

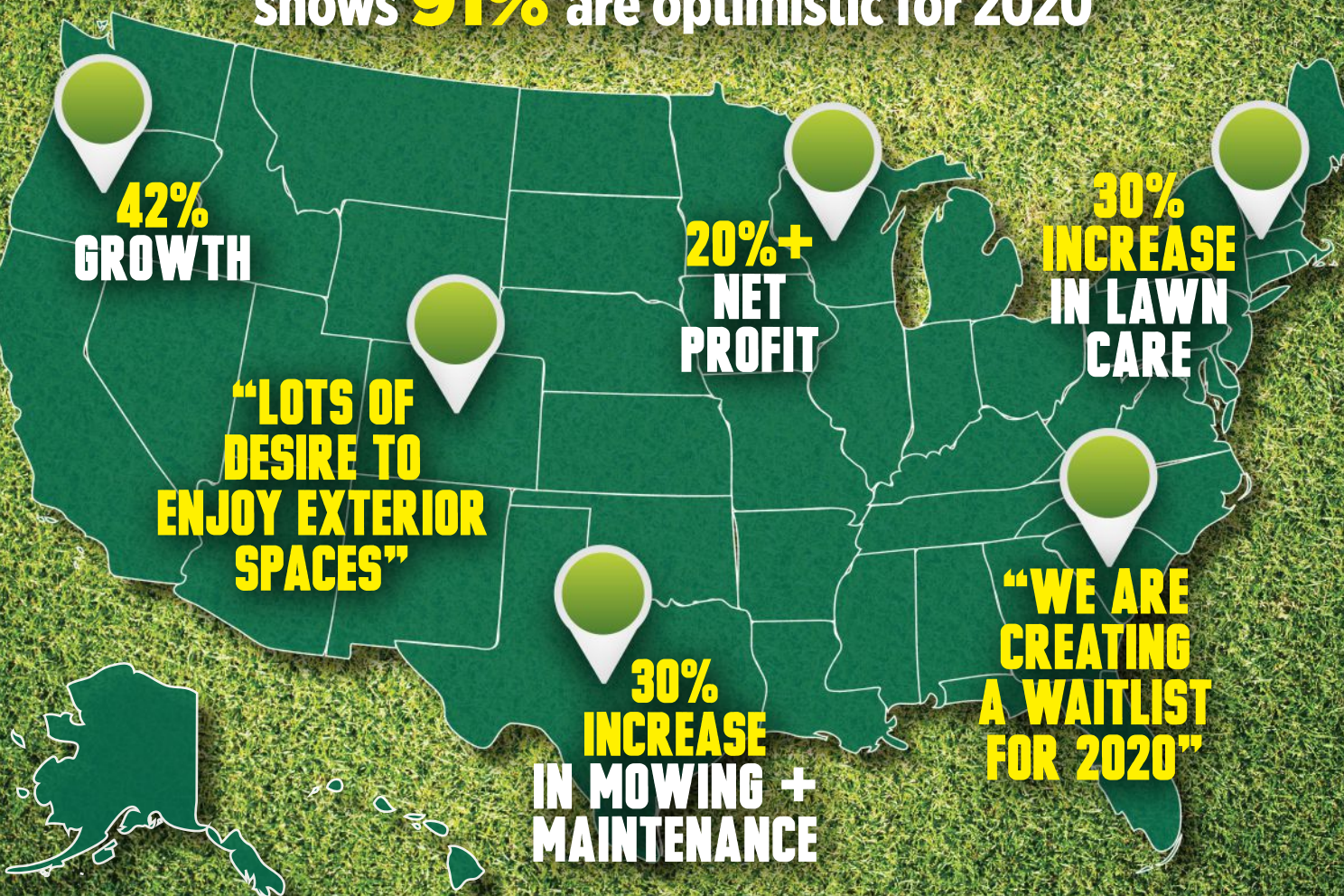


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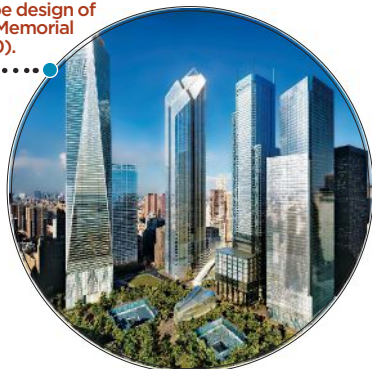
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APP PICK: INVOICE2GO

Do you ever wish you could create invoices on the fly? Now you can with Invoice2go, a mobile and web app designed as a simple invoicing, expense-tracking and reporting tool for micro and small business owners. It can also be used to help landscape professionals send estimates. The application is cloud based and sold by subscription, based on the quantity of invoices, clients and account managers. It's available for Android and iOS devices.



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Maybe it's the mirror

It's been a hectic few weeks for the Joneses, as we recently moved. After 10 years of living in a small town of 6,000, we up and moved the family to the country. To give you an idea of what I mean when I say "country," a neighbor literally rode his horse from the prairieland across the road into my driveway to introduce himself and welcome me to "the neighborhood."

It was surreal speaking to someone up so high on his horse (and now I know where the saying comes from) but also very cool. And good news: everyone is so nice out here. The neighbor invited me to bring our two kids over to see his horses whenever convenient. We have quickly adapted to the quiet of the country ... even the lack of cellphone reception.

But I do think the move, and 2019 in general, aged me. I recently spent time working on the yard — raking leaves, picking up branches, burning the pile — and I sat there on the tailgate of the truck and smoked a cigar while I watched it burn. I came inside, smelling terrible, and looked in the mirror. I was shocked at how old I looked. I complained out loud, and my wife said the sweetest thing: "Maybe it's the mirror."

I can promise you it is not the mirror. But it is the end of 2019, and it's a good time to reflect on the year that was.

We had a lot of to celebrate at *Landscape Management* this year. On the personal level, we welcomed a new addition to the family (Senior Editor Abby Hart and her husband, Chris, welcomed baby Leo in August), and

“Sometimes it's hard to step back and appreciate everything that is happening around you when you're still so heavily involved in the day-to-day process of getting the job done.”

two staffers, Jake Goodman and Clara McHugh (née Richter) married Katie and Joe, respectively. We welcomed a new digital content producer, Tyler Gunter, to the team in June and added Christina Herrick, a talented new editor, to the magazine in September.

Beyond the exciting developments with the staff, on the professional level, the magazine had a successful year, thanks to our loyal readers and advertising partners. As each issue was produced, there were victories for the team. For example, this issue includes the Industry Pulse report, sponsored by the Propane Education & Research Council (PERC), as well as the Battery-Powered Equipment Guide — two sections that we can hold in our hands and look at with a sense of pride. And there are also things we can't hold in our hands but still look at with a sense of pride — like our weekly e-newsletter, *LMDirect!*, and the many videos we produce for our website.

Creating all of this content takes time, and I thank my team for their hard work to make *Landscape Management* the brand that it is.

We also hosted the eighth annual *LM Growth Summit (LMGrowthSummit.com)* in November, taking us out of our normal roles of making a valuable magazine and instead making a valuable meeting. And the team traveled the country in 2019, covering myriad industry events. The events were diverse in size and scope, but the commonality was that each event included passionate people eager to share knowledge and advance themselves and the industry. I took something valuable away from every meeting I attended, and I'm sure the team did as well.

Sometimes it's hard to step back and appreciate everything that is happening around you when you're still so heavily involved in the day-to-day process of getting the job done. The end of the year allows us a moment to pause and appreciate not only the good work that we did, but also the amount of work that we did. I hope you can also take a moment and appreciate the year that was before looking to 2020 and the challenges that lie ahead.

Reflecting on 2019, it was a great year ... even if the reflection in the mirror didn't look so great. And one goal for 2020 is an easy one — cutting out those cigars. 🍷



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EDITORIAL ADVISORY BOARD



MORE ONLINE

See more great advice and complete answers from our Editorial Advisory Board in the online version of this feature at LandscapeManagement.net.

What's your prediction for the state of the landscape industry in 2020 — better or worse than 2019?

"I think 2020 is going to be another blockbuster year; the economy is on fire! Our growth as a nation will only be limited by our ability to find workers to get the job done."



Landscape Professionals

Richard Bare
Arbor-Nomics Turf
Norcross, Ga.

Troy Clogg
Troy Clogg Landscape Associates
Wixom, Mich.

Paul Fraynd
Sun Valley Landscaping
Omaha, Neb.

Luke Henry
ProScape Lawn & Landscaping Services
Marion, Ohio

Chris Joyce
Joyce Landscaping
Cape Cod, Mass.

Aaron Katerberg
Grapids Irrigation
Grand Rapids, Mich.

Jerry McKay
McKay Landscape Lighting
Omaha, Neb.

Bryan Stolz
Winterberry Landscape & Garden Center
Southington, Conn.

Greg Winchel
Winchel Irrigation
Grandville, Mich.

Industry Consultants

Dan Gordon
TurfBooks
Newton, N.J.

Marty Grunder
The Grow Group
Dayton, Ohio

Phil Harwood
Grow the Bench
Grand Rapids, Mich.

Kevin Kehoe
3PG Consulting
Laguna, Calif.

Jeffrey Scott
Jeffrey Scott Consulting
Trumbull, Conn.



"The landscape industry will continue to grow behind the momentum of 2019 and be better for it! A focus on recurring services will help shield companies from any potential dip in the economy."



"I am optimistic for continued growth, but regardless of the economy, the companies that focus on value-based selling, efficient operations, positive culture and team member training and development will continue to win."

"Landscape industry demands will continue to increase as the steady housing market continues. The one factor that may keep landscape industry growth flat or slow will be the lack of a workforce."



"Smart owners are prepared for the worst and hope for the best. One thing you never regret investing in is training your people. The shortage of quality people will not go away. The companies that have the best people will win no matter what the economy does."



"The economy may soften in the late part of the election cycle. That's OK because we need that to loosen unemployment. The best companies take advantage when there's a dip by buying companies, and finding leads and great employees."



OUR MISSION: *Landscape Management* shares a comprehensive mix of content designed to stimulate growth and take our readers to their next level.



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LM GALLERY

Check out a few of the places where the **LM** team made its rounds recently

1 Giving the lowdown Despite the chilly, rainy day, Ron Morgan, territory manager at Kioti Tractor, provides information on the new developments within Kioti's tractor lineup during the Kioti Ride & Drive dealer event near Raleigh, N.C., on Nov. 12.

2 Gobble, gobble! At Summit Landscape and Design, Hondo, Texas, the company president, Josiah Peterson (left), gets the help of a feathered friend to hand out turkeys to his employees in honor of the Thanksgiving holiday.

3 They call it puppy love *LM* Editor Christina Herrick got her puppy fix during Lucky's Mutt Madness adoption event. TurfMutt Foundation partnered with the Kentucky Humane Society to find homes for dogs and puppies alike during GIE+EXPO.

4 Coast to coast *Landscape Management* Publisher Bill Roddy (left) had to be quick on his feet to catch this photo with Bayer Environmental Science Senior Regulatory Affairs Consultant Frank Wong, Ph.D. Wong was at NALP's Landscapes 2019 for all of six hours ... then it was off to San Diego for Pest World 2019.

5 Virtual reality Dan Hannan, *LM* eastern regional sales manager, tries out the virtual reality vision system by Mean Green and Kobi for Mean Green's new 74-inch Evo autonomous mower during GIE+EXPO.

6 Cover model At GIE+ EXPO, *LM* Editor-in-Chief Seth Jones (right) ran into the model for our August 2019 "Start Your Engines" cover, Josh Willis of Greenscapes Land Care, Worton, Md.



PHOTOS: SARAH WEBB (1); SUMMIT LANDSCAPE DESIGN (2); LM STAFF (3); SETH JONES (4); CHRISTINA HERRICK (5); BRIAN BOHANNON (6)

QUALI-PRO

COMBINATION CHEMISTRY: QUALI-PRO'S NEGATE AND FAHRENHEIT BROADEN CONTROL, REDUCE GUESSWORK FOR LAWN CARE OPERATORS

Lawn care operators are always on the hunt for products that can make their jobs easier, while still helping them meet customer expectations. That's why many are adding combination chemistry products to their lineups.

This type of chemistry combines two different active ingredients (AIs) into one product, keeping lawn care operators from having to mix products on their own. Using combination chemistry also allows them to purchase one product instead of several to achieve the same results.



Nick Strain

"By having those two actives in one container, it makes it easier for the lawn care operator not to have to have multiple products in their barn," says Nick Strain, business director at Quali-Pro.

Quali-Pro's research and product development program performs efficacy tests and university trials across the country to test and prove the combination chemistry products' performance.



Ian Rodriguez

"Formulating these active ingredients into an end-product that's user-friendly is our ultimate goal," says Ian Rodriguez, techni-

cal service manager at Quali-Pro.

Another benefit of using combination chemistry products is that users can experience the same results using less AI loads per acre, allowing them to make more applications in a season, Rodriguez says.

There's also a synergistic effect when combination chemistry products are produced, Strain says. The reason for that effect comes at the manufacturing level because there's less surfactant load in the product. That reduces the chance of phytotoxicity during application of the product.

"In the industry today, ease of use and taking the guesswork out of things, I think, is very important," Rodriguez says. "It can cause a lot of heartburn for people, particularly people who are newer to the industry and maybe don't have 20 years of experience."

As a previous end user himself, Rodriguez says common pain points for lawn care operators are the difficulty of mixing, especially with creating small batches, and feeling restricted to purchasing large quantities of chemicals when they need to solve a problem.




Two of Quali-Pro's combination chemistry products that provide solutions to those problems include Negate 37WG and Fahrenheit — both herbicides for broadleaf weed control on warm-season turf. Negate is labeled for

residential turf and contains the AIs Rimsulfuron and Metsulfuron, and Fahrenheit has the AIs Dicamba and Metsulfuron-methyl.

The products are both formulated so that one bottle covers exactly an acre, allowing users to pour them into the tank and go. That helps eliminate a tedious and often difficult-to-measure process by the products coming pre-measured.

"I know from experience the last thing you want to be doing when it's 100 degrees out are math problems in your head, trying to figure out how much you need to mix in the tank," Rodriguez says. "Minimizing the amount of measuring you have to do is one of the goals we've set for our product line, and we do that whenever we can."

These combination chemistry products help make the lawn care operator's job easier, without sacrificing results. 

LM TRAVEL LOG

BY LM STAFF

November proved to be another busy month for the *Landscape Management* editorial team members. LM Associate Editor Sarah Webb had the opportunity to take part in the Kioti dealer event Nov. 12 near Raleigh, N.C., and Editor-in-Chief Seth Jones, Editor Christina Herrick and Digital Editor Tyler Gunter covered the LM Growth Summit Nov. 11-13.

With a few more industry events coming up toward the end of the year, the LM team shows no signs of stopping.

