trying to achieve and how that was going to get us in the direction that we were wanting to go," Ellefson says. "But the big thing in all of this is that the upper management group at the nursery and I have a close enough relationship that we're open with one another about decision-making, where the problems are, and how we need to move forward [to address them]. We talk our way through the problems to better understand the solutions. This has been vital in this process and in achieving all our success."

The culture

The shift to regenerative agriculture could be a tough sell to Windmill's team members, especially the sales staff who were on the front lines with clients and consumers. They would bear the brunt of any product that failed to meet plant quality, health and longevity expectations.

Although admirable, sustainable and environmentally sensitive growing practices only influence a small fraction of consumers.

"It takes a lot to sell this whole idea to the consumer," says Henry Hunter, Windmill's vice president of operations. "People who are plant people, they get it. They understand, and they want this [holistic approach]. But you also have people who just want [to purchase] a clean plant. And that can be a challenge."

The knee-jerk reaction to a change like this is often, "If it's not broken, why fix it?"

"Everybody is on board on paper until there's a problem," Hunter adds.

Early on, Roe encountered complications — bouts of disease or insect infestations — as he perfected his practices. Some team members suggested reverting to conventional methods, and Roe had to resist the pressure.

"It would have been easy to back down and say, 'Okay, you're right, let's go back to the way it was,'" Roe says. "But I wasn't going to back down."

Such a philosophical pivot was bound to be accompanied by a few agricultural



challenges, says Jack Gearing, Windmill's sales manager. While clients understood that Windmill was moving in the right direction, they had questions when they received products that were still being fine-tuned or had quality issues due to disease pressure.

"[Sales] reps would hear [negative feedback] and say, I don't know why we're doing this. Let's just nuke the place, kill all the bugs and get everything right," Gearing says. "But as a management team, we felt [this new approach] was the right thing to do. Michael was passionate about it, and the whole team wanted to keep pushing it forward."

Despite the learning curve and some initial pushback, the proof of concept is evident in Windmill's final product, which consistently gets better and better, Gearing says.

"Over the last four years, the jump in the quality of our product has been significant, and we took an even bigger jump in the last six to eight months," he says. "I recently toured the nursery, and we were still in drought and extreme heat conditions. I expected to see a bunch of stressed-out plants and a lot of death and loss of material. But the plants look like they have spring flush on them. They're healthy and vibrant. They look great."

Windmill's paradigm shift to regenerative agriculture proved that doing things more holistically was not only a responsible pursuit but also profitable. They also learned to navigate risks and overcome obstacles as a company. This newfound resolve enabled them to pursue an aggressive strategic growth plan over the next five to 10 years.

COVER STORY

And whether it was realized at the time, Windmill also required a shift in the company's cultural makeup. In fact, substantial change has taken place over the last seven years. Gearing says many people have come and gone to get the right personnel with the right mindset in the correct positions. An organization can have people who do more harm than good, and it's imperative when building a successful team to have the right people in place who own their jobs. And that philosophy extends from the management team to the guy in the field who is pulling plants, Gearing says.

"It's about getting the right people to work together," Gearing says about growth and success. "You want people who can disagree but not hold it against each other; it doesn't get personal and stays on a business level. We're all working toward the same goal."

As the company's leader, Ellefson allows his team to run things as they

believe they should.

"Todd periodically points us in a direction toward the goal, and then he pretty much gets out of the way and lets everybody do their thing," Hunter says. "And I really doubt that there are many companies of similar size and similar mission that have as much freedom in their departments as we do. We're allowed to exercise a lot of freedom, and that's worked out well [for Windmill]."

For the next five to 10 years, Windmill's goal is to continue its growth trajectory by adding acreage and production, increasing its field reps, bringing on the next generation of managers, and exploring new Northern and Midwest markets for its plant products, which are also expanding.

"When you look at all of this from the growth of Windmill Nursery, we've done the right things and added the necessary pieces to ensure we don't fall behind and only progress forward," Ellefson says. "As a company and as a team, we've done a great job of putting the right people together for success. From me on down to the guy in the field, we've all come together to make this happen."

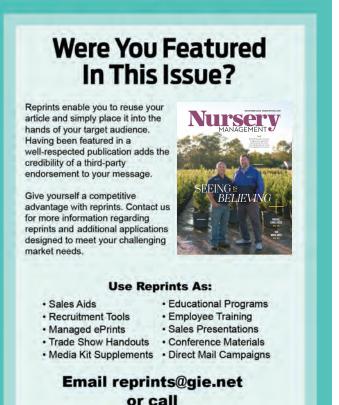
In many ways, Windmill is a new model for the modern nursery.

