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President's Message

Riding the Heat Wave . . .

and coming out on top

s turf professionals, one of our greatest challenges—and headaches—is dealing with Mother Nature's "mood swings." This season, she's apparently on the warpath. While we were in the middle of one of the driest, hottest periods we've experienced in years, the Midwest was being ravaged by nonstop rain.

For golfers, our weather couldn't be better. Few days have been unplayable. For golf clubs, the nonstop sun and warmth is a mixed blessing. Revenues from greens fees and carts are no doubt up, but the extreme conditions are taking a toll on our courses—and on our golf course maintenance staffs, superintendents included.

It takes a little flexibility and a lot of creativity to keep everyone's morale from flagging and, worse case, dragging the operation down.

To give my crew a lift during the hottest period in July, I offered them the opportunity to work split shifts. My mow crew, for instance, would leave during the middle of the day and return in the evening to cut fairways when it was cooler and there were fewer players on the course. That made their job easier and faster and had the added bonus of putting less stress on the turf.

That's just one idea for making a maintenance staff's work life more tolerable. I'm sure, if you give it a little thought, you can *(continued on page 2)*

Special Feature

Taking the Guesswork Out of Your Fertility Program

Lakeover Super Dennis Petruzzelli explains how he puts tissue analysis to work

p until several years ago, deciding when and how much fertilizer to apply was little more than a guessing game. We relied on a few standard formulas and our past experience to show us the way.

Now, we have a new and—what appears to be—more reliable tool at our disposal to tell us the exact quantity of each nutrient a plant needs and the exact time the plant needs it. The technical name for it is near infra-red spectral (NIRS) analysis; in layman's terms, it's tissue analysis.

The technology's been around for about 20 years, but until the past four, it was used exclusively to analyze agricultural crops and livestock feed. By December 1989, Karsten Turf Inc. out of Phoenix, AZ, had adapted NIRS analysis for the turfgrass industry, enabling us, for the first time, to measure how much of 12 elements are in a plant's leaf tissue.

Aside from helping us determine the correct fertilizer to apply, tissue analysis enables us to customize our fertility programs to meet the needs of individual turf areas on the golf course. It's also invaluable in justifying the use and cost of the fertilizers we apply.

Though we can still get similar guidance from soil samples, NIRS analysis is a process that can be done easily—and frequently—from the comfort of your own office. It's quick. Procedures for preparing samples are relatively simple. And the instruments are safe and easy to operate.

About 30 superintendents across the country currently rely on NIRS analysis to develop fertility programs. I've been using it at Lakeover for the past three years. To give you an idea of what it would take to get a tissue analysis program up and running at your course, here's a look at our program—from start to finish.

Getting Started

To perform NIRS analysis, you have to have a scanner, a grinding mill, a computer equipped with a Mathco Processor to perform the many *(continued on page 4)*

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- Williow Ridge Takes Home Invitational Trophy

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Riding the Heat Wave

come up with a few ideas that will work well for your own operation.

Just as important, though, is that we superintendents find ways to pace ourselves and our work. While you might be tempted to put in 15-hour, "go nonstop" days right now, you'll not only end up feeling frustrated, your productivity will suffer.

So my advice to you is to be sure to take a time-out during the day. Join your guys on break once in a while; stop and put your feet up on your desk. At the very least, be sure to take time for lunch—preferably away from the shop. And don't completely abandon your family, friends, and sense of fun. A good way to wrap up a trying season is to attend our Professional Turfgrass Field Day.

It will once again be hosted by Westchester Country Club, this year on October 19. I have a feeling this time around a lot of people will be looking at aerifiers. But whether it's aerifiers or some other piece of equipment you're interested in, this is a tremendous opportunity to bring assistants, mechanics, crew members, club officials, or even interested members to view the various equipment demos. It's an event no superintendent should miss.

TIM O'NEILL, CGCS President

Notable Notes

Hoorah for the 1993 Scholarship Winners

his year, the children of seven MetGCSA members were the lucky recipients of the association's annual scholarship awards. The winners were handpicked by the Scholarship Committee, who ranked applicants on their maturity, academic background, ambition, extracurricular activities, and their completion of the application.

This year, a total of \$4,000 was distributed among the following scholarship recipients:

• Dana Alonzi: A graduate of Greenwich High School, Dana plans to attend Elizabethtown College and major in occupational therapy. She's the daughter of Winged Foot Superintendent Bob Alonzi and his wife, Kim.

• Holly Ann Gonyea: A student at the University of New Hampshire, Holly is working toward a liberal arts degree. She's the daughter of Rye GC Superintendent Dick Gonyea and his wife, Margaret.

• Evan Maddocks: A graduate of Fairfield High School, Evan is planning to attend Vanderbilt University as an engineering and physics major. He's the son of CC of Fairfield Superintendent Ted Maddocks and his wife, Adele. • Michael Mullane: Attending Colorado State University, Michael is majoring in computer information systems. He's the son of Bob Mullane of Alpine, the Care of Trees and his wife, Pat.

• Brian O'Conner: Attending University of Rhode Island, Brian is a political science major. He's the son of Sunningdale CC Superintendent Dom DiMarzo and his wife, Ginny.

The last two recipients are turfgrass students with aspirations of following in their father's footsteps:

• Robert Alonzi: Enrolled in the University of Massachusetts, Robert is the son of Bob and Kim Alonzi.