NOV. 12

Kioti Ride & Drive

A chilly, rainy morning didn't stop 600-plus Kioti dealers from testing Kioti's new equipment, including the new ZXC SE zero-turn mower and tractor lineup.

Attendees even had a chance to zip through a newly blazed UTV trail to see how the machines perform in action.

After getting cleaned up, dealers toured the \$13 million expansion of Kioti's plant in Wendell, N.C., which nearly doubled the facility's former footprint.

To cap off the night, attendees participated in games such as ax throwing, archery, putt-putt, darts and lassoing before sitting down to dinner and an awards ceremony.



LM's Bill Roddy and Lawn Doctor's Jerry Grutzz head off to the first tee at the LM Growth Summit.

NOV. 11-13

LM Growth Summit ... Rocks!

The annual LM Growth Summit was held at Reunion Resort in Orlando, Fla., on Nov. 11-13. More than 20 attendees from across the country enjoyed two and a half days of networking, one-on-one meetings with suppliers and fantastic food.

As part of the event programming, attendees played golf on Reunion's newly renovated Tom Watson-designed course.

And, since Editor-in-Chief Seth Jones is such an audiophile, we had to ask our guests about the first concert they attended.

"Whitney Houston and Kenny G," says Luke Hawthorne of Emerald Lawns in Round Rock, Texas. "What I took away from it is Kenny G is kind of a rockin' dude."

Check out *Landscape Management's* Facebook page at [Facebook.com/LandscapeManagement](https://www.facebook.com/LandscapeManagement) to see all of the hilarious responses and look for more from the event in our January issue. 🎵



Kioti's Greg Bibee gives LM's Sarah Webb the rundown on Kioti's CS2210 tractor.

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Harrell's acquires Koch's Polyon

Harrell's acquired one of the green industry's signature brands — Polyon — from Koch Agronomic Services. Polyon is a fertilizer with a reactive coating technology that diffuses nutrients based on soil temperature and coating thickness.

The sale, which closed last month, includes the Polyon controlled-release fertilizer brand and related technology, patents and manufacturing capability. More than 70 veteran team members from the landmark Sylacauga, Ala., Polyon production facility officially become Harrell's employee-owners.

"This is a great day for Harrell's," said CEO Jack Harrell Jr. "We've always wanted to own Polyon, and finally the time was right for everyone. Now, we're going to do everything we can to bring this superb technology to more customers and markets."

Harvest Partners acquires Yellowstone Landscape

Harvest Partners acquired Yellowstone Landscape, which ranked No. 5 on the 2019 LM150 list, from CIVC Partners.


Yellowstone is headquartered in Palm Coast, Fla., and is a commercial landscaping company. The company's management team, led by CEO Tim Portland, will continue to lead Yellowstone and remain significant owners of the business. Additional terms of the transaction were not disclosed.

Yellowstone is a leading provider of commercial landscape services to more than 5,000 customers throughout the southern and southeastern U.S., including corporate campuses, resorts and hotels, homeowners' associations, multifamily communities, schools, hospitals and municipalities.

Belchim, Albaugh reach supply agreement

Belchim Crop Protection USA entered into an exclusive supply agreement with Albaugh for its pelargonic acid-based products, including Beloukha Garden Herbicide, specifically to support the turf and ornamental industry in the U.S.

Beloukha is a biobased, foliar-applied, contact herbicide made from sunflowers that provides burn down of both annual and perennial broad-leaf and grass weeds, as well as most mosses and other cryptogams. It's a USDA-Certified biobased product.

Under the agreement, Albaugh will work within its channels of distribution via Prime Source and SiteOne Landscape Supply, to make Beloukha available to commercial turf and ornamental sectors throughout the U.S. Belchim USA will provide both product registration and data support. 



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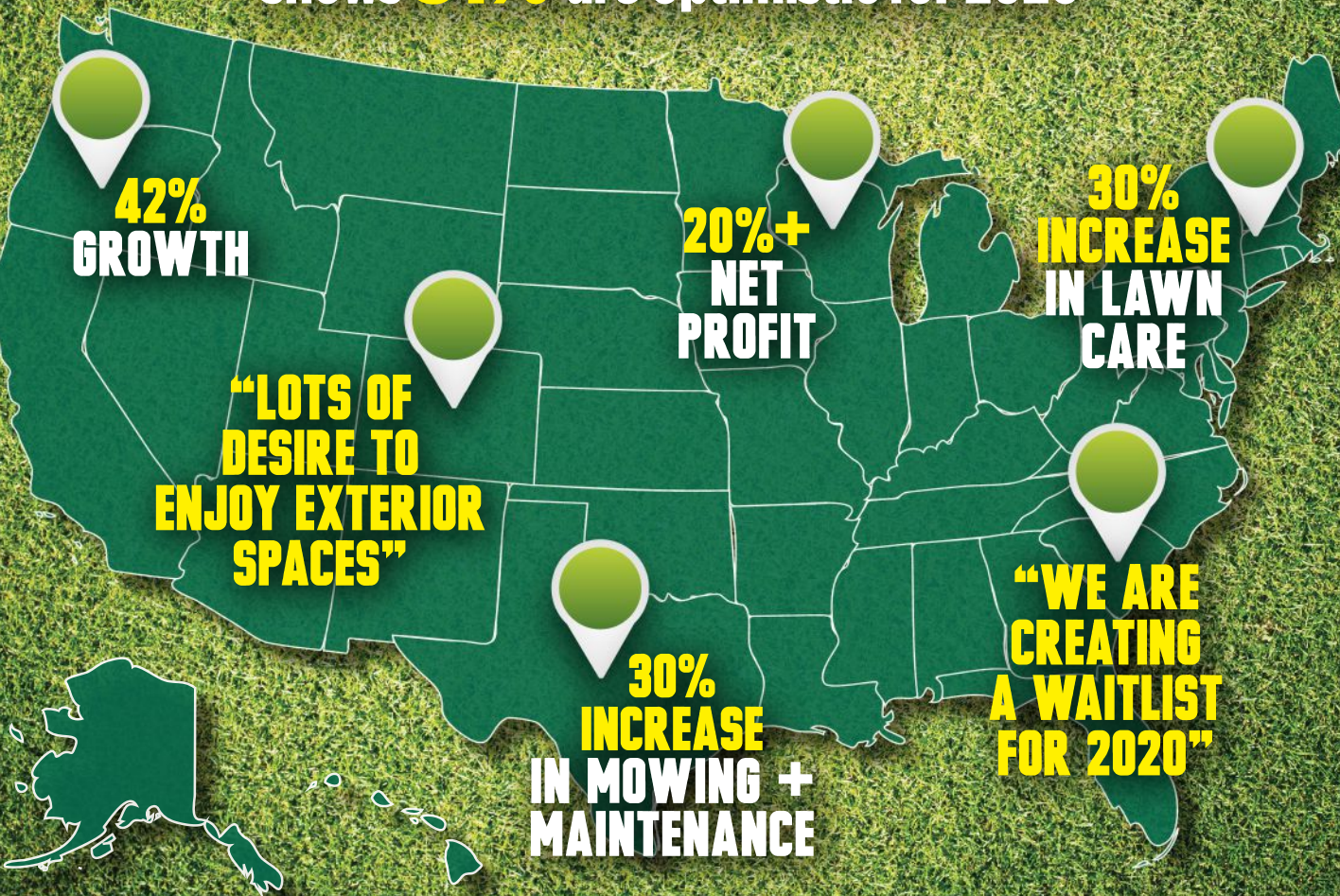
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After an exceptional year, 2019 Industry Pulse Report shows **91%** are optimistic for 2020



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Propane helps business be better tomorrow than it is today

It's almost time to close the book on 2019, and it's a natural time for lawn and landscape professionals to take inventory of their businesses — what worked, what didn't and, most importantly, what can be done better in 2020.

In my role at the Propane Education & Research Council, I get to speak to — and learn from — so many landscapers throughout the year. From the largest national lawn care companies to the owner/operators building a business while cutting lawns themselves, I've found that no two landscape businesses are alike. But, they do all have one thing in common: a drive to be a little better tomorrow than they were today.

As green industry pros continue to refine their business operations to do more of what helps and less of what hurts, it's no surprise that alternative fuel mowers of every kind are grabbing headlines. Alternative fuels reduce fuel costs, increase productivity and are much better for the environment compared to gasoline and diesel mowers.

Contractors who do their homework quickly find the only alternative fuel that saves their business

money from day one is propane. Commercial propane mowers don't require exorbitant upfront costs, and the fuel savings are significant (propane costs 30 to 50 percent less than gasoline and diesel). More than 25,000 commercial propane mowers are in service across the country helping contractors boost their bottom lines.

We are thrilled to be sponsoring *Landscape Management's* annual Industry Pulse survey because it is filled with insights and information from so many landscape professionals who are simply trying to make their businesses a little better tomorrow than they are today.

This determination to learn and be better at what they do best is what drives us at the Propane Education & Research Council. We have been energized by you, the professionals, who continue to seek new ways of doing business. We're proud that many of the contractors who have provided their input in the following pages have found a solution with propane equipment that helps them do business better.

Kind regards,

A handwritten signature in black ink that reads "Jeremy M. Wishart".

Jeremy Wishart

Director of Off-Road Business Development
Propane Education & Research Council



[INDUSTRY PULSE]

STILL GROWING STRONG

2019 proved to be another strong year for the landscape industry, according to the latest LM Industry Pulse

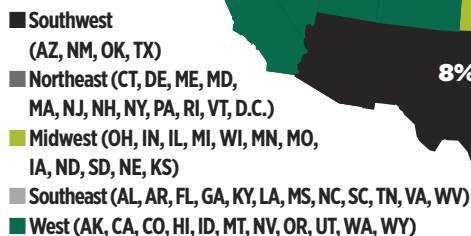
Landscape pros are optimistic about their assessment of 2019, with 83 percent describing the market as “healthy.” Many expect that market health to continue into next year. As one respondent stated, “Our goals will increase; we have a lot of commercial work already on the books for 2020.”

Financially, 2019 was a good year for the majority of companies surveyed, with 70 percent of companies predicting they will meet or exceed their expected revenue and 65 percent expecting to meet or exceed their net profit goals.

One thing that has many industry pros concerned is the upcoming election cycle and how it will affect the economy. Regardless of their political affiliation, landscape company owners are cautiously optimistic that loyal customer bases will help pull them through an economic downturn.

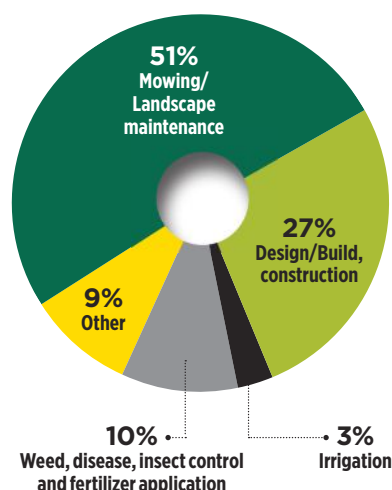
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Geographic breakdown

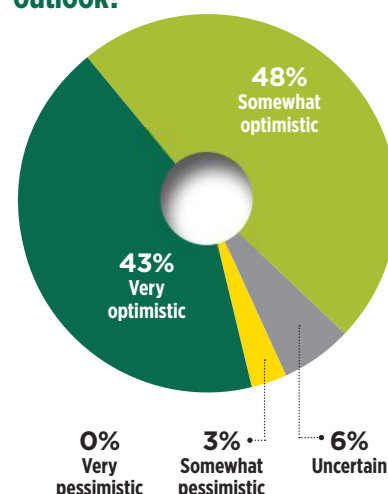


Percentages don't equal 100% due to rounding.

Service mix

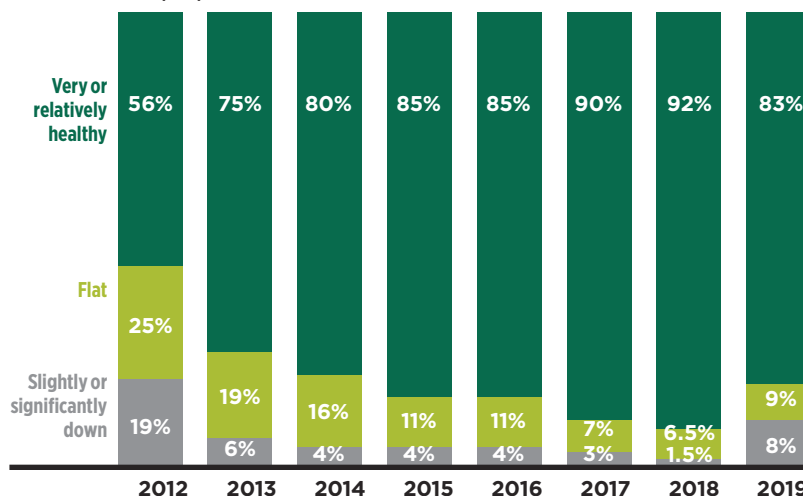


What is your 2020 business outlook?



STILL FEELING FINE

How landscape professionals describe the state of the market.



Continued from page S3

In the face of a potential recession, landscape companies are tapping into some creative ways to become more efficient and keep costs down, such as adopting more advanced software or integrating versatile equipment such as skid-steers into more of their jobs. User-friendly battery-powered tools and electric equipment are becoming more popular, and some companies, such as Texas-based Clean Scapes, are turning to propane for their entire riding mower fleet.

The industry continues to face its perennial challenges: the labor shortage and inclement weather. Here, in this year's Industry Pulse, landscape pros share their perspectives on their outlook for the upcoming year, how they are handling hiring and recruiting and how they've dealt with the ups and downs of Mother Nature. 🌱

2019 Revenue Goals

How does your expected 2019 revenue compare to what you budgeted for the year?

40% We'll beat our revenue goal

30% We'll just meet our revenue goal

19% We won't make our revenue goal

11% What budget? We don't have one

2019 Net Profit Goals

How does your expected 2019 net profit compare to what you budgeted for the year?

35% We'll beat our net profit goal

30% We'll just meet our net profit goal

24% We won't make our net profit goal

11% What budget? We don't have one

How often do you travel to educational events or seminars?