"Anybody not moving in this direction is doing themselves a disservice," Hunter says. "The world is certainly going that way ... and we've really been ahead of the curve, which will pay off in the end."

"We'll still have roadblocks, and we'll still have issues that we'll have to correct," he adds. "But we're headed in the right direction. And 10 years down the road, we're going to be really, really successful for getting on board with [these practices, changes and improvements] as early as we did. And with Todd's vision, Jack's leadership and Michael's methods, success will continue to be in our future."NM

Mike Zawacki is a Cleveland-based editor and writer with 20 years of experience covering the green industry.

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WOMEN IN HORTICULTURE

Force of Mature

How Carol Reese became the dynamic speaker and freewheeling writer the horticulture world knows and loves.

BY DENISE SCHREIBER

id you ever know someone who worked as a boll weevil sexer? Neither did I until I talked with Carol Reese. More on that part later.

Carol grew up on a dairy farm outside of Starkville, Mississippi. Her mother decided that she wanted to raise her seven kids on a farm, not because they were farmers. Carol's father was an engineer with his own business. He was an excellent businessman, partly credited to her mother's ability to spell and correct his correspondence, while she ran the farm. She did that with great skill, becoming an excellent mechanic along the way, all the while taking art classes at the local university. Carol grew up thinking everyone's mother could paint, sculpt and fix tractors. Her dad was no slouch, developing a formula for making cement out of local limestone and raised enough investment money to build Mississippi's only cement plant.

Carol says she was encouraged by a family "who believed the world was yours if you go for it, and education was foremost." Her artist mother taught her to see "all the shades of green in the trees, and the different shades of blue in a thundercloud, also, how to grow a garden." Carol's maternal grandfather was a country vet but an avid gardener as well and wrote a gardening column for a while. He was a showman and dynamited his garden every spring to break up what he called "his hardpan." His specialty was growing a wider palette of edible plants than the usual southern gardener of that time, including asparagus, boysenberries and sugar snaps along with plenty of fresh peanuts for boiling. Her mammy grew dahlias, poppies and daffodils along with roses and gardenias.



WOMEN IN HORTICULTURE

Education

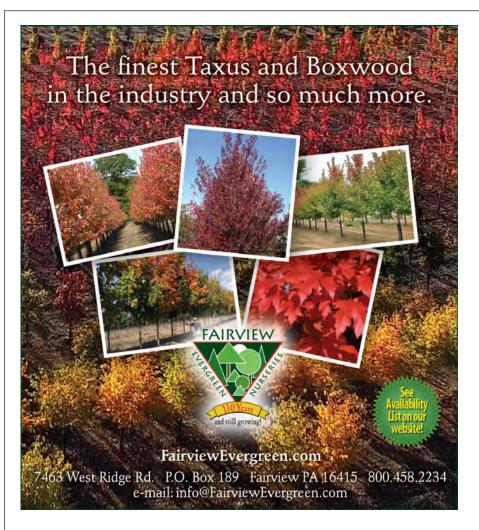
Carol's first stint at college was as a major in English, and she introduced herself as "Ah'm uh Mississippi State Bulldog through and through." That came to an abrupt end when she opted out of a too young marriage and ran off with a rock and roll guitar player to spend the next 11 years "wasting as many brain cells as girl could and still be able to walk upright." She says her parents rescued her from her party girl ways and never gave up on her.

When asked how she came to horticulture she says that it never crossed her mind until she grew tired of being a counselor to other alcoholics after going through three rehabs herself. It was then she remembered the young Carol, that spent her days as a "wild tomboy that rode bareback on her mare, Diamond, exploring the fields and woods." She would collect unusual plants and wild artifacts while out on Diamond to bring home and show her mother. This interest led to her return to Mississippi State in her mid-thirties where she found horticulture. There she found supportive mentors in her plant materials professor, Dr. Lester Estes and department head, Dr. Richard Mullenax. They spotted potential and awarded her teaching assistantships and grants to pursue graduate degrees. Teaching classes about plant materials and design, as well as greenhouse and nursery management gave her confidence in those topics and in speaking to a group. She says that sleepy students didn't pay attention unless she engaged them with humor and entertainment.

Prior to her teaching assistantships, Carol was a boll weevil sexer. Who knew that could be a profession? It required determining the boll weevil's gender so that the males could be sterilized and released to mate, helping to eradicate them. She was good at it, and ended up overseeing a roomful of women sexing boll weevils at the Mississippi State Boll Weevil lab.

Eventually she finished all the courses needed to complete her doctorate, and accepted a job with the University of Tennessee as an extension horticulture specialist at the West Tennessee AgResearch and Education Center, intending to write the dissertation after starting the job. Carol intends to put her 118 acres into a conservation trust that will allow the owners to garden and landscape at will in the few cleared acres around the house, but leaves the rest of the property to the wild things that lived there before she did.





WOMEN IN HORTICULTURE

Unfortunately when she sat down to write the dissertation, she realized the equipment she used to store critical data had malfunctioned. It would take another year of treatments and bud collection to recreate the data. Living in a new state with a new job, she wasn't in a position to repeat the field work. So she shrugged off the doctoral degree.

As to who inspired her besides her parents, she has a laundry list of conservationists and writers, like John Muir, Sue Hubbell, Wendell Berry, Joe Hutto and Jane Goodall to name just a few.

She thanks so many horticultural giants who encouraged and forgave her late start in the horticultural life before she knew a thing, including Tony Avent, Michael Dirr, Dennis Werner, Paul Cappiello, Mark Weathington, Todd Lasseigne, Ozzie Johnson and more.

Writing and speaking

As an extension horticulture specialist, she did a lot of teaching and writing. She wrote a weekly gardening column for the Jackson Sun for about 20 years, and became a popular speaker, noted for humor.

"Carol is an engaging and dynamic public speaker and garden writer," says Dennis Werner, J.C. Raulston Distinguished Professor Emeritus at North Carolina State University, and a plant breeder with more than 25 cultivars patented and released. "Her presentations and articles convey her passion for gardening, and demonstrate her broad knowledge of horticulture based on a lifetime of personal gardening experience. Carol is effective at challenging the audience and reader to question long-standing gardening dogmas, especially the pervasive misinformation in the gardening press regarding the use of native and non-native plants in managed landscapes. On a personal level, Carol is a kind and gracious person who respects all creatures great and small, with a particular love for dogs."

Another testament to her speaking prowess comes from a legend in the horticulture world. Horticulturist, plant breeder, author and frequent *Nursery Management* contributor Michael Dirr enjoys Carol's talks.

"Carol Reese hits the podium running, words streaming like fireworks, with

staccato delivery," he says. "She has the

staccato delivery," he says. "She has the ability to relate to any audience for she lives/breathes/enjoys/practices the art and science of gardening. Truth-telling, rather than hyperbole, with a healthy infusion of southern humor is the hallmark of a Carol Reese lecture. Sit back, hold onto the chair, and enjoy the ride as only Carol can deliver."

Her latest speaking passion is fighting what Carol calls the native plant purist movement because she believes it is "dangerous and ill informed." She calls her latest talk "Native Plants: Facts, Fallacies and Foibles." She provides evidence that plants have been moved around by the birds and beasts for millennia, and the only constant in planetary time is change.

Carol lives on 118 acres of "wildness" as she calls it, not far from Jackson, Tennessee, with a pack of 17 rescue dogs and cats where they can roam to their hearts content. She says these once homeless dogs might be the more expensive habit of her other major expenditure, collecting lots of plants. A recent obsession is ordering oddball things to grow from seed, and experimenting with different seed sources. Propagation from cuttings is a passion as well as edible plants. The result is an eclectic orchard of blueberries, blackberries, jujube, serviceberry, goumi, cornelian cherry and Asian persimmon, plus heirloom apples and pears, plus a large vegetable garden.

If you find yourself in the Jackson area with some kind of wonky cool plant, she says she will do her best to give it a good home.

"Carol is one of a kind," says plantsman, horticulturist and garden writer Daniel Hinkley. "Knowledgeable, powerful, articulate and funny. She's the right combination needed to make a difference in our horticultural community." NM

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Questions with GIL DEL ROSARIO

Corteva Agriscience Turf & Ornamental Strategic Accounts leader provides tips for program and insecticide resistance management.

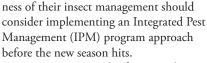
Insect flare-ups are still happening this time of year. What insect pressures are there currently and what pressures are still growing?

Some key infestations, such as whiteflies and thrips, are happening in November, December and January in certain areas of the United States. In Florida, *Thrips parvispinus*, or pepper thrips, is a damaging species. Originally detected in 2020, this invasive species has been found in greenhouses, nurseries and retail stores and has begun to harm a wide range of plants, including those in residential landscapes. As sap-sucking insects, thrips can restrict plant growth, cause damage and make the plant unsellable. Plus, thrips can transmit viruses that kill the host plants.

XXpire[®] and Conserve[®] SC insecticides from Corteva Agriscience Turf & Ornamental have been found to effectively control this thrips species.

As a grower, what should I consider regarding insect management?

Growers looking to increase the effective-



A program approach of insecticides that includes different modes of action effective on the target pest enables growers to treat infestations and reduce the risk of insecticide resistance. By planning and purchasing the appropriate products now, growers will have the tools and strategy without delay to face urgent infestations during the busier times of the year.