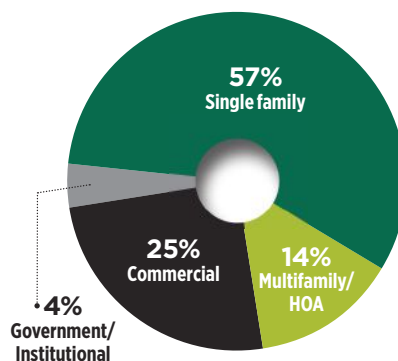
10% 5 times a year or more

48% Between 2 and 4 times a year

26% Once a year

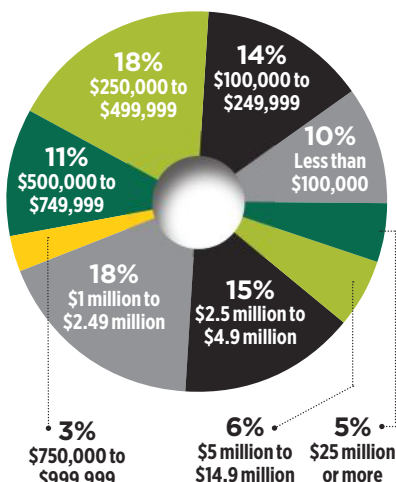
16% Never

Customer breakdown

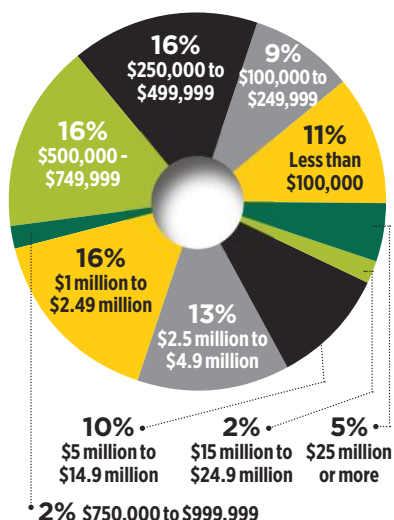


Annual revenue

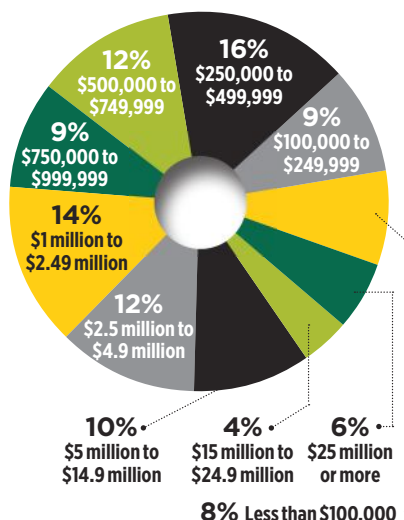
Total revenue for 2018 – reported



Total revenue for 2019 – anticipated



Total revenue for 2020 – anticipated



Percentages don't equal 100% due to rounding.

[2020 OUTLOOK]

A LOOK TO THE FUTURE

Landscape pros offer insight on what they expect for 2020

BY SARAH WEBB | LM ASSOCIATE EDITOR

While no one can predict the future for certain, many green industry professionals maintain a sense of optimism when looking ahead to 2020, according to the Industry Pulse survey.

For example, on average, many survey respondents said they expect revenue to be up in 2020.

"The market is good, and people are spending money," says

Jason Bishop, regional manager of King-Green, a turf and ornamental care company near

Atlanta. "If there's a recession, that's

going to hit us hard, but we're not expecting a recession, so hopefully we stay on the upward trend that we're on now."

Kent Collins, owner of Clipper Landscaping, a commercial and residential property maintenance firm in Portsmouth, N.H., agrees.

"(The future) is promising," Collins says. "I think 2019 was a pretty productive year, and I expect 2020 to be equally productive, if not more."

Continued on page S6



Jason Bishop



Many landscape professionals are optimistic about the work that 2020 will bring.



New housing and construction projects in many areas indicate a strong 2020 for landscapers.

Continued from page S5



Mark McGrady

CLUES TO WHAT THE FUTURE HOLDS

Bishop, Collins and Mark McGrady, owner of Carolina Colorscapes, a specialty seasonal color provider in Lexington, S.C., all point to the booming housing markets in their areas as an indicator of continued success for 2020.

"When we drive around, we see all these new neighborhoods pop up," Bishop says. "The new housing market in our area is typically \$300,000 and up. That tells us that the new homeowners are probably going to be looking for the help we can provide."

McGrady acknowledges, "There could always be a slowdown on housing, but I don't foresee that, especially not in my area. They're building new developments, shopping centers and schools as fast as they can."

Collins adds that the millennials who are moving into those homes tend to call on his company for service.

"The younger generation doesn't seem to be mowing their own lawns as much," he says. "They seem to be more of the people who request a (maintenance) service."

Another factor that may influence the 2020 outlook is the upcoming election, according to McGrady. However, he says he doesn't expect it to have a huge bearing on the economy, at least not until the fourth quarter of 2020.

In case an economic downturn is in the cards, companies such as

Greensweep in Burtonsville, Md., will focus on growing their maintenance division in 2020.

"We know the bubble is going to pop at some point," says Kyle Narsavage, owner of Greensweep, which provides primarily maintenance and some design/build services to an 80 percent commercial, 20 percent residential clientele. "The maintenance is our bread and butter, and that's what we're going to stick with because that will ride through any economy. People are always going to try and take care of their properties. Enhancements and design/build will falter if the economy goes ... but the grass is always going to grow."



Kyle Narsavage

**Jedd Narsavage**

Jedd Narsavage, vice president of design and development for Greensweep, adds that the company

tries not to fret too much over how external factors may influence the economy because they're out of his control.


"What we can control are the processes we put in place, the people we have, the confidence we have in those people and the balance in our service mix," he says. "From there, we're confident that we're organized in such a way that we can ride out any highs and lows."

FUTURE CHALLENGES

Often, with more money comes more (labor) problems. As the workload continues to mount, companies say they expect to struggle with finding a quality workforce to take on the new jobs. (See more about this in the labor section on page S10.)

For example, according to the survey results, many respondents cited finding labor, hiring and retention as items they'd like to improve in their operations.

"Finding people who want to start on the ground and work their way up is difficult," Bishop says. "It's getting qualified people who understand that lawn care isn't always 9-5. Unfortunately, we're expecting to see that trend continue in 2020."

Other survey respondents said that in 2020 they would like to improve marketing, job selection and estimation, efficiency and profitability. 

WHAT IS YOUR ECONOMIC OUTLOOK FOR 2020?



"Very favorable.

Home building may slow, but commercial and public sector clients should have adequate growth or increased tax base to keep markets strong."

"Expecting a recession."

"It's probably going to be a good year. We saw an increase in client acquisition in 2019, and we expect to see an increase in 2020."

"Strong. While there may be a correction in the economy, our irrigation maintenance and upgrade business continue to grow — mainly because irrigation is such a needed item, business and residents have already invested in their sprinklers and continue to be willing to invest in maintaining and making them more efficient."

"Good. Lots of opportunity and with a good core of people, it's looking good."

"Our area is experiencing tremendous growth. Building starts continue to rise along with revitalization in existing areas."

"We think it's going to be a learning year for new employees, but we have a lot of commercial work already on the books for 2020."

"I'm not sure since there will be an election. Anything could happen."

"Looks good, but we're limited by the labor shortage."

"I'm cautiously optimistic anticipating an eventual down cycle."

"Tempered growth. Main factor is the election, but our local market is very stable."

"My business is in an upswing, but staffing for lawn workers is holding us back."

"We believe 2020 will continue to exceed 2019."



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"It's nice when the financial and environmental benefits are on the same side of the ledger."

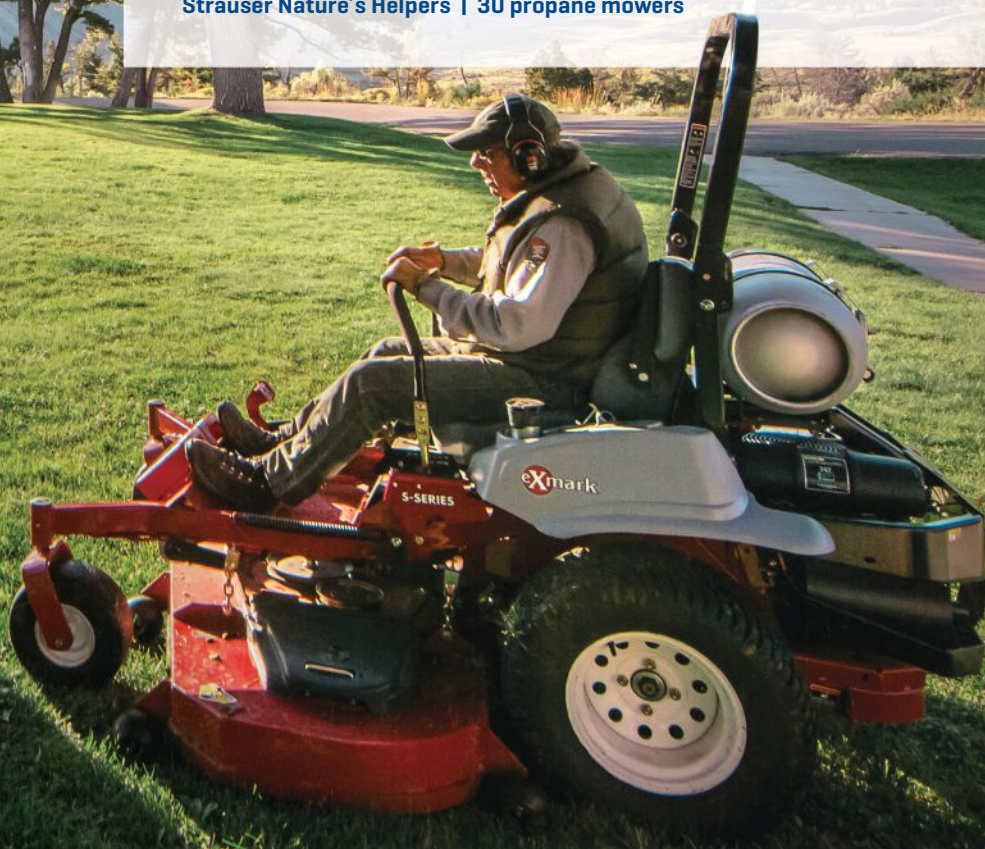
ANDY FRITSCH | Director of Operations
Barnes, Inc. | 60 propane mowers

"Our oil is cleaner. Our motors are holding up better. In the long run, we're having less reactive repair on the engines."

ZECHARY STRAUER | President
Strauser Nature's Helpers | 30 propane mowers

"Operating a propane mower is a pleasure compared to working with a gas mower. The biggest difference is the exhaust that comes out of a gas mower. It comes out in a black cloud that wants to sit right about where the operator level is. Whereas propane, honestly you don't notice it."

JAKE DEVRIES | Mowing Foreman
Bozeman Site Services | 16 propane mowers





[LABOR REPORT]

PLENTY OF WORK, BUT NO WORKFORCE

Industry Pulse respondents say 2019 was a good year for business but a struggle to find people to help complete jobs

BY CHRISTINA HERRICK | LM EDITOR

The good news in 2019 is the economy is strong and demand for landscape services is high. But, when the going is good with the economy and the unemployment rate is low, that usually means one

thing: Labor is scarce. Such was the case in 2019, say many respondents to LM's 2019 Industry Pulse.

"You ask any landscape guy out there what his biggest problem is, and he's going to say people," says Don Zerby, president of

Ecolawn, a lawn care, tree care and pest control business in Eastlake, Ohio.

To sum up the viewpoints of many survey takers, one respondent said simply: "Plenty of work, but no workforce."

While landscape companies say work was plentiful in 2019, it was often hard to find workers like those pictured here.



PHOTO: GREENSWEEP

TOUGH TO FIND GOOD PEOPLE

Landscape professionals say they've faced issues with finding qualified workers within the labor pool, too.

"It's not just about hiring them; it's about keeping them," Zerby says.

Setting competitive wages is a constant struggle. Sources we spoke to say they have increased pay in order to stay competitive within the market.

"My guys make anywhere from \$17 to \$23 an hour, and my kids from high school made \$10," says Kurt Olsen, president of Timber Ridge Landscape, a design/build operation in Crown Point, Ind.

Skilled labor has also been a challenge for One Two



Dusty Montiel

Tree, a pest control, tree service and lawn care operation in Miami. General Manager Dusty Montiel says his operation has struggled to find tree trimmers

—so much so that he calls them "extinct dinosaurs." One of his best trimmers has worked for One Two Tree for more than 20 years.

"Our tree division can't grow because we can't find them," Montiel says.

Survey respondents say they've implemented signing bonuses, increased benefits, offered free lunches, free uniforms, on top of referral bonuses all to try to fill positions. And as far as referral programs go, One Two Tree had to increase its employee referral program to entice more participation.

"We went from \$300 for the year to \$600 for the year," Montiel says.

Shawn Edwards, president of A+ Lawn & Landscape, a lawn care and landscaping

operation in

Des Moines,

Iowa, also

pays top

dollar for

employee

referrals. His

company's pro-

gram pays out

\$400 per month, starting after

30 days of a referred person's

employment up to five months for

a total of \$2,000.

A+ Lawn & Landscape uses

Indeed, social media and job fairs

to recruit workers. But, as Edwards

says, "there's no secret sauce to

finding labor."



Shawn Edwards

TRAINING

One solution to the labor strife, respondents say, is to boost an operation's employee training.

Continued on page S12

Labor savers

As labor becomes scarce, business owners are looking for ways to do the same amount of work with a smaller workforce. Equipment that helps increase efficiency is often the solution. Here are a few pieces our survey respondents keep in their fleets to help them get work done even when there are fewer people to do it:

- Vermeer chipper/Bobcat E20 mini excavator
- UTV with spray rig
- Electric equipment
- Mini skid-steers
- Service Minder CRM
- Stihl 800 blowers
- Bobcat MT52
- Zero-turn mowers
- Z-Spray
- 200-gallon spray tanks
- Toro and Exmark stand-on mowers
- Toro Dingo

On average, respondents pay employees with 0-5 years of experience **\$13.40** an hour for mowing work. That amount increases to **\$16.40** with 5 years of experience or more.





Continued from page S11

Some landscape companies have accomplished this by developing how-to and safety videos in-house.

Conserva Irrigation created a new recruitment, training and certification program to train junior irrigation technicians called Conserva CareerTech Academy.

"After sourcing young men or women with little or no irrigation experience, in just four weeks, we are able to train them



Russ Jundt

(classroom and field) and get them in their own company service vehicle earning money for themselves and for the company," says Russ Jundt, founder and

vice president of Conserva Irrigation. "They graduate with a Certified Irrigation Technician certificate and can handle 80-85 percent of the common problems encountered in the field."

The training, though, doesn't end there, Jundt says. Continuing education options are also available with the end goal of creating a consistent experience for Conserva's customers.

"The best labor practice in this labor shortage is to spend more time with your employees so you don't lose them."

"We are very encouraged by the early results," he says.

TREAT THEM WELL

Another fix for labor woes, many survey respondents suggest, is to respect employees and take a heightened focus on company culture.

Olsen says he's changed his approach when communicating with his employees.

"I tend not to yell at them. I don't give them the riot act like I used to when I was younger," he says. "If one guy does something wrong, I'll pull him off to the side."