When planning an insecticide program, what are some tips to help avoid resistance?

Avoiding resistance should be the goal of every insecticide program. Developing an insecticide rotation that uses IRAC numbers to plan different modes of action can help minimize resistance risk.

It is imperative to frequently scout and monitor with sticky traps to identify pests and population pressure. Plan to target the most susceptible growth stages



of an insect and follow labeled application rates and spray intervals to ensure optimal efficacy. This reduces the potential of individual insects surviving and developing resistance.

In outdoor settings, weed management in the perimeter areas is good practice, because insects may inhabit perimeter weeds and move in after treatment. Controlling perimeter pest pressures also can help reduce the potential for resistance.

Why is XXpire[®] insecticide an effective option for insecticide programs?

XXpire[®] insecticide fits well into a rotation because it combines two active ingredients — sulfoxaflor and spinetoram — to control more than 39 insects, including seven of the top 10 chewing and sap-feeding insects. With two modes of action, XXpire reduces the likelihood of resistance as well as controlling a broad range of insect pests.

XXpire has shown no signs of phytotoxic risk to more than 300 plants and can be used as the final treatment before shipping because it doesn't leave a residue. Visit corteva.us/asktheexpert to learn more.

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Left: Treated with XXpire[®] insecticide Right: Untreated



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Questions with FRÉDÉRIC GAGNON

Frédéric Gagnon, Lambert Peat Moss agronomist, explains how to determine the best growing media mix and addresses sustainability questions.

How can growers determine what type of substrate mix they should use?

There are lots of factors to consider when it's time to select the best available mix. The more information the grower can share with us, the better the fit will be.

Firstly, it depends on the crop, the container or tray used and its size. Those are some of the first questions we ask. But also, the location and the season of the year are important details. Even the irrigation system that will be used can affect the type of mix that should be used.

Lambert has a very useful and userfriendly tool on its website that can help growers select the mix that would be right for them. You can pick the category you want, for example, the professional mix, then you have options like the type of crop and other characteristics. It's a really practical tool to help find out which mix is right for you. You begin with let's say 12 options, but once you select a couple characteristics, you end up with two or three options. It helps narrow down the list of options to make sure that it is suitable for you.

Why should growers consider using a mix with sphagnum peat moss? What are the advantages?

It's mainly because of the value and quality it adds to peat moss mixes. It's still the best option on the market. One of the main qualities is water holding capacity. Depending on the grade, the peat moss can retain more than 10 times its weight in moisture. Then it releases slowly as the plant needs it.

Also, the screening system allows you to achieve the physical characteristics that are right for the crop and the growing stage of that crop. This will give you the perfect ratio of water retention and air space.

Another important quality of the sphagnum peat moss is its high cation exchange capacity, commonly called C.E.C. Because of the numerous exchange sites of peat moss fibers, it retains lots of positively charged cations, so it reduces leaching of nutrients. You then save money on fertilizer. That characteristic makes the E.C. easier to manage compared to other materials. Also a good point for the peat moss mixes is that they are virtually free of plant pathogens and free of weed seeds.

What are the benefits of using a mix with wood fiber, like EcoPeat Plus?

EcoPeat Plus is a unique product, exclusive to Lambert. It's a highly fibrous natural wood fiber, harvested from our peat bogs and specially processed in our facilities. It is a very stable component so it will not shrink once in the container of growing media for long-term nursery crops. Also because of its stability, it will also not tie up the nitrogen.

It can be used as aggregate to improve the structure of your own specific

blends. It can be used as a perlite replacement, giving some cost savings to the customer. We also have a full range of ready-to-use substrates. The EPM line (using EcoPeat Plus) has been adopted by many of our customers. It's now one of our best sellers.

How does Lambert practice sustainable peatland management?

There are some misconceptions about peat moss harvesting. Less than 0.02% of Canadian bogs are utilized for horticultural purposes. The remaining 99.98% are still at a natural stage and still growing peat moss. The accumulation of peat moss exceeds by far the volume harvested every year. In Canada, we have about 120 million hectares of peat bogs. So we are harvesting not even a half-inch a year on 0.02% of the area and all the remaining hectares of peatland continue to grow.

That being said, Lambert has a Veriflora certification for taking part in SCS' Responsibly Managed Peatlands Program. As soon as a section of bog gets older, the harvesting stops. The bog is brought back to its natural stage by reintroduction of native plant species. The objective is to re-establish the ecosystem. Then, the peat accumulation can begin again.

FOR MORE: www.lambertpeatmoss.com







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Questions with JUSTIN BARTLETT

Legacy Labor's co-CEO and director of sales and marketing explains how outsourcing your H-2A can help you focus on other parts of your business.

What parts of the H-2A process does Legacy Labor handle for clients?

We handle everything from recruitment to filing for job orders, visas, transportation from consulate to work site. Once the workers arrive, they're on our payroll, so we handle the payroll, workers' compensation insurance, in some cases we handle housing as well. If growers already have housing, we just utilize theirs and charge them a different rate that accounts for that. We provide vehicles and drivers for transportation on site.

We basically find out the needs that the growers have, make sure that we can meet those needs and if it's a good fit for us and that we can do a good job. But then after that point, we sign contracts for a number of workers, job duties or crop they're working with, start and end dates, whether housing is needed or not. Next, we recruit, we source the workers, we manage the hiring, firing, disciplinary actions – management of the workers is on us. We assign workforce coordinators to manage the crews and the account once the contracts are signed.

What's the difference between working with a contractor like Legacy Labor, or using an agent for the H-2A process?

An agent might recruit workers, do paperwork, get appointments at the consulate, may handle transportation from consulate to the work site. But at that point, they're your workers. All of the compliance and exposure is on you. Payroll, insurance, vehicles for transportation, that all falls on the grower. And if the DOL shows up, they're the one at risk of getting CMPs (civil money penalties) or fines.

The difference between an agent and a farm labor contractor like us is that we not only handle all that piece of it, but when the workers show up, they're our workers. They're our direct employees. They're on our payroll, our insurance. If DOL shows up, any potential fines are on us and not the grower. We handle the management of the workers: hiring, firing, disciplinary, all that falls on us. That's the biggest difference between an agent and us.

How does the reporting system work?

We have a digital time-keeping system and kiosks we set up on site for fixed sites. We can also do mobile phones or tablets. All of our crew leaders have that and they punch in and punch out using our system. That's real-time information for us. We send a detailed report with our invoice. We send one invoice a week for payroll. All the grower has to worry about is paying that bill once a week. It alleviates the need for in-house staff to manage that.

How much lead time do you require to get started with a new company?

I like to say 120 days, four months prior to the first start date for year one. That's so we can work with the customer getting housing licensed, approved and set up. But usually I'm having conversations six months before the need, trying to determine if we'll be a good fit. Currently, we are in 14 states in the U.S. The only limitation right now is California. We're working to get licensed there, but it's a lengthy process and there are delays on issuing licenses in that state right now for farm labor contractors. Any other state, we could work there in the next couple of weeks if we're not already there.

Why should a grower consider hiring Legacy Labor to handle its H-2A process?

We may not be the biggest out there, but you will not find another farm labor contractor out there who cares more about compliance. With the state of the industry and how rules and regulations are changing, that matters more now than ever. We're proactive about rule changes and how they affect us. We pride ourselves on being 100% compliant, taking good care of our workers and doing what we say we're going to do.

We care about developing a long-term relationship with growers. We want to find long-term solutions, not just a quick Band-Aid this year to help with their labor needs.

A lot of our growers are adding workers this year because their businesses are thriving. They're thriving because they have a reliable workforce. That means a lot to us, that their business is growing because they can now focus on their business. They don't have to spend most of their day just making sure people show up to work. That's what gets us excited to do what we do every day.

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Questions with SAM DRAHN

Sam Drahn, technical manager with OHP, explains the major factors affecting weed control strategies in the nursery.

How should growers approach their herbicide selection?

Any successful herbicide program starts with identifying the most problematic weeds at the time of year, which crop(s) are to be treated and selecting an herbicide which is both safe and effective.

What are the keys to controlling weeds without increasing resistance?

Rotation of herbicides between different herbicide group numbers is key to minimizing resistance. Switching between products in different herbicide groups helps ensure herbicides remain effective tools for the grower.

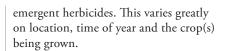
How can growers establish a rotational strategy for weed control?

Growers should become familiar with the different herbicide options that exist

for the different crops they are growing. There are a lot of good pre-emergent herbicides on the market. Switching between products in different herbicide groups, at different times of the year helps target specific weeds and limits repeated use of an individual class of chemicals which creates tolerance.

How are granular pre-emergent herbicides products typically applied, and how often?

Granular pre-emergent herbicides are applied in many different ways. The most common application techniques include spreaders and some more mechanized systems. The key is getting the product to the soil level before the weed seeds germinate. Longevity varies by product, weather and climatic conditions. I recommend treating crops every 2-3 months with most granular pre-



What are the advantages of using a product delivered on the Verge granule?

Biathlon, Fortress and Fuerte are all produced on the Verge granule. The advantages of the Verge granule include:

- Minimal dust
- Free flowing
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- Low odor

Do you have a solution for glyphosate-free operations? How does it work?