An owner/co-owner of a design/build/construction business in the Southwest recommends that managers and owners, "respect current employees as they are family."

Edwards agrees, saying he makes it a point to spend time with his A+ Lawn & Landscape employees.

"The best labor practice in this labor shortage is to spend more time with your employees so you don't lose them," he says.

BECOME AN EMPLOYER OF CHOICE

Zerby says labor struggles are nothing new for him, and he's spent a lot of time unsuccessfully thinking about how to alleviate his labor woes.

That was, until a friend passed along the book, "How to Hire the Best" by Dr. Sabrina Starling. In the book, Starling explains that businesses struggling to fill positions need to become an employer of choice.

And, in order to understand what an employer of choice looks like, companies need to identify



Don Zerby

Reasons people leave

- Better pay
- Work is too hard
- Don't fit into the culture
- Better benefits
- Other industries are more appealing

How are you attracting more employees?


- More money
- Weekends off
- Sending them to trade school
- Current employees are best recruiters
- Work-at-home days
- Treating all employees with respect

the key characteristics of the ideal employee and identify what elements of a business employees like.

"Pretty soon, you start to define what an A-player employee looks like. Job ads can be written

that capture the testimonials of what your current A players like about working at an employer of choice," Zerby says. "You end up marketing in a similar fashion to the way you do to your ideal customers."

Zerby says the book and website have been immensely helpful, and his labor woes are now nonexistent.

"We made a couple of successful hires based on information that is in this book," he says. "Your A players become your best recruiters." 

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[WEATHER REPORT]

WEATHER WARRIORS

Landscape professionals have to contend with the weather Mother Nature brings — good or bad

BY DANIELLE PESTA | LM ASSOCIATE EDITOR

Due to the nature of working in the elements, landscape professionals battle the weather every day.

"As landscapers, we are prepared for just about any work conditions," says Peter Wood, project manager and turf care specialist with Hyde Park Landscape.

Although not all landscape companies saw the impact of weather on their businesses, some survey respondents found that the weather in 2019 brought on unique obstacles. Some even said the most challenging aspect of their business this year was the weather.

A loss in production and a negative effect on sales are just some of the reported outcomes of the extreme weather conditions in 2019.

One Midwestern landscape company noted that weather was the biggest factor in not making its revenue goal. A late April snowstorm and many rainy days caused the company to fall behind and prevented it from taking on extra work.

Hyde Park Landscape, headquartered in Norwich, Conn., experienced problems due

A wet spring in many parts of the country hindered some landscape companies.



Peter Wood

Continued on page S14

Continued from page S13
to a lack of snow at the end of winter.

Wood says plants typically receive protection from the snow cover during the winter.

"The reduction in snow cover increased the quantity of new plant materials that were under warranty and needed to be replaced," he says.

A lack of snow also made it difficult to provide a winter income for the crew.

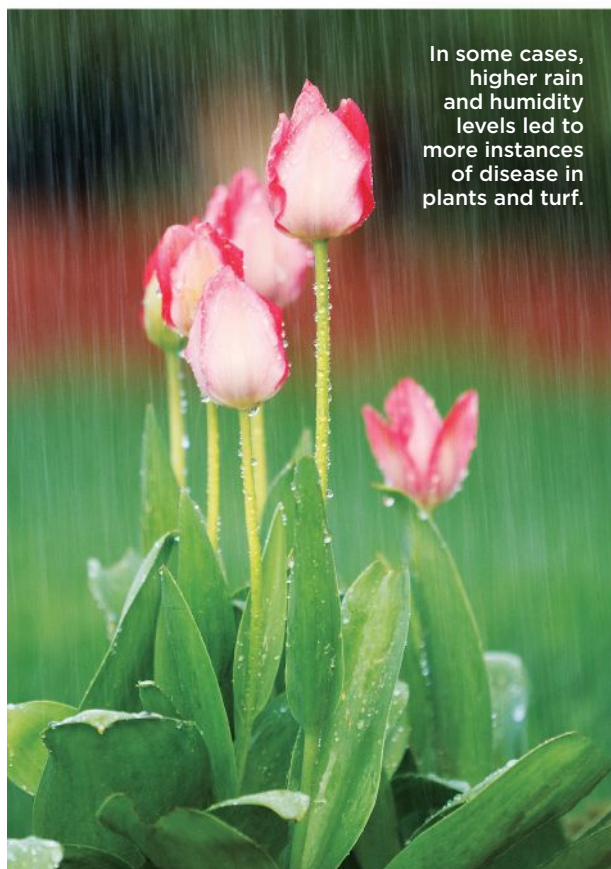
"We needed to scramble at times to find winter work for good employees that we didn't want to lose," he says. The crew kept busy during the winter by pruning ornamentals and working on hardscape projects and other indoor and outdoor tasks.

"There is always work to be done — the trick is trying to load up on billable-hour projects during winter," Wood says.

WATER: TOO MUCH OR NOT ENOUGH

Weather extremes, such as flooding or drought, caused trouble for landscape companies in 2019.

Spring 2019 was the sixth wettest spring on record, according to



In some cases, higher rain and humidity levels led to more instances of disease in plants and turf.

the National Oceanic and Atmospheric Administration.

Wood says above-average levels of rain and humidity created obstacles for Hyde Park crews.

"(Rain) led to some sites being muddy and difficult to work at, coupled with high levels of fungus on plants and in turf," he says.

Lou Palazzi Jr., CEO at Palazzi Landscape Gardening, says the rain delayed lawn instal-

lations for over a year. His northeastern Pennsylvania company made some schedule changes to get work done despite the rain.

"We ended up working a lot on Saturdays, and even a few Sundays, to make up for the lost time when it was raining," Palazzi says. "When we did have good days, we tried to work maybe two hours extra, and that worked out pretty good, too."

He says getting dry topsoil was the biggest challenge, but fortunately, customers were willing to wait.

"I had one customer — he was very understanding about it — but he waited almost two years for me to put his lawn in because it was so wet here," Palazzi says.

Overall, Palazzi says business has been good despite setbacks from the rain.

"We had a very good year in terms of business, but it would have been much better if we could have gotten ahead on these lawn jobs. But we just couldn't; the ground was too saturated," he says.

While the Midwest and eastern part of the U.S. experienced

Ongoing education

Education is an important part of growing a business, and reading business books can help company owners and their employees learn

how to further the success of their companies. Here are some of the types of books and periodicals our survey respondents consult to help them run their businesses:

- Green industry publications
- University periodicals

- "EntreLeadership" by Dave Ramsey
- Books on marketing and branding
- Leadership development books
- Books on business culture
- Books on efficiency

record rainfall, some parts of the country had the opposite problem.

"This year, we experienced one of the driest years we have seen in Arizona," says Jesus Cera, head of strategic initiatives at Tempe, Ariz.-based DBL Landscaping. "I have lived here my entire life, and by far, this has been one of the lowest amounts of rain I have seen."

DBL, which only services commercial properties, had to replace plant installations under warranty, due to the unusually dry weather.

"Warranty work is materials and hours that we have to cover on our own, so we do not



Jesus Cera

bill customers for this work," Cera explains.

Landscape companies that took a hit because of weather can look on the sunny side — 2020 weather will be just as unpredictable. As Palazzi says, "We make up for it in the following year. It always evens out." 

HOW HAS WEATHER AFFECTED YOUR BUSINESS THIS YEAR?

"Spring of '19 hurt, and getting snow with cold temperatures in early November is not good."

"The wet season didn't really hamper us too badly. We are a maintenance company and never got behind schedule."

"We were able to complete all work despite a very wet year."

"Some offices experienced a wet irrigation season, which slightly impacted overall revenue at those locations."

"We have sold more disease control jobs this year than any other year."

"Weather was terrible. Lost a lot of work due to not enough time to complete and not dry enough conditions."

"It has made getting jobs done more challenging."

"We have had a lot of rain, and things have been slower in the spring than normal. The cold weather has driven sales down as well."





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WEED AVENGERS

Poa pop quiz

Put your *Poa annua* knowledge to the test

BY SARAH WEBB | LM ASSOCIATE EDITOR

Poa annua has come up a lot this year within *Landscape Management's* pages, which is why we want to see if you've been paying attention. Take the quiz below and visit LandscapeManagement.net/poaquiz to see how your answers stack up.

- 1. *Poa* is identified by _____.** (You may choose more than one.)
 - a. A narrow leaf blade
 - b. A wide leaf blade
 - c. A boat-shaped leaf tip
 - d. A dark green color
 - e. Bunch-type leaves
- 2. In what conditions does *Poa* thrive?**
 - a. Cool, shady areas
 - b. Warm, shady areas
 - c. Cool, sunny areas
 - d. Warm, sunny areas
- 3. *Poa* prefers areas with _____.**
 - a. High moisture
 - b. Medium moisture
 - c. Low moisture
- 4. True or False: *Poa annua* is a high seed producer.**
- 5. When does *Poa* typically germinate?**
 - a. Late winter/early spring
 - b. Late spring/early summer
 - c. Late summer/early fall
 - d. Late fall/early winter
- 6. Which of the following cultural practices can lawn care operators employ to combat *Poa*?**
 - a. Core aeration
 - b. Overwatering
 - c. Low mowing



- 7. True or False: Rotating herbicides with different modes of action is the best way to avoid herbicide resistance.**
- 8. *Poa* starts to germinate when soil temperatures reach _____.**
 - a. 55 degrees F
 - b. 60 degrees F
 - c. 65 degrees F
 - d. 70 degrees F
- 9. *Poa* tends to be found in lawns with _____. (You may choose more than one.)**
 - a. Loose soil
 - b. A thick turf stand
 - c. Compacted soil
 - d. Low fertility
- 10. True or False: Up to 2,000 seeds are produced by each *Poa* plant, which can remain viable for at least six years in the soil.**

COMMON CULPRIT

Poa annua is one of the more common grassy weeds within the country.

TURF INVADER

Poa annua typically shows up in turfgrass that's not particularly healthy.



SOURCES: Mike Sisti, FMC Corp. golf & lawn care market manager; Ian Rodriguez, Ph.D., Quali-Pro technical services manager; Rob Golembiewski, Ph.D., Bayer Green Solutions Team member

TURF DISEASE ID + CONTROL

KNOW YOUR SPOT
Pythium blight can be mistaken for several diseases so it's important to properly diagnose lawns.



Pythium blight: often a case of mistaken identity

Experts say other diseases may be misidentified as *Pythium* blight and misdiagnosis can waste critical time controlling disease

BY CHRISTINA HERRICK | LM EDITOR

With *Pythium* blight, it's often a case of mistaken identity, says Jim Kerns, Ph.D., associate professor of etiology, epidemiology and management of warm- and cool-season grass diseases at North Carolina State University.

"Most people think they have *Pythium* blight when, indeed, it's gray leaf spot," he says. "I hear a lot of people talking about (*Pythium* blight), and I've rarely diagnosed it myself."

Because it's so easy to misdiagnose, proper identification is critical when it comes to *Pythium* blight.

TELLTALE SYMPTOMS

Certain species of turfgrass can be more susceptible to *Pythium* blight than others, says Emma Lookabaugh, technical service representative for the Southeast for BASF. These include cool-season grasses such as perennial ryegrass and annual bluegrass. But, she says, most grass species, including Bermudagrass, can get *Pythium* blight. Kerns says tall fescue is also susceptible to the disease.

One telltale symptom of *Pythium* blight might include a small, dark spot on a lawn that becomes more irregular over time. The spots are sometimes black to purple and turn orange-brown over time, Kerns says.

"They'll see blotches in their lawn, and that looks really similar to leaf spot diseases or other turf diseases,"

Lookabaugh says. "Leaves will appear water soaked. They can sometimes look greasy."

FAVORABLE CONDITIONS

For cool-season grasses, turf is most susceptible as early as when daytime temperatures hit 65 degrees F. It becomes more of a problem as heat and humidity rise.

"The conditions that are most favorable are typically nighttime temps above 72 degrees F and high relative humidity above 85 percent," Kerns says.

For warm-season grasses, *Pythium* blight strikes during cool, cloudy and wet weather when temperatures are above 50 degrees F but can occur year-round.

"Usually once you have *Pythium*, you may have it every year or see it pop up when conditions are favorable. The pathogen produces long-term survival spores," Lookabaugh says. "It is a disease associated with high soil moisture and usually it's more problematic in low-lying, poorly drained areas."

Pythium spores can travel through surface water, and the disease can spread rapidly, she says.

"If conditions favor disease development, you can have a huge area in your yard that sustains significant damage in two to three days," she says.

GET IT RIGHT

Knowing how quickly *Pythium* could spread, getting the diagnosis right the first time is critical.

"A couple of years ago, during seedlings, most people were treating for damping off, which is similar to *Pythium* blight, but they weren't seeing any effect," Kerns says. "It was actually gray leaf spot that was killing those new seedlings."

There are plenty of resources to help assess what disease is affecting the turf, such as local land-grant universities or turfgrass diagnosis labs.

CONTROL METHODS

If disease pressure is low, experts say products with quinone outside inhibitors, such as azoxystrobin, fosetyl Al, pyraclostrobin or potassium phosphite, are good options. But, if disease pressure is high, experts suggest using *Pythium* specialists, such as products with cyazofamid, mefenoxam and propamocarb.


Kerns says mefenoxam can be applied as a liquid or granular fungicide, but he recommends using the liquid version.

"Repeat applications every 14 to 21 days as long as conditions favor disease development," Lookabaugh says.

Other simple control solutions might be to water early in the morning so leaves have a chance to dry. Turn off irrigation systems if there is excessive wet weather.

"If you have excessive nitrogen rates, you're essentially creating lush succulent leaves, and that are just perfect for *Pythium*," Lookabaugh says.

Additionally, consider avoiding mowing if possible to eliminate the pathogen's spread. If mowing is necessary, don't put infected clippings back on infected areas.

"It's a tricky pathogen. It's hard to work with, but if you're in a good preventive spray program, you can maybe get ahead of it," Lookabaugh says. 





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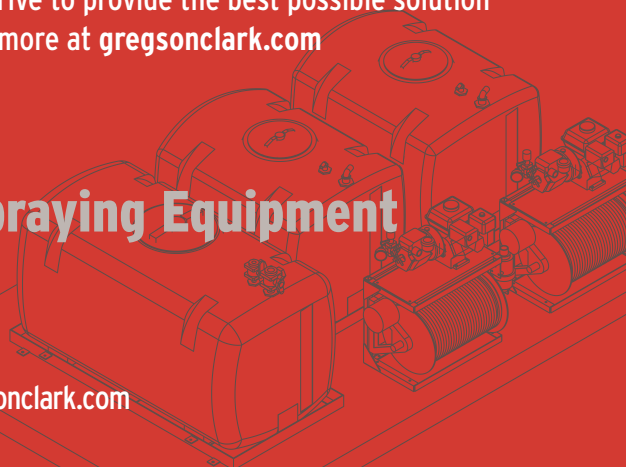


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FERTILE GROUND

Fertilizer facts

Best practices for fertilizer application

BY SARAH WEBB | LM ASSOCIATE EDITOR

It's no surprise that fertilizers help lawn care operators (LCOs) produce healthy turf with high wear tolerance and aesthetic value, but fertilizer applications also help turf outcompete weeds, experts say.