Glyphosate is a very good post emergent herbicide. Operations who choose not to use glyphosate have many other post emergent options to consider. Weed species, stage of growth to be controlled, area to be treated, desired speed of burn, and many other factors should be considered when deciding the best options for controlling weeds with post emergent products. OHP's Fireworxx is an OMRI listed blend of fatty acids which provides exceptional post emergent, contact control of many different types of weeds. Fireworxx produces extremely fast results and is labeled for nursery and greenhouse use. Hand weeding and other mechanical types of systems are also part of any successful weed management program.

FOR MORE: www.ohp.com



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ASK THE EXPERTS: PERENNIALS



Questions with HANS HANSEN

Walters Gardens' Director of New Plant Development explains what growers should look for in hosta.

Hosta have been one of the most popular perennials historically – what do you think are some of the reasons for their enduring popularity?

Several factors have led to the Hosta's rise to popularity since the 1970-80s. They are one of the few perennials that look great from the time they emerge in the spring until they go dormant in the fall. They are also hardy in much of the United States. They are great shade plants for folks that have homes in wooded lots or have mature trees. They propagate well and are affordable. They have a diverse range of variegation making them collectable and lend themselves to many landscape opportunities.

Is there any particular characteristic or type of Hosta that you see gardeners latching onto?

The larger hosta types seem to be the most popular, with blue and variegated forms outselling gold and green varieties.





What are some of the goals of the Hosta program at Walters Gardens? What improvements are you working on?

I believe in the 10-foot hosta rule – a hosta should be easily identified without a label at ten feet away. Distinction and hostas that stand out and stand the test of time is my goal. Hallmarks of my breeding program include blues that hold their color all season, rippled leaf margins, slug resistance and variegation. Out of 1000s of hand pollinated crosses each year only about 1 out of 1000 make the cut. Vigor and ease of propagation in production are also very important.

When making Hosta selection, are there any characteristics growers should look for?

I would recommend a nice selection of variegation patterns, sizes and forms to give the retailers a nice palette to choose from. Narrow foliaged varieties like 'Silly String' and 'Party Streamers' complement the heart-shaped leaf forms like 'Diamond Lake' Any selection from the Proven Winners[®] Program, especially the Proven Winners[®] Hosta of the Year are popular with growers and gardeners.

What is an essential piece of information for growers looking quickly bulk and have nice looking plants for retail?

Hostas give back what you put into them. They love moist well drained soil, plenty of water and light shade. One of my early mentors said "don't plant a \$30 hosta in a 30-cent hole. Add compost and make sure the garden is amended for the plant." Also, if the shade in your garden is so dense you can't grow grass, you won't grow great hostas. Hostas tolerate shade – but do need light to grow. The medio variegated types especially thrive with morning sun (eastern exposure) or high shade. These tips translate into nursery production as well.





SHADOWLAND[®] 'Love Story' Hosta^{PP34224 CPBRAF}

A large variety of long heart-shaped leaves with green margins and chartreuse jetting that bleeds into cream centers. Leaves are of thick substance and show good slug resistance. Zones 3-9.

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REPAIR, REPLACE [OR NOT] FOR MAXIMUM TAX SAVINGS

he tax write-offs for repairs, improvements or adapting property or equipment to another use have long been an issue with the IRS. The tax rules are pretty cut and dried when it comes to expenditures for repairs, replacements, improvements or routine maintenance. It is the actual definition of each activity that causes the problem in most cases.

The tax rules allow a wholesale nursery business to deduct all the "ordinary and necessary" expenses incurred during the year, including the cost of repairs, maintenance, supplies and the like. Another tax rule requires the costs of acquiring, producing and improving equipment or other property, regardless of the amount of the cost, be capitalized - and written off only over a period of years.

Defining the difference

In the past, unless the property or equipment was old, the answer to the question of whether to repair

repair. Today, technological and functional obsolescence can occur within 10 years or less and the question grew more complicated for every grower. When the IRS began labeling many repairs as improvements deductible only over several tax years and accelerated depreciation write-offs entered the picture, the answer became more difficult.

The IRS's usual definition of a repair is an expenditure that keeps the property in normal operating condition. A capital improvement, on the other hand, is defined as an expense that either extends the useful life of the property and allows it to perform a new function.

When attempting to figure the difference between immediately deductible repairs and those improvements that should be written-off over a number of years, the general rule of thumb is: an improvement is work that prolongs the life of the equipment or property, enhances its use or adapts it to a different use.



Write-offs are available for repairs, replacements and routine maintenance. Make sure you understand the definition of each before deciding which route to pursue on tax returns.

BY MARK E. BATTERSBY

A repair on the other hand, merely keeps that property or equipment in efficient operating condition. But then, there is routine maintenance.

Routine maintenance

Expenditures for regularly scheduled, routine maintenance on property or equipment, including inspection, cleaning, testing, replacement of parts and other recurring activities performed to keep that property or equipment in its ordinary efficient operating condition don't, according to the rules, must be be capitalized.

Of course, while routine maintenance can be performed any time during the property or equipment's useful life, there must be a reasonable expectation when the property is first placed in service that the maintenance activities will be performed one or more times during its useful life. Failure to actually perform the maintenance more than once is not fatal - provided the grower can substantiate that its expectation was reasonable when the property or equipment was first placed in service.

Factors to consider when determining the wholesale greenhouse's expectation was reasonable include the recurring nature of the activity, practices within the industry, the manufacturer's recommendations and the operation's own experience with similar or identical property or equipment.

Belaboring the obvious

Quite simply, a wholesale greenhouse can take tax deductions for certain expenses in the same year they are made by labeling them a "current expenses." For other expenses, those so-called "capital expenses," the business must break up the deduction and take a portion of the total cost over a number of years.

A capital improvement is a perma-

nent structural alteration or repair to equipment or property that substantially improves it, thereby increasing its overall value. This can involve updating the property or equipment to suit new needs or extending its life. But, again, basic maintenance and repairs are not considered capital improvements.

A repair is essentially maintenance that brings the property or equipment back to working condition but doesn't improve its condition beyaond the quality or usefulness that existed before the work was done. Just to confuse things, it should be noted that, according to the IRS, while painting is usually not considered a capital improvement, it must be capitalized if it is part of a large-scale improvement plan.

Fortunately, the tax rules contain a relatively new de minimis safe harbor for expenditures that would ordinarily have to be capitalized. Instead of capitalizing and depreciating many of those expenditures, taking advantage of bonus depreciation or the Section 179 election to expense, many otherwise costs ordinarily capitalized, can simply be expensed thanks to any one of the tax law's socalled "safe harbors."

Safe harbors

The tax regulations allow purchases of either materials or supplies for use in the wholesale nursery that cost less than \$200 to be treated as currently tax deductible. The deduction for materials and supplies is available in the tax year when the item is used or consumed so long as it has a useful economic life of less than 12 months.

Also, in the tax rules is a unique 'safe harbor" for amounts paid to acquire or produce tangible property. The so-called "de minimis safe harbor" is available to wholesale nurseries that do not have an "Applicable Financial Statement" allowing them to immediately expense expenditures or less than \$2,500 per invoice.

For those operations that do have an "Applicable Financial Statement" (generally an audited financial statement), the threshold is increased to \$5,000 per invoice – regardless of whether the expenditure meets the definition of a capitalizable expense or not. Best of all, the de

MANY SMALL BUSINESSES CAN ELECT TO DEDUCT THE COST OF WHAT WOULD OTHERWISE BE CAPITAL **IMPROVEMENTS AS EXPENSES.**

minimis safe harbor is available without the necessity of changing the operation's accounting methods.

Not strictly a safe harbor, the tax rules allow amounts paid for routine and recurring maintenance to keep property in working condition to be treated as repair costs. In order to use the "Routine Maintenance Safe Harbor," the wholesale greenhouse should segregate amounts paid for real estate and other property. If the expenditure is paid to maintain real estate, the amount can be expensed so long as it is expected the repair will occur more than once during a ten-year period. If the amount is paid to maintain other property, the amount can be expensed so long as it is expected to occur more than once during the property's useful life.

When an immediate write-off won't help

Immediate write-offs, whether labeled as repairs, maintenance or accelerated depreciation, are not of much use to any business without taxable profits from which to deduct them. After all, very few growers will actually benefit from more losses.

Many small businesses can elect to deduct the cost of what would otherwise be capital improvements as expenses. That's right, the operation is not required to capitalize as an improvement, and therefore may be permitted to deduct the cost of work, such as repairs, maintenance, improvements or similar costs, performed under the safe harbor for small taxpayers.

By expensing an expenditure, the operation ends up paying less tax because expenses are reported immediately (in the tax year when purchased). Capitalizing has the opposite effect on the tax bill.

To qualify, the business must have had less than \$10 million in average annual gross receipts for the three preceding tax years. To be eligible for the safe harbor, the total amount of repairs, maintenance and improvements for the year cannot exceed the lesser of \$10,000 or 2% of the property's unadjusted basis. If the total amount paid exceeds the safe harbor threshold, the safe harbor does not apply to any amounts during the tax year.