"By having a healthy turfgrass canopy, the weeds have a much more difficult time competing for nutrients, water and sunlight necessary for turf," says Tony Goldsby, Ph.D., research agronomist for The Andersons.

However, it's important that LCOs pay attention, instead of mindlessly applying any given fertilizer product.

"Fertilizer may seem like a minor purchase to many LCOs, but it does have a tremendous impact on turf and its appearance," says Eric Miltner, Ph.D., research agronomist for Koch Turf & Ornamental. "Applying a less-than-optimum fertilizer product or applying it incorrectly at the wrong time of year can lead to turf

that's not as healthy or attractive as it could be."

Jeremy Bigler, landscape channel manager for LebanonTurf, Goldsby and Miltner provide insight when it comes to fertilizer application.

TIME

Application timing often depends on the type of turfgrass, according to Goldsby. For cool-season grasses, such as tall fescue and Kentucky bluegrass,

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fertilizer can be applied in spring and fall months. For warm-season grasses, such as Bermudagrass and zoysiagrass, fertilizer can be applied during times when the grass is actively growing, like in the summer months.

It's also important to match the fertilizer technology with the season, according to Miltner.

"Many enhanced-efficiency fertilizers' release rates depend on the temperature," he says, adding, "Plant nutrient demand varies with the season and turf species, so understand your plants, weather and climate."

RATE

In order to ensure they're applying the correct rate, LCOs should follow the instructions on the label and be sure the spreader is accurately calibrated.

Bigler adds that LCOs shouldn't apply too much nitrogen, as this could lead to excessive growth and potentially burn turf. For example, if LCOs are putting down 3 pounds of nitrogen annually, three applications would typically result in 1 pound per application.

SOURCE

When choosing fertilizer, Miltner suggests thoroughly analyzing lawns' needs.

"Some LCOs are tempted to stick with the same fertilizer they've used out of habit. Others may only look at the price per bag and try to save money by going with the less expensive alternative," he says. "There are good reasons why one bag of fertilizer costs more than another, and it's important to know what you're getting."

Goldsby adds that most LCOs apply fertilizer products containing at least

50 percent slow-release nitrogen in the springtime, but during the fall, when temperatures cool, LCOs can switch to quickly available nitrogen sources since stimulating shoot growth isn't as much of a concern.

PLACE

When applying fertilizer, Bigler says implementing a slight overlap will help ensure no streaks are visible in the lawn.

Goldsby adds that a deflector shield can help protect driveways and other surfaces from fertilizer spillover.

Also keep in mind regions' restrictions when it comes to what type, how much and when fertilizers can be applied.

"Be aware of your surroundings and choose products that will minimize potential losses to the environment," Miltner says. 📍

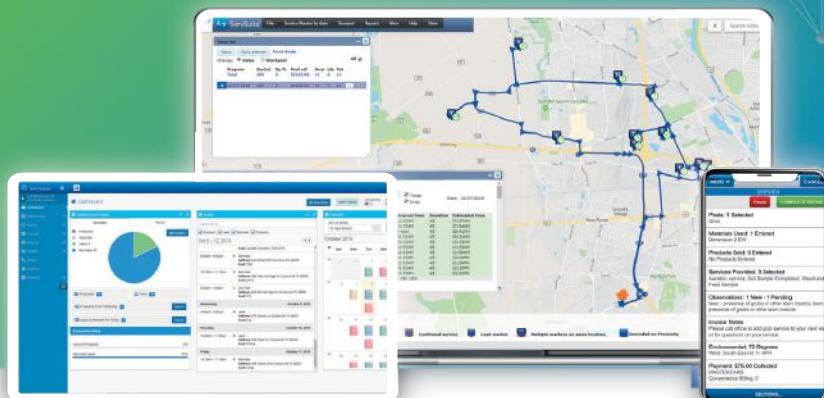
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THE BIG ONE

An indoor paradise

LOCATION Monticello, N.Y.

COMPANY Wagner Landscaping

DETAILS New York's Catskill Mountains are home to a tropical paradise. Even during the winter, guests at the Kartrite Resort & Indoor Waterpark enjoy a warm climate with lush landscaping.

Since opening in March 2019, Wagner Landscaping has maintained the property's indoor and outdoor landscape.

Owner Steven Wagner says the indoor water park is serviced during off-hours by five crew members two or three times per week. While there, crews are constantly maintaining, pruning and growing new plants from cuttings.

The water park's landscape includes philodendrons, palm trees, lady palms, bird's nest ferns and more.

Because of changes in lighting and humidity levels throughout each season, Wagner says this first year has been a learning experience and there's research involved on a daily basis.

"For example, during the summer, we didn't have any powdery mildew, but the ventilation was open so the humidity level was low," he says. "Now that they've closed things up for the winter, we're seeing it get overly humid."

Along with powdery mildew, the plants in the water park struggle with scale and Hemlock woolly adelgid.

To combat any type of infestation, Wagner says nonchemical remedies must be used. Dish detergent and baking soda are two strategies the firm incorporates to remain environmentally sound.

See more photos from this project at LandscapeManagement.net/thebigone.



PHOTOS: STEVEN WAGNER



Captions | 1. Wagner Landscaping tends to the Kartrite Resort & Indoor Waterpark's outdoor property as well. Annuals are planted at the front entrance sign each season, like this display of mums with some pumpkins.

2. Owner Steven Wagner credits his background knowledge of tropical plants to earning his landscape development degree in Florida. He says it has helped immensely with any challenges he encounters with the tropical foliage indoors at the water park. **3.** Once a month, as well as right before holidays, about eight crew members will work overnight at the property for a complete overhaul of the water park landscape beds. **4.** Professionally dressed and polite, employees are part of the overall appearance Wagner says he wants for his company, even when the crews are working during off-hours. **5.** Crews tend to areas with damage caused by inflatable inner tubes being thrown into planting beds. Some areas are trampled by guests who walk through the planted beds for a shortcut. **6.** Some landscape areas in the water park have plants that aren't thriving because of chlorine conditions, so adjustments are being made. "We've learned what grows well in certain areas, so we're changing things out and shifting plants around," Wagner says. **7.** Tropical plants line the park's lazy river and show the plants' proximity to the chlorine-filled water.

» BRAND U

Finding Ferris

Why one landscaper touts Ferris as his brand

BY DANIELLE PESTA
LM ASSOCIATE EDITOR

Richey Plemons appreciates equipment that can withstand just about anything. That's why his company, Plemons Lawn & Landscape in Chatsworth, Ga., uses Ferris.

"I'm always willing to push the equipment to its limits," he says. "We now use a stand-on unit for hills that we wouldn't normally put a machine on other than a walk-behind."

Having a stand-on unit gives Plemons and his three-man crew better stability on steep slopes, and crew members aren't as fatigued from using it by the end of the day.

"You get a better view standing, as well," Plemons says. "You can see better out in front of you and can get under low-hanging branches easier."



Now that the firm uses a stand-on mower for hills, Plemons says it's easier to complete a job with one piece of equipment. "The mowers have made us faster at our jobs without sacrificing quality," he says.

Within the past year, Plemons Lawn & Landscape has started performing more commercial services as opposed to residential. "We decided we needed to find the right mower that would be versatile enough to work for both markets," he says.

Plemons now has three mowers, all from Ferris: a Z3X stand-on, an ISX 3300 zero-turn and a FW15 walk-behind.

Plemons also has the FB2000 and FB3000 Hurricane stand-on blowers from Ferris. A leaf cleanup that used to take four crew members now only takes two.

"We finish the job quicker and with less manpower," he says.

The stability of Ferris stand-on mowers allows Richey Plemons and his crew to better handle mowing steep slopes.


At Briggs & Stratton's facility in Sherrill, N.Y., Richey Plemons saw firsthand how Ferris machines are built. He credits the opportunity to the nearly 7,000 followers of his YouTube channel.

Plemons gets all of his Ferris equipment serviced at nearby Master Mowers in Marietta, Ga. Dealer support and cut quality have kept Plemons loyal to the Ferris brand, he says.

Since the Ferris mowers use the Vanguard Oil Guard System, Plemons says his company also saves on downtime for maintenance.

"We do our routine greasing of the fittings and the air filter, but when you only have to change the oil every 500 hours, that's awesome," he says.

Plemons says the Oil Guard System also saves on oil costs and storage since his company doesn't need to purchase as much oil or keep it stocked.

"The Ferris mowers cut exceptionally well," Plemons says. "It's the best quality machine for the price. You're not going to beat it anywhere." 



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MAINTENANCE SHOP

Talk about a tough tire

Airless radial tires work to keep mowers in the field and out of the shop

BY DANIELLE PESTA | LM ASSOCIATE EDITOR



MORE MOW TIME
Airless radial tires help eliminate downtime on mowers and reduce many maintenance costs.

Say goodbye to tire pressure checks and flat tires. Airless radial tires could be the investment landscape contractors need to keep mowers productive.

We talked with John Deere, Exmark and Michelin to understand the benefits these tires have for efficient mowing.

TAKE TIME BACK

Airless radial tires have multiple features that can help landscape contractors prevent downtime. For example, air pressure checks, which are time-consuming and often overlooked, are eliminated, says Tony Marconi, technical director with Michelin Tweel Technologies.

“You can imagine for a whole fleet of machines, there would be a lot of tires to check the air pressure on,” he says.

Downtime from flat tires, punctures or leaks is completely avoided. With airless radial tires, landscape contractors don’t need to carry tire repair kits to the site. And, if a tire needs to be changed out, airless radial tires don’t need to go to the shop for a mounting machine.

“You can puncture the Tweel, and it’s not going to affect its performance,” Marconi says.

Exmark Marketing Product Manager Lenny Mangnall says Exmark asked its customers, “What does a flat tire cost you?”

Some landscape contractors simply responded with the cost of the \$3 tire plug. Others were in tune with the total cost, including the



Lenny Mangnall

impact of downtime, Mangnall says.

“The real cost can be anywhere from \$50 to \$250, depending on the severity of the damage to the tire,” he says.

Airless radial tires are designed to last the life of the mower with up to three times the life span of a pneumatic tire, meaning operators can go three times as long between replacements, says Nick Minas, product manager with John Deere.



Nick Minas

MADE FOR TURF

Having consistent ground pressure is another perk.

“Since there’s no pressure to maintain, you always maintain a nice even cut because you don’t have to worry about a mismatch of air pressure or deck leveling,” Marconi says.

Tire pressure plays a significant role in the deck level of a mower.

Airless radial tires maintain even tire pressure so operators experience less vibration and bouncing for improved comfort overall.

Michelin’s Tweel tire has large and even pressure distribution in its footprint, so it’s gentle on the turf, Marconi says.

“Operators can mow faster, still maintain a smooth cut and not feel like they are beating themselves or the mower up,” he adds.

According to Marconi, airless radial tires can mow on

steeper hills because of the added control and stability.

Mangnall agrees. “The tire has a larger contact patch with the turf, so it allows us to reduce compaction and gives more traction for better hillside stability. The

tread pattern on Exmark’s Tractus tire allows debris to clear out better,” he says. “It’ll be less likely to build up and carry those debris from location to location.”

ROLLING FORWARD

Michelin began producing the Tweel in 2014. After showcasing the Tweel at GIE+EXPO

the past few years, Marconi says the company is getting more interest.

Mowers from John Deere, Toro, Hustler Turf, Grasshopper, Ariens, Gravely, Husqvarna, Kubota, Mean Green and others can accommodate Tweel tires. Marconi suggests contractors reference Michelin’s Fitment Guide if they want to find which Tweel tire will work for their mower.

“We’re continuing to add sizes to cover a broader spectrum of mower brands,” he adds.

Exmark launched its new Tractus tire at the 2019 GIE+EXPO. Mangnall says the tires will be available from Exmark’s vendor in spring 2020.

“In the end, we’re not a tire manufacturer,” Mangnall says. “We are a manufacturer that makes mowers, and contractors rely on us to give them something that allows them to cut grass productively and proficiently.”

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HARDSCAPE SOLUTIONS

A meaningful memorial

LOCATION New York City

COMPANY PWP Landscape Architecture

DETAILS When many parties are involved in a project, communication is key. There certainly were a lot of people involved in the development of the 9/11 Memorial, located in Manhattan's financial district.

In fact, the number of agencies and individuals involved was one of the biggest challenges for PWP Landscape Architecture, the design firm that won the open design contest to develop the landscaping surrounding the twin pools that make up the memorial.

"It was families, city officials, the Port Authority, the Memorial Foundation themselves," says Conard Lindgren, the landscape architect who oversaw construction of the memorial. "Within all of those, you had subgroups and then all of the coordination."

According to Lindgren, the keys were staying organized and making sure the proper authorities were all being communicated with. He also says it helps that there were so many people who were passionately involved in the project, which kept it moving forward.

Lindgren adds that it was complex to figure out how to run the lighting, coordinate security and access and get plant material that would survive in an urban environment. The trees are all swamp white oaks, with the exception of the survivor tree, which is a flowering pear. The lawn panels are a blend of fescue — rye and bluegrass — and the ground cover is small-leaf ivy.

See more photos from this project at LandscapeManagement.net/hardscapesolutions.



Captions | 1. Visitors come from all over the world to pay their respects at the 9/11 Memorial, which was opened to the public in 2011. 2. An aerial view of the pools located where the footprints of the Twin Towers were shows the lush greenery surrounding the memorial. All of the trees but one are swamp white oak. The plant material at the site is still maintained by teams from PWP. 3. PWP Landscape Architecture used Vectorworks design software during the design development phase of the project, which took roughly four to five years. 4. Conard Lindgren says that even though the memorial was one project, it felt more like two due to all of the various organizations and authorities involved in its development.



PHOTOS COURTESY OF PWP LANDSCAPE ARCHITECTURE



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INSTALLATION SOLUTIONS

Getting smaller

Trenchers and augers continue to be popular as attachments on smaller, multitasking machines that are perfect for installation jobs on smaller lots

BY CHRISTINA HERRICK | LM EDITOR

Earth movers like trenchers and augers can be used for endless design/build tasks. But as equipment manufacturers can attest, landscapers increasingly want land movers with a smaller footprint and more maneuverability for smaller jobs.

“For the last five years, we’ve been pressured to make things that are smaller in size, no more than 48 inches in width, that will be able to get onto quarter-acre lots or smaller and be able maneuver around,” says Chris Thompson, compact equipment product manager with Ditch Witch.

VERSATILITY’S THE NAME OF THE GAME

Mike Hale, sales and marketing manager with Little Beaver, says his company has been offering compact multitasking devices with a multitude of attachments with its lightweight Kwik-Trench mini trencher.

“Everyone talks about versatility,” Hale says. “The greater the number of applications a product can handle, the more ‘worth it’ its purchase becomes.”

While the Kwik-Trench can be used for edging, installation of drainage lines, low-voltage wiring, silt fence and irrigation system installation, Hale says one overlooked use of the device is root pruning.

“Many larger trenchers can rip out the roots, making a mess,” he says. “The Kwik-Trench features a sawing method that allows users to cut through tough material like tree roots.”

The Kwik-Trench also boasts a bolt-on tooth system, and users can also alter the width settings from 1 to 4 inches to reach depths of up to 12 inches.

“This design not only speeds up maintenance, (but) it also allows the operator to quickly change out teeth to match the application,” Hale says.

HANDY ATTACHMENTS

One of the ways Ditch Witch is adapting to landscapers’ desire for equipment with smaller footprints is to configure earth-moving attachments for its mini stand-on skid-steer line — the SK600, SK800, SK1050 and SK1550.

These attachments include trenchers of varying depths, a planetary auger driver, vibratory plows, grapples, backfill blade, buckets, backhoe, leveler, tree shear, jackhammer, rotary broom, plate compactor, rake, forks and more.

“They’re versatile. You can put a trencher on the front, and you can put a vibratory plow on the front, so you’re able to install your irrigation line with just one product, and that makes things a lot more efficient,” Thompson says.

Ditch Witch also offers the Vacuworx PS 1 portable and SL 2 subcompact vacuum lifting system for use on the stand-on skid steers. The Vacuworx technology uses vacuum pressure to move heavy materials on job sites. Thompson says where this can come in handy is if an open drill site needs to be covered.

“With the Vacuworx attachment, you can take a steel plate, and you can use the vacuum on the front of the attachment to attach that steel plate over the opening and that takes three minutes,” he says. “It significantly reduces startup and shutdown time.”

KEEP IT IN MIND

Cory Maker, horizontal directional drills product manager for Ditch Witch, says when it comes to picking out the right tool for the design/build and installation project, it’s important to figure in the cost of operation of that piece of equipment.

“If they can make an open cut with a trencher, that’s going to be their fastest, lowest cost,” he says. “Say they already have sod laid; they could utilize a vibratory plow — it’s way less invasive than open cutting.”



Operators can change out teeth and alter width settings on Little Beaver’s Kwik-Trench mini trencher.



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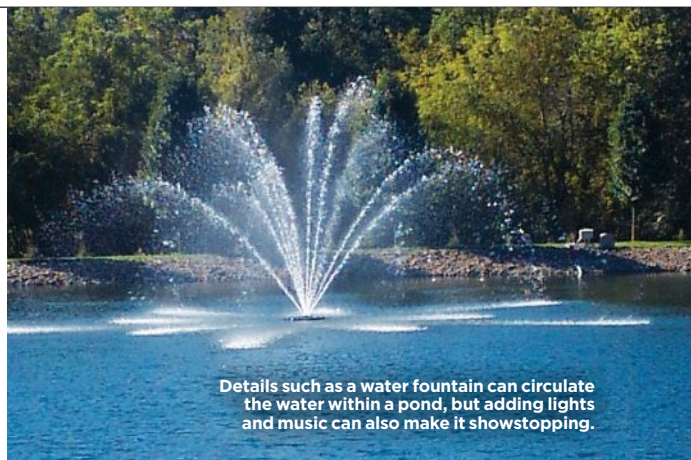
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BUSINESS BOOSTERS

Are ponds pointing your business in the right direction?

Here's what to consider when adding ponds and water features to your business' portfolio

BY CHRISTINA HERRICK | LM EDITOR



When it comes to ponds and aquatic works, there are many options available, from small water features to something as large as a few thousand gallons. But is adding an aquatics division the right move for your operation?

For Mark Harpenau, owner of A+ Lawn & Landscape and A+ Watercare and Fountains in Des Moines, Iowa, it was about expanding his company's portfolio.

"It was a niche that we thought could go well with what we already offer as a full-service company," he says. "We mow, we do landscaping, construction — everything about lawn care we do."

Harpenau was approached five years ago by the owner of tree care and aquatics business to buy the operation.

"Not a lot of people work with water, you can charge more per hour," he adds. "On the mowing end of it, you only charge \$40 or \$50 an hour. In the pond business, since it's a specialty like a plumber or electrician, you can charge \$125 an hour."

He adds \$125 an hour is for a typical service call — including drive time — which can last for 20 minutes or more.

KNOW YOUR STUFF

It's important to find a good pond equipment supplier, one that offers educational opportunities, advises Winfield Lentz, owner and project manager for Wild Bamboo Pond & Landscape in Fort Meyers, Fla. Lentz uses Aquascape's product line. Many companies like Aquascape offer trainings and certifications on pond care and how to use the products. Companies also sometimes offer training on how to sell the products to clients.

"Take that training," he says. "When you're selling the pond, it's not just the aesthetics and the look, but it's also the maintenance."

Also, many manufacturers have brochures landscape professionals can share with clients, all to help better educate them on what their service provider is doing and how to care for their purchase.

"Very few people want to spend \$25,000 on a black box," he says. "Your standard pond customer wants to know a little bit more about how it works."

Before beginning a project, it's critical to understand exactly what the client wants and what you as a service provider feel comfortable doing.

"It's all about making sure you're installing what the homeowner needs and balancing out that with what the homeowner wants," he says. "That's one of the frequent mistakes that I find, the wrong system was put in for the maintenance level."

Lentz also says it's a good idea to start small when it comes to a pond or water installation.

"If you have space in your yard, put in a small water feature," Lentz says. "It's good practice for you and for your crew. Having one yourself, then you can learn some of the tricks."

WATCH THE DETAILS

Knowing what type of equipment is available for use in ponds is another key step. This way, contractors can advise clients on best management practices for keeping water moving and what type of depths are effective.

"You can put a fountain in or a diffuser in the fountain, you can put lights or different color lights, you can put music with it," he says. "Now you're controlling the water, but you're also taking that piece of water and making it beautiful. You can kind of make it look like the Bellagio."

On the other hand, Lentz says sometimes all the client wants is a piece of nature. In that case, the best way to construct as natural looking of a water feature as you can is to get out in nature and look at how waterfalls and ponds are created.

"You can do a lot of things with a lot of practice and just observing nature," he says. "What nature has already done, don't try and reinvent it, just work with it."



Winfield Lentz



Mark Harpenau

A SUPPLEMENT TO



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A man with grey hair, wearing a dark green long-sleeved shirt, black pants, orange and black earmuffs, safety glasses, and orange and black gloves, is using a STIHL chainsaw to cut a log. The log is resting on a silver metal sawhorse. Sawdust is flying from the cut. The background shows a rustic wooden building and a grassy field with trees under a blue sky.

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THE PUSH OF A BUTTON

BY SARAH WEBB
LM ASSOCIATE EDITOR

Three landscape contractors share their experiences using battery-powered equipment

Environmental concerns, potential safety hazards and fuel costs — all have been cited as reasons landscape contractors make the switch over to battery-powered handheld equipment from gas-powered machines.

“We are responsible for the upkeep and improvement of the cultivated landscape, and I think that is best completed with the very light touch (of battery-powered equipment),” says Matt Dingeldein, president of Oak Grove Gardeners in Naperville, Ill.

Continued on page BP4



Because of its easy startability, the battery-powered chainsaw helps companies be more productive.

“We are responsible for the upkeep and improvement of the cultivated landscape, and I think that is best completed with the very light touch (of battery-powered equipment).”

—MATT DINGELDEIN, OAK GROVE GARDENERS

Continued from page BP3

Landscape Management got the scoop from Dingeldein and two other landscape professionals — Chris Draaistra, owner and general manager of The Grounds Guys of Abbotsford in British Columbia, and Michael Bedell, owner of Bedell Property Management in Milford, Mich. — on why battery-powered equipment is the go-to option for them.

A NEW SOLUTION

Bedell Property Management, a site development consulting, horticulture, landscape design/build and snow and ice management firm, began using an Echo CCS-58V4H cordless chainsaw during the 2019 growing season. After experiencing issues with the gas-powered chainsaws it had previously used, the company followed the advice of several other contractors in its area.

“Struggling to get gas-powered equipment going that’s sat for a while can really kill the profitability of a project,” Bedell says. “Battery-powered equipment can sit idle for months, and as long as there is a charge in the battery, we can pull that equipment off the shelf and get it started without a hassle, allowing us to service our clients in a more timely and profitable manner.”

While battery-powered equipment has enabled Bedell Property Services to be more productive on the high-end residential and commercial properties that it services, Bedell cautions that crews should be sure to have an additional fully charged battery on hand to keep projects moving.

“While the amount of work you can complete with one fully charged battery is impressive, some projects will certainly take more battery power than a single charge offers,” he says.

With the 2019 season drawn to a close, Bedell says he looks to implement more battery-powered technology in 2020.

“The efforts of many top manufacturers these past few years in developing next-level battery-powered

equipment is starting to show dividends for us as the end user — and this is just the beginning,” he says.

MAINTENANCE MANAGED

For The Grounds Guys of Abbotsford, the change to battery-powered machines came after technicians struggled to keep gas-powered handheld equipment up and running.

“Our techs are not mechanics or mechanical, and the switch to battery-powered equipment seemed like a simple solution,” Draaistra says.

The company made the commitment to invest in Stihl 3.0-Ah battery-powered equipment — including hedge trimmers, pole saws and chainsaws — for all five of its crews in early spring 2019. The company has also recently embarked on a trial with Makita’s battery-powered equipment.

In addition to the machines, The Grounds Guys of Abbotsford invested in two batteries per trailer, as well as a charging station at the shop.

Overall, Draaistra says implementing battery power into his operation has allowed his company to not have to worry about fumes, fuel or ear protection because the equipment operates quietly, a perk for the homeowners’ association properties the company helps maintain.

He adds that crew members can operate the machinery in a safer manner.

“When you put the machine down, it turns off immediately. There are no moving chains on a hedge trimmer or saw, and the techs are not trying to keep a machine running while doing another task,” he says.

The final perks of battery-powered equipment, Draaistra says, is that the equipment produces no carburetor, valve or flooding issues.

“We use these in the rain all day long (about four to five months of the year),” he says. “I really can’t say enough about this equipment.”

GIVING IT A GO

Oak Grove Gardeners warmed up to the idea of battery-powered equipment after being presented with an opportunity by Ego's product research team to test out Ego's products in spring 2019.

The company has since incorporated two hedge trimmers, two string trimmers, two leaf blowers, one sidewalk edger, three high-capacity backpack-mounted batteries and two 21-inch mowers into its fleet.

So far, the equipment has exceeded Dingeldein's expectations.

"I'm bought and sold," he says. "(The machines) are just an incredible production tool. (Using them) was a huge boost for us. Not having to breathe exhaust fumes, from a worker's perspective and for workers' health and safety, is a huge leap forward."

Dingeldein says during the regular growing season, his crews haven't had issues, but in the fall, the leaf blower doesn't quite have the capacity to keep up with the demand.

"The full power of the blower's battery will run about as long as a tank in a two-cycle mix in a comparable gas model, but the problem is you can't always recharge on the fly," he says. "(However), we do usually get through the production day with more than enough power to make it back to the shop."

The company currently has three wall-mounted chargers that hang in the maintenance trailer, connected to a heavy-duty power strip, which is then connected to a wall outlet via an extension cord.

Chargers for smaller batteries can be charged overnight in the office or in the field.

“The efforts of many top manufacturers these past few years in developing next-level battery-powered equipment is starting to show dividends for us ...”

—MICHAEL BEDELL,
BEDELL PROPERTY MANAGEMENT




The amount of power provided in battery-powered equipment is often comparable to gas models.

Oak Grove Gardeners hasn't completely flipped over to all battery-powered equipment, and Dingeldein says the only thing holding his company back is the cost. As of now, a battery-powered 60-inch zero-turn mower is about double the price of a comparable gas model.

"It does cost a little bit more upfront, but we don't go to the gas station (for the equipment)," he says. "But I think between the reduced carbon footprint and reduced noise, it's also a lot less disruptive."

For contractors who are thinking about adding battery-powered machines to their operation, Dingeldein encourages them to test it out.

"The best advice I would have for somebody wanting to put their foot in the water is to just try. Start with a line trimmer or hedge trimmer and really see how much of a difference it can make in your fleet," he says. "I look forward to the day when the technology is a little more widespread." 

Contractors considering their next equipment investment should compare the long-term cost of battery and gas power.

CHARGED UP

Manufacturers share upcoming trends and predictions for battery-powered equipment

BY DANIELLE PESTA | LM ASSOCIATE EDITOR

Landscape contractors are starting to make the switch to battery. But why?

To better understand the possibilities — and benefits — of battery-powered equipment, we talked with experts at Oregon Outdoor Power Equipment, Mulch Mate, Ego and Stihl.

Contractors are looking for better production from their equipment, says Paul Vanderwal, senior global product manager for Oregon Outdoor Power Equipment.

“Landscape contractors are utilizing all of their equipment assets to the utmost,” he says. “Their priority is to get to the next site as quickly as possible.”

Today’s battery-powered equipment can provide the production capability contractors need, Vanderwal adds.

“Contractors are starting to adopt battery-powered tools at a much higher rate,” he says.

“There has definitely been an increase in sales of battery-powered equipment in the past few years,” says Craig Carlson, president of Dawson Manufacturing, the creator of Mulch Mate. “As the lithium-ion cells have improved and the capacity to current ratios get better, I think you continue to see increases in the equipment sales.”

For landscape contractors who want to make the switch from gas-powered equipment to battery-powered, the product performance has to be comparable.

“We make sure our tools are developed and benchmarked against typical gas tools, not just other battery tools,” Vanderwal says.



Paul Vanderwal

Product performance is an important consideration for efficient production.

“The idea is to offer as little compromise as possible when switching from gas to battery,” says Mike Poluka, a product manager with Stihl. “And one way we can achieve that is by offering similar power, acceptable run times and, of course, the best power-to-weight ratio as possible.”



Mike Poluka

INNOVATION THAT PERFORMS

Continuous improvement is driving the adoption of battery technology.

“Innovation is happening on both the battery tools and also the batteries that power these tools,” Poluka says.

Batteries are being built with more efficient electrical components, he says. In some cases, a tool will have the same components as its gas-powered counterparts.

For example, the recently introduced Stihl FSA 130 battery-powered line trimmer shares the same drive shaft and gear head components as the company’s gas-powered trimmers.