Follow the accountant

The tax rules allow a wholesale nursery to follow the financial accounting policies when it comes to choosing to capitalize repair and maintenance expenses as improvements – so long as they are treated as such for accounting purposes. The grower can choose to treat repair and maintenance costs paid during the tax year as amounts paid to improve property if:

- Those amounts were paid in carrying on a trade or business, and
- The amounts are treated as capital expenditures on the operation's books and records
- The election to capitalize is made for each taxable year in which qualifying amounts of repair and maintenance costs are a factor on the tax return.

Once again, this annual election is not a change in the method of accounting.

To capitalize or not

Capitalizing means treating the cost under the belief that benefits will be derived over the long run, whereas expensing a cost implies the benefits are short-lived. Whether an item is capitalized or expensed usually comes down to its useful life, i.e., the estimated amount of time that benefit is anticipated to be received. And, who better to estimate than the grower?

It is the wholesale nursery owner or manager that has the discretion of determining if expenditures should be capitalized and depreciated over time or whether the cost should be fully expensed and deducted in the current tax year.

Keeping in mind that some costs cannot be capitalized, such as maintenance plans and warranties, software licenses, training costs, operating supplies and consumables. The decision to deduct or capitalize requires professional help. NM

Mark Battersby is a financial writer and resides in Ardmore, Pennsylvania.

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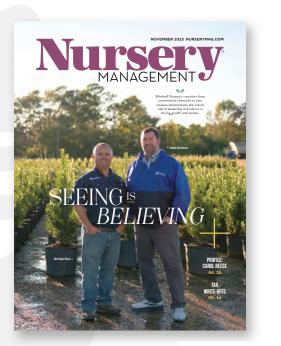
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JESSICA JANES

As a plant breeder at Star Roses and Plants, Jessica Janes blends science and creativity to breed the next perennials and woody ornamentals while anticipating future trends.

NM: How did you get started in horticulture?

JJ: Growing up I knew nothing about plants other than I liked them, and I liked spending time in nature with them. My curiosity led me to pursue a degree in horticulture. When I started, I couldn't have even told you a petunia from a begonia (laughs). I've learned so much since then, and horticulture has really offered, for me, the perfect blend between science and creativity.

I started as an intern at Star Roses and Plants, my senior year of college at the University of Delaware. My goal initially was to learn about propagation, but as I worked in the R&D department, I found I had a natural affinity for plant breeding and continued as a full-time employee after my internship. I had other working opportunities along the way, but I've always felt a calling to help preserve and sustain new life. There's nothing else I'd rather do. To work as a plant breeder for one of the best companies in the world, I feel very blessed that life has brought me here.



NM: What do you do as a plant breeder at Star Roses and Plants?

JJ: I help develop new plants for the company. I have about 20 different genera that I work on, and it spans across perennials and woodies. The crops rotate seasonally, so every season I'm working on a different genus in our greenhouses. No two days are the same (laughs), which makes it interesting. Some days I'm in the greenhouse breeding, other days I'm out in the field or in the lab. I'm always learning new things. Of course, being in horticulture, we have to keep up with trends. That's difficult with plants because it takes such a long time to breed them, so we have to anticipate future trends.

NM: What is your favorite part of your job?

J: Doing the cross pollinations, emasculating and pollinating. Then coming back and collecting that seed is very exciting. Then growing that up, screening it and selecting from the project you created. I love the creative part of plant breeding, and that's what art is, creating something that doesn't exist yet. Plant breeding is plant art, basically. Your medium is plants, and you use your knowledge of them to create something new.

NM: Can you elaborate on the importance of plant breeding for the hort industry?

JJ: It's a great way to create more sustainable plants for the end user, plants that are going to live and thrive better in the environment they live in, with less inputs — less water, less fertilizer and things like that.



NM: What is your favorite plant that you've bred?

J: My favorite plant is *Caryopteris* 'Gold Crest'. It's very underused, but it surprises me every time with just how beautiful it is. It grows into this perfect, low-mounding, gold shrub. It's the perfect size; requires no trims. Whatever you've got going on in your landscape, it just makes it pop. It's really a beautiful plant. It has gold foliage and the blue flower in the fall which is a nice surprise at the end. I have to give credit to Greg Soles who has passed. He was one of our product managers at the time. He saw the potential of this plant, and he didn't let it go. To his credit, this was introduced.

NM: When you're not working, what are some of your hobbies?

II: I have an innate desire to create beautiful things, and I'm inspired by the natural beauty of nature. I paint, draw and do ceramics. I like hiking in the White Mountains of New Hampshire. I also have an obsession with pumpkins, and there's so many different varieties. I love them all. Naturally, I paint and carve elaborate designs on them during the fall season. The only thing I don't like to do with pumpkins is eat them (laughs). Prior to having children, I raised chinchillas for about 10 years, but now I spend my time raising my two boys. We play a lot of Super Mario, and they like to paint pumpkins with me, too. NM

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