“The batteries that power these tools are seeing greater power output and greater capacity,” Poluka says. “It’s innovations like these that are making battery-powered tools attractive to professional end users.”

Carlson gives some credit to the auto industry for encouraging alternative fuel sources.

“Since the auto industry is now in full swing behind electric-powered vehicles, I believe the research and development into better battery technology will continue to accelerate,” he says.

Recent innovations in battery technology include more power and longer run times. Gerry Barnaby, director of excitement for Ego, says those two benefits aren’t always found in the same battery.

“For instance, one manufacturer may offer a higher-voltage battery, so it could be assumed that it has a lot more power than a lesser-voltage (battery),” he explains. “But, because the higher-voltage battery has a lower number of amp hours, it will not run as long.”

In addition to considering the voltage and amp hours with commercial battery-powered tools, weatherizing these tools is vital, Vanderwal says.

“This equipment has to run in all kinds of weather and often is stored in the rain on the back of a truck or trailer,” he adds.

There are some financial incentives available to landscapers looking to transition to battery. Some places in California offer rebates toward the purchase of new battery-powered equipment, Barnaby says.

Another benefit to switching? Winning the bid.

“Certain companies require that only battery equipment be used,” Poluka says. “So contractors who have battery-powered equipment are more likely to win the bid for those jobs.”

A VIABLE ALTERNATIVE

As with any new technology, it takes time to get people on board.

“People are going to be skeptical any time something new is introduced to market, but I would say try it,” Poluka says.

If contractors are unsure whether battery-powered equipment could be an option for their company, Poluka recommends a hands-on demo.

“Stihl has field staff all over the country to help support landscape contractors who are interested in switching to battery,” he adds.

Efficient production is a real issue for landscape contractors. Charging a battery is less complicated than using gas and two-cycle mix while at a job site, Vanderwal says.

“Contractors save time not mixing fuel and performing other maintenance,” he adds. “Quicker, better production means more business and more money.”

Barnaby recommends landscape contractors read opinions and reviews on all battery-powered equipment.

“Anyone skeptical of switching from gas to battery power needs to only try today’s higher-rated equipment,” he says.

Battery-powered equipment is more user-friendly, Barnaby says. The tools always start, are quieter than gas-powered, don’t release any emissions and produce very little vibration, he says.

“The user is sacrificing nothing by transitioning from gas to battery power,” Barnaby says. “The ROI

Continued on page BP8

BATTERY-POWERED EQUIPMENT GUIDE

Continued from page BP7

on transitioning is fairly quick as the user no longer has to pay for gas, oil or tuneups.”

Poluka agrees that there’s virtually no learning curve with battery products.

“With gas, contractors have to mix gas and oil, learn how to start it, use the choke. That’s all eliminated by switching to battery,” he says.

Every time the cost of gas goes up, so does a landscape contractor’s incentive to switch to battery-powered equipment, Carlson says.



Craig Carlson

JUMP START INTO THE FUTURE

Battery innovation isn’t slowing down, Poluka says.

“We’ll see those tools continue to develop,” he says. “We will see increased efficiencies, more power and longer run times.”

Poluka also expects that new tools will be introduced on battery platforms.


“The future is connectivity,” he says. “We have a high request for the ability to track products and see how they are performing in their fleets.”

For example, Stihl’s new platform called Connected will help contractors track equipment better and determine when maintenance is needed. The technology will interface with the equipment and an app on a cellphone.

“At the beginning of the day, the landscaper can see how many batteries are in their fleet, fully charged and ready to go,” Poluka says. “And throughout the day, they can monitor how much battery capacity they have.”

Next year, Stihl plans to introduce the BGA200 professional battery-powered blower. This new unit will be the most powerful blower in Stihl’s handheld lineup — including the gas-powered equipment, Poluka says.

Barnaby says there will always be new developments in the battery space.

“Six short years ago, Ego offered four tools,” he says. “Now, we offer 40-plus with three new innovations coming online in the next few months.” 



Pacific Landscape Management’s crew uses Oregon’s 120V Professional Series on a job site in Beaverton, Ore.

PHOTO: OREGON OUTDOOR POWER EQUIPMENT

Jacto battery-powered backpack sprayer/doser

The Jacto DJB-20S is the first in the world with Bluetooth connection, making it possible to be controlled via a smart-phone app.

Launched in Jacto's home country of Brazil in mid-2019, this unique tool is scheduled for rollout in North America during the second half of 2020. The equipment with capacity of 5.2 gallons combines comfort with technology, as the operator does not have to make manual effort during use and focuses on targeting, thus having a higher quality application, reinforcing Jacto's position as the world leader in the backpack sprayer market and ushering in a new era in the segment.

The operator can accurately calibrate the doses as well as the spray pressure of the product to be applied. The machine generates usage reports, similar to the telemetry services that are offered in big agricultural machines. Additionally, the Jacto app will generate an operational map of the area covered in an application. All this information can be saved and shared, facilitating certifications and inspections.

If a dose is used for each plant, it is possible to count the number of plants in an area and to recognize mortality points. With this report, it is possible to improve production management and forecast total production at the end of the season.

"So with the Jacto DJB-20S, the report generated at the end of the spraying or drenching of products, for example, by the app, can help companies know



everything that was done during crop production taking into consideration which were the products applied, the quantity, when and how many times, among other indicators", explains Iago Oliveira, product specialist of Jacto Portables division.

For more information, please contact Iago Oliveira (Brazil) iago.oliveira@jacto.com.br or Greg Imus (USA) gimus@jacto.com.



Mean Green Mowers EVO-74



The Evo is the flagship mower of the new “evolution” series by Mean Green Mowers! With up to 9 hours of continuous mowing time, an expansive 74" deck, speeds up to 13 mph and horsepower comparable to a 37 hp diesel mower, the EVO is sure to please most any large area mowing operators. In addition to the already exclusive patented electric ZTR features, the EVO boasts an all new hub drive system designed from heavy duty excavating equipment. The new patent-pending deck lift system and battery/drive wheel arrangement provides the EVO with some of the best-in-class power and stability on slopes up to 20 degrees. If you have a need for a quiet, low maintenance, cost-cutting, zero-emission mower capable of cutting large areas all day long, the new EVO-74 is your ultimate performer!

The EVO was designed with maximum power in mind. We knew it had to compete with the most

powerful gas and diesel engine mowers on the market, so we combined known time-tested planetary gearing with the latest electric hub motor technology. The results are impressive with almost three times the power and weight carrying capability compared to our current, already powerful, 60" mower! The comparable horsepower of our 74" EVO exceeds most 72" gas- or diesel-powered mowers. While power is important for maintaining speed while cutting thick grass, the EVO also shines with forward ground speed of 13 mph to compete with or exceed most any popular 72" gas or diesel mower on the market.



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Mulch Mate

What would it do for your company if you could increase the speed of your mulch jobs by 50% or more? Mulch Mate doesn't just eliminate the guys in the truck, it

speeds up your entire crew, getting your crew on to the next job faster. With the touch of the joystick you can load a wheelbarrow in about 3 seconds.

- Mulch Mate mounts to the Class 4/5 truck you already own with no dumping required.
- All electric operation means no gas, no oil, low maintenance.
- Virtually silent means no complaints from neighbors about noise.
- Safer and easier for your employees.

HOW IT WORKS

To load your truck, simply unwind the ballistic nylon tarp material across the bed of your truck using the wireless remote controller. Load mulch, rock, topsoil, etc., into the truck and at the job site simply turn on the key and press the joystick to dispense material directly into your wheelbarrow. Mulch Mate can unload 10 yards of mulch in less than 10 minutes without anyone jumping in and out of the truck.



Truck Mate

For you guys that don't have a large Landscape Bodied truck, we now have the Truck Mate. Truck Mate attaches to any standard 1/2-ton to 1-ton pickup truck without any modifications to your truck. Truck Mate simply slides into your hitch and replaces your tailgate. You can now pull mulch, rock or topsoil from your truck and dispense it in either direction directly into wheelbarrows. You can even remove the cross conveyor and use the tarp mechanism to dump directly on the ground with the press of a button.

- Easily mounts to any pickup truck with no modifications.
- All electric operation means no gas, no oil, low maintenance.
- Virtually silent means no complaints from neighbors about noise.
- You can send one man and one truck to do small mulch or stone jobs.



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String Trimmer (ST120VX) – Designed with exceptional torque to offer uncompromising performance

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Product Spotlight: STIHL KMA 130 R

The STIHL KMA 130 R battery-powered Kombi-Motor is making waves in the landscaping industry with its ability to streamline operations. By powering up to 14 separate tools with one STIHL powerhead,



Choose from extended-reach hedge trimmers, pole pruners, lawn mowers, cut-off machine, and more. AP Battery Series works with AP chargers and batteries, as well as our AR backpack batteries.

the KMA 130 R saves on storage space and maintenance of multiple units.

Part of the AP Series, the KMA 130 R gives professionals the ability to trim, prune, edge, clean, cultivate, and more with optional attachments – all without gas, fumes or exhaust emissions. The external battery source shifts the battery weight to the user's back or hips, ensuring a lightweight, comfortable and balanced position, regardless of the attachment being used.

Its quiet operation enables this unit the flexibility to be used during extended hours, increasing income potential, while the commercial-grade, brushless electric motor offers optimal performance and durability for a virtually maintenance-free service life.

The unabated versatility of the KMA 130 R is sure to get a groundswell of support from landscapers and groundskeepers alike.



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WATER WORLD

Art's the word

LOCATION Coachella, Calif.

COMPANY Urban Habitat

DETAILS Urban Habitat, a firm in La Quinta, Calif., was called upon to create a park surrounding a unique, mesh-wire art piece left over from the previous year's Coachella Music Festival and recently purchased by the city of Coachella. The art piece was to be placed near Coachella's downtown center.

"They're going through an urban renewal on that street, and the art piece serves as an anchor point for that street as you enter," says Urban Habitat COO and founder Brett Brennan.

The company removed an old gas station that sat on the corner where the 51-foot structure was to be installed; poured the foundation for the art piece; installed power and electricity for the structure's custom colorful lighting and irrigation controller; and introduced turf and drip irrigation in the park area.

A total of 192 low-voltage lights were installed and programmed to interchangeable lighting schemes, and six transformers were wired and synced together. The company implemented a Hunter Industries smart controller. The plant material is on drip irrigation, and the turf areas and palm trees make use of the MP3000 low-water-use heads from Hunter.

"The site had no water, so we brought in water. It had no power, so we brought in power for the controller," Brennan says.

The project was a coordinated effort between Urban Habitat, the city of Coachella and Golden Boys, the entity that puts on the Coachella music festival.

See more photos from this project at LandscapeManagement.net/waterworld.



PHOTOS: URBAN HABITAT

Captions |

1. The Urban Habitat crew had to install drip irrigation, as well as a paver-base section.

2. Specialized skill was required to lay out and dig the art structure footings. Since no engineering plan was available, all dimensions had been handset.

3. The art piece features changing LED-colored uplighting.

EXPERTS' TIPS

Sensors & Software

WATER WISE

Pacific Landscape Management has been using soil-moisture sensors on its commercial properties to help conserve both water and clients' money. Pictured is the Baseline biSensor the company commonly uses.



Saving water and time go hand in hand

Pacific Landscape Management in Hillsboro, Ore., has been using smart irrigation products for many years. One such product is soil-moisture sensors.

"We've learned that you need to have enough of them in different locations so your readings aren't just based on a sunny or shady location, an area with tree roots or certain types of soil," says Bob Grover, president. "The locations you place them in must provide readings that are indicative of the entire site."

David Thurman, irrigation manager for Texas Landscape Group in Houston, is also a proponent of soil-moisture

sensors. "They know the difference between a half-inch and 5 inches of rain, so they are more accurate than a rain sensor," he says. "You just need to make sure you're strategically placing them around a property."

Some cost-conscious clients may balk at the use of soil-moisture sensors. That is why Thurman's more widely used tool is a rain sensor. He says they are easy to install and use. He especially likes the wireless versions.

Thurman and Grover also have become proponents of irrigation smart-control software. "The whole theory is that once a system is calibrated, it starts

making adjustments on its own," Grover says. "That eliminates guesswork."

Since he tends to rely more on rain sensors, Thurman has come to appreciate having the ability to make manual scheduling adjustments.

"Sometimes things get so saturated after several days of rain that we simply don't need to irrigate for a few days," Thurman says. "I can make controller adjustments on any of our sites, right from my desk."

Four experts from leading irrigation suppliers offer some additional advice on how to leverage sensors and software to save water, time and money. **14**

HUNTER INDUSTRIES Darik Chandler

Associate product manager

Sensors are powerful tools that help ensure healthy, cost-effective and water-conscious landscapes. When paired with advanced water management software, they provide useful information such as how much water is applied to plant material and the need for maintenance. Hydrowise software allows landscaping professionals to remotely monitor an unlimited number of sites and understand critical issues before costly landscape damage occurs. Along with Hydrowise, professionals should use a flow-monitoring device such as the HC Flow Meter for automatic shut-off triggers by zone if unusual water use is detected, a controller with built-in milliamp sensing to monitor solenoid load and a rain sensor for reliable shut-off if precipitation occurs — a requirement that is increasingly mandated by water agencies nationwide.



IRRITROL Matt Hall

Product marketing manager

Sensing products combine predictive technology with real-time information to help fine-tune watering schedules faster than running calculations by hand. They also help eliminate a lot of guesswork. When combined with the latest software tools, contractors can respond to situations in the field faster using their mobile device or PC, saving time and money. When weighing sensor options, contractors should consider solutions that work for both existing and new system installs. For many systems, upgrading to weather sensing and software options could require the purchase of a new controller, which could get costly. Selecting sensors that can be easily added to expand the capabilities of a new or existing controller helps to manage costs and cut down on the learning curve.



JAIN IRRIGATION Richard Restuccia

Vice president, water management solutions

While weather-based and soil-moisture-based sensors both help save water, weather-based sensors work better in most landscape situations. Weather-based sensors use local weather data to determine accurate evapotranspiration for a property. The data is analyzed by software, and the best software creates and adjusts irrigation schedules based on the data. Soil-moisture sensors, on the other hand, measure the amount of water in the soil. This information is communicated to software, and irrigation schedules are created. This type of sensor works great for agriculture where 1 acre looks just like the next 100 acres. In landscape applications where you have shady parts of a landscape plus a wide variety of plants, soil-moisture sensors are not practical.



RAIN BIRD Rick Malkin

Product manager — central control products

Affordable weather stations and rain, temperature, wind and flow sensors make it possible to vastly improve irrigation efficiency. Accompanying software makes sensor monitoring and control easily accessible via Wi-Fi and cellular connections. At sites with flow sensors, a controller carries out preprogrammed actions to diagnose the high- or low-flow condition and can shut down the problem water source. This limits liability and costs associated with broken pipes, stuck valves, water loss and unauthorized water use. When selecting flow sensors and software, it's important to consider the administrative and water management features you'll need on the back end.





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EVERY DROP COUNTS

A time to educate, celebrate

BY CHAD SUTTON

It's been a positive and productive 2019, and now is a great time to celebrate with the team and highlight their excellent work over the last 12 months. Better yet, how about combining education and celebration into one event? To get you started on creating your own combo, here are some ideas to pair both goals together in 2020.

Irrigation Show. The granddaddy of all irrigation trade shows, the Irrigation Association's Irrigation Show & Education Week has a full week of top-notch classes and seminars. On top of all that education goodness, the host cities Las Vegas, Orlando and Long Beach offer amazing opportunities to celebrate in style with your team. There's a big party on opening night and lots of fun private events hosted by manufacturers when the show is not in session.

Manufacturer factory tours. Hunter, Rain Bird, Toro and many other companies offer great fly-ins and tours of their factories to help you understand irrigation from the inside out. While you're there, you can enjoy Jeep expeditions in the desert, hit the local hot spots or enjoy a round of golf. The manufacturer sales reps ensure the team members get great product knowledge and have a great time, too.

College certificate programs. Many colleges and universities offer short, intensive certificates in business management and other related topics. While you're not hitting the books, the

team can catch a ballgame or visit other attractions these world-class institutions offer.

Peer group events. If you haven't experienced a peer group, it can be a great way to learn from other irrigation business owners. Peer groups provide coaching, mentoring and accountability check-ins. These meetings are typically held in beautiful locations with downtime for recreation and celebration. There are many peer groups to choose from, and they can help grow your business while having some fun.

Distributor education events. We all have local distributors that hold educational events, but the big nationwide distributors hold events, like SiteOne University, all over the U.S. Pick a fun location that offers some side trips, then you and your team can see the irrigation industry through the eyes of a different region and dovetail the education into any adventure or celebration the area has to offer.

Irrigation company visits. It is amazing how generous and helpful people in our industry can be. Many times, irrigation companies in other parts of the country where we don't directly compete have offered to open their doors and share how their operations run. From opportunities like this, you can gather helpful insights to bring back to your shop. 📍

Sutton is the water resource manager for Gachina Landscape Management in Menlo Park, Calif.

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A LOOK BACK

A far cry from 1995

In 2019, it's hard to imagine running a business without a computer. But the 1996 State of the Industry report (now Industry Pulse) showed that in 1995, only 70 percent of landscape contractors were using computers at their companies. And of that 70 percent, only about 14 percent of computer users had access to the internet, "the fast-growing computer web that has millions of subscribers around the world." Want to know what else was trending in the green industry in 1995? Check out the full article (July 1996, "State of the Industry") online in the *Landscape Management* archives.



COVER: LM ARCHIVES

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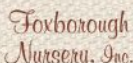
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BY JEFF KORHAN

Jeff Korhan is the author of *Built-In Social*, founder of Landscape Digital Institute and a Duct Tape Marketing Certified consultant.

How Google is elevating conversational search

Google and BERT (short for Bidirectional Encoder Representation from Transformers) are taking out the trash. Together, they are making the old way of optimizing website pages obsolete.

BERT is Google's natural language-processing model that now powers search queries. It's capable of understanding content based on its context from associated phrases and sentences. This essentially kills traditional keyword optimization.

For years, Google has been telling us that natural language is important. Foundational SEO criteria, expertise and authority are now measured more by context than keywords.

You should not abandon keywords altogether, but know that they are not enough. If your competitors are also using the natural, conversational language that BERT trusts, they will win out.

People look for experts to solve problems and know they've found them from the language they use. True experts have a voice that resonates with people, and Google knows the difference, too.

Content that may be keyword rich but that's otherwise average quality is dead. Instead of behaving like a real person, this content games the system, and that's not what Google wants.

BERT's launch signals the beginning of data-driven systems that will expect marketers to be smarter. Here's how to plan for that:

1. Be the best answer. Forget about making basic, how-to content because it has been done. You will attract more leads by giving people the best answer to their question.

It's a shift from a keyword mindset to focusing on problems that need solutions. Are people searching for "Who's the best landscaper in Miami?" Not likely because the answer to that is, "It depends." You need to be more specific.

"Is pine-straw mulch better than hardwood?" Now that's a question that comes up a lot in the Southeast. You could own the answer to that with well-researched content that quotes recognized industry experts.

2. Engage the audience. People listen to storytellers because stories capture and hold attention. Case study interviews of landscaping customers are practically guaranteed to be story based.

While BERT cannot understand a story the same way a human being will, the sentence structure and articles in the copy will suggest relevance that will be compared to proven high-quality content. If it checks out, it will rank well.

3. Reorganize for ease and relevance. Regardless of the quality, if your

marketing content is not discoverable, it may as well not exist. You have to anticipate the problem-solving process buyers will take with your website.

If they inquire about the cost of a tree, the logical next questions will relate to delivery, installation and warranty. How your website makes that information available can set your business apart.

Think of your website as an interactive library that gives feedback to questions that lead people down a path. This may not necessarily be the one they had envisioned, but it should be one that delights them with its usefulness.


A comprehensive guide that answers 10 or 20 carefully researched questions regarding a particular topic is far better than expecting people to search your blog. The answers could be articles, links to YouTube videos or a combination of both with other resources.

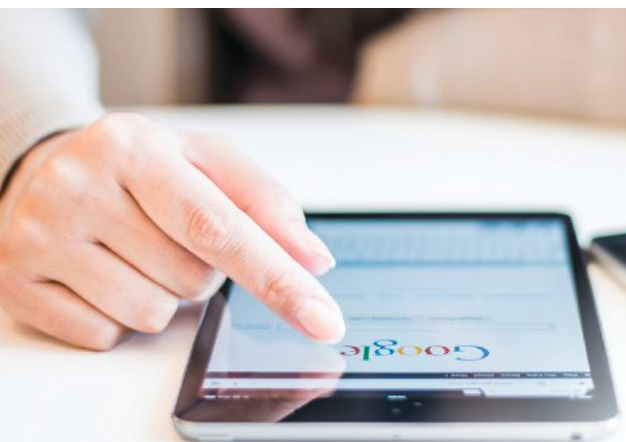
HOW TO GET CONVERSATIONAL

Training and practice are the only ways to develop your conversational marketing skills.

You'll have to work at this because it won't happen overnight.

Use this as an opportunity to start or reinvent your email newsletter to deliver fresh insights. Keep it light and you'll enjoy developing your natural voice. Whatever you do, encourage the audience to reply to make it a genuine conversation.

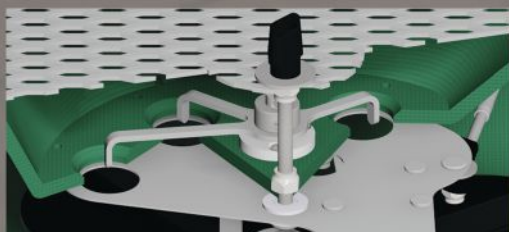
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2020 labor situation: crisis or opportunity?



BY PHIL HARWOOD

The author is president and CEO of Pro-Motion Consulting. Reach him at phil@mypmcteam.com.

For years, demographers, economists, movie-makers, politicians, scientists and others have been famously making false predictions of future events. Remember the doomsday predictions leading up to Jan. 1, 2000, or how the stock market was going to crash if a certain person was elected president of the U.S., or any one of the end-of-the-world predictions?

Predicting the future is not easy. Nonetheless, I'm going to go out on a limb and predict that the labor crisis will not subside in 2020. There are several good reasons why I'm confident in making such a prediction. Our population continues to age. By 2030, 20 percent of the U.S. population will be over 65. The workforce participation rate has declined to historic lows. Government spending on entitlements continues to grow. Unemployment rates have never been lower. There are more open jobs today than there are people to fill them. None of these data points are likely to change anytime soon. The labor crisis is here to stay. Does anyone else want to get in on this bet?

The good news is the labor crisis has a silver lining. Companies, managers, supervisors and even crew leaders are forced to change how

they recruit, onboard, train, lead and develop their people. New leadership approaches were long overdue in my humble opinion, and I am thrilled to see a new and improved model of leadership taking hold.

Organizations of all types are tossing their old employee handbooks and top-down supervisory practices out the window and, in many cases, not replacing them. General Motors CEO Mary Barra recently replaced the company's dress code with a simple statement, "Dress appropriately." A new day is dawning. With a focus on employee engagement and strengths-based leadership, today's leaders are radically changing the employee-employer relationship for the better.

This begs the question, what are you and the leaders in your organization doing differently in response to these changing norms? I see some companies in our industry completely reinventing themselves, while others do nothing differently. Maybe my prediction about the labor crisis is false and the best option is to sit out these cultural changes. Maybe they are a passing fad, but I don't think so. Do you?

The labor crisis is also fueling innovations in technology and equipment. When labor is abundant and cheap, innovation suffers. But when labor is scarce and expensive, innovation thrives. Looking at the labor crisis in this light, I see great opportunity where others may see doom and gloom.

Take notice of the many innovations in our industry. Some of these "innovations" have been around for a long time but are just now gaining a foothold. I was invited to a dinner in 1999 where there was an opportunity

to invest in the newest and coolest innovation — a robotic mower. That was 20 years ago. Why do you think robotic mowers are finally gaining adoption when the technology has been around for two decades?

Technology is sure to change our industry even more radically in the future. Whether driven by big data, artificial intelligence or the lightning-speed connectivity of all things, we know innovation will continue. For now, I will reserve predictions on when the final gas-powered landscape machine will be built. The time is coming, though.

What I will ask you now is, what are you and your leaders doing to capitalize on the current advances in technology and equipment? A machine built in 2019 may produce several times what a machine built in 2014 could produce — only five years ago. And yet, I still see equipment built in 1994 in use today. It's a head-scratcher, for sure.

I recall the "stagflation" of the 1970s and early 1980s — a demoralizing combination of low economic growth and high inflation rates. The U.S. unemployment rate in 1982 was 10.8 percent, and you could lock in a 30-year fixed-rate mortgage for 17 percent APR. I'm grateful we're not living through anything like this today and hope we never do again.

Yes, we have a labor crisis. We also have economic fundamentals that are stronger than they have ever been in my lifetime, and we have incredible opportunities to reinvent our organizations. It's up to us to determine how to capitalize on these opportunities.

Now go forth. 



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Dressing for the job is important to make winter work comfortable and manageable

The real challenge when dressing for winter work is to keep skin warm and dry — perspiration can make clothing damp or wet.

The key piece of clothing is the upper-body base layer, such as a T-shirt made from a material that won't get soaked from sweat, which makes cotton a poor choice. A material with polyester or polypropylene is designed to wick moisture away from skin and through the shirt to the next layer to evaporate or be absorbed by outer layers. The next layer of upper body clothing should be something warm like a sweatshirt or fleece.

The final upper-body layer should be an outer shell that's water resistant or waterproof on the outside. The best choice is a material that "breathes."

Bring an extra piece like a sweatshirt or a fleece sweater if it's going to be extremely cold.




For the lower body, the same rules apply. Water-resistant or waterproof snow pants are usually the best choice.

When using a snow blower, especially in windy conditions, you will be sprayed by snow mist discharging from the blower. If you're wearing jeans or another absorbent material, the snow will stick and make you wet and cold.

Waterproof footwear is essential, so leather work boots are out of the question unless they are lined under the leather with a waterproof material. Lined rubber boots are the best choice.

For socks, nylon or wool are best. The best gloves are waterproof but breathable. It's always good to have an extra pair or two in case they get wet.

For headgear, a close-fitting hat will keep the head warm in most conditions. In windy or blizzard conditions, a full-face covering is helpful, as are a scarf and a hood.

Be prepared for bad snow events and use less clothing if weather conditions are more favorable. 

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RESOURCES



GROW WITH GRUNDER

BY MARTY GRUNDER

The author is president and CEO of Grunder Landscaping Co. and The Grow Group, based in Dayton, Ohio. Reach him at marty@growgroupinc.com.



The keys to success in 2020 and beyond

My team at The Grow Group, the green industry consultancy I run, is hard at work right now gearing up for our Grow! Annual Conference for landscape pros who are serious about moving their careers and their businesses forward.

Scheduled for Feb. 24-26 in Charlotte, N.C., the 2020 conference will be my 25th year putting on this event. It's expanded greatly in size and scope over the years — we expect more than 400 owners and their teams to attend, and we have a full slate of industry leaders and successful operators teaching more than 20 educational sessions. But no matter how Grow! has evolved, I find over and over again that the keys to growth and success in our industry remain the same. You have to:

Envision. Those of you who know me have heard me go on and on about the importance of having a vision — of having a destination toward which your whole team is driving. Well, I go on and on about it because it's that crucial to your company's success. What are you trying to achieve? What are your revenue goals? Where do you want to be by the end of 2020? 2021?

“In business, the wedding is getting your ideal prospects and job candidates to say yes to you ... The marriage is everything that comes after.”

2025? At Grow!, we'll show you what's possible and the benchmarks smart landscaping companies measure themselves against.

Plan. As the late, terrifically wise Zig Ziglar observed, “Most people spend more time planning the wedding than they do planning the marriage.” In business, the wedding is getting your ideal prospects and job candidates to say yes to you. That's certainly important, but it's just the courtship. The marriage is everything that comes after, and if you want your business to grow, you have to really plan for that too. How do you streamline your operations to ensure you're delivering exceptional service and clearing a good profit? How do you develop other leaders on your own team so your business isn't solely reliant on you? How can you make the H-2B program work for your company?

Execute. This is where the rubber meets the road. In terms of truly learning how to execute a plan, I believe the fastest and most effective way is to see, up close and in person, how a successful company does it. That's why we're headed to Loving for Grow! 2020. Founder and President Mike Haynes started in our industry the way so many of us did, by mowing lawns in high school. Through drive, determination and a truly remarkable team, he's led Loving to become

one of the fastest-growing landscaping companies in the country. Mike is also one of the humblest and kindest people you'll ever meet, and he's surrounded himself with the same. You can't help but learn and get inspired when you're around the Loving team.

Compete. It takes a lot to win at business; it takes even more to continue to win, year after year. Many landscaping companies are seeing record revenue right now, as the economy continues to boom, but what happens when there's a downturn? How do you gain an edge over your competition through effective marketing and the innovative use of technology? How do you determine what equipment you should buy and when? How do you successfully expand into new markets? Companies that succeed over the long haul focus on how to get better *every day*. And that's exactly what my team and many others from all across the country will be doing at Grow! 2020.

I wish you the happiest of holidays this season and a wonderful and prosperous new year. See you in 2020! 🍷



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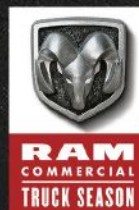
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