• Brian Remo: A student at Delaware Valley College of Science and Agriculture, Brian is the son of Rock Spring Club Superintendent Wayne Remo and his wife, Candace.

Money raised for our annual scholarship awards comes from our Christmas raffle and, occasionally, from a personal donation. We urge you, therefore, to support this yearly event. With your help, we can increase the funds available to our members' college-bound children.

JOE ALONZI Chairman, Scholarship Committee

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Managing Editor PANDORA C. WOJICK

Editorial Committee SCOTT APGAR LARRY PAKKALA WILL HEINTZ DENNIS PETRUZZELLI

> Advertising Manager MIKE MONGON 201-843-6960

Photographer DOMINIC RICHICHI

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ADDRESS: P.O. Box 396, Mamaroneck, NY 10543.

Spotlight

All About July's All-New Meeting Site and Host

uly 26 marked the MetGCSA's premier visit to the 101-year-old Powelton Club in Newburgh, NY. Hosting the golf meeting was Bob DeMarco, the club's super since 1982.

When Bob took over at Powelton 11 years ago, he was no stranger to the operation. Early in his career, he served as the club's assistant for four years, under the late Bill Smart.

Bob's interest in turfgrass management began when he graduated high school and started working summers on the grounds crew at Southern Dutchess Country Club, a nine-hole course in Beacon, NY, where he was born and raised. He enjoyed his experience there so much, he decided to pursue formal training.

He enrolled in UMass's Winter Turf School, and when he completed the program in 1976, he signed on as Powelton's assistant.

In 1980, he left the club for a super-

intendent's position at Kutchers Country Club in Monticello, NY. Two seasons later, he returned to Poweltonthis time as superintendent.

During his tenure at The Powelton Club, Bob's seen the 90-acre course through numerous renovation projects. Many are being guided by a long-range plan established in 1985 by renowned golf course architect Geoffrey Cornish. On the architect's long list of enhancements were bunker and tee renovations, mounding, and tree planting.

To date, Bob and his crew have moved the 6th tee, added a bunker on the 4th hole, renovated a bunker on the 11th hole, and added mounding on the 1st and 9th holes.

Three seasons ago, he also embarked on a program designed to convert the fairways from poa to bentgrass.

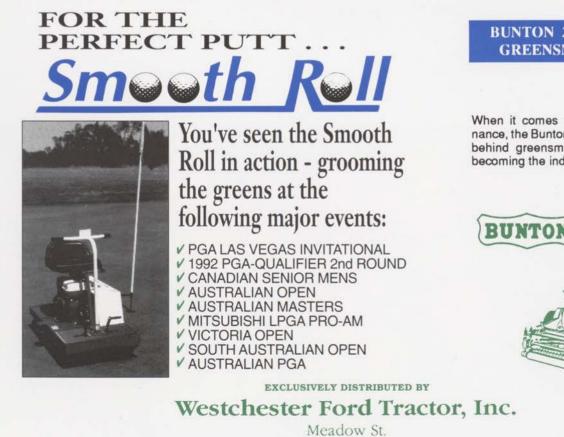
"We've seeded with bentgrass the past three seasons," says Bob, "and this season, we've begun experimenting with Scott's TGR."

But perhaps the most significant project Bob's had a hand in was in 1985, when the club hired Cornish to relocate the 17th hole and a handful tees-#11, #15, #17, #18-to make way for the expansion of I-84's Newburgh-Beacon Bridge. This was also the most significant departure from the course's Devereaux Emmet design, which hadn't been tampered with since the late 1950s, when Robert Trent Jones was brought in to partially rebuild holes #6 and #7.

Like many superintendents, when Bob leaves work, he doesn't have far to go: He lives on club grounds with his wife, Elayne, and 6-year-old son, Geoffrey.

A sports enthusiast, Bob's favorite pastimes are golf, running, biking, hiking, and, most of all, skiing.

DENNIS PETRUZZELLI, CGCS Lakeover Country Club



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BUNTON 22" and 26" GREENSMOWERS

When it comes to greens maintenance, the Bunton 22" and 26" walkbehind greensmowers are rapidly becoming the industry standard.

Tee to Green July 1993 (3)

Taking the Guesswork Out of Your Fertility Program

mathematical calculations, a printer to generate nutrient data reports, a microwave, and a series of small petritype dishes called cells. We have about 20 cells—enough to isolate samples from our 17 fairways and still have several spares on hand in case one breaks.

The most costly—and critical—piece of equipment is the scanner. We have a Karsten Turf Model #491 scanner, which, in 1991, cost about \$20,000. Included in that price is the software required to run the tissue analysis.

Extra are the grinding mill, a couple hundred dollars; the cells, a few dollars each; and the computer, printer, and microwave, which vary in price, depending on what you select.

Though the start-up costs seem steep, you're bound to make that money back by allowing tissue analysis to guide your fertilization program. Read on. You'll see what I mean.

Tissue Testing, Step-by-Step

Step one is to determine what areas of your course you'd like to test and how often you'd like to test them. We alternate analyzing greens, tees, and fairways once every three to four weeks. This span allows any nutrient-deficient areas ample time to benefit from our corrective fertilizer applications.

Once you've got that down, you're ready to begin your NIRS analysis. In short, the process works like this: You collect your samples, dry the grass leaves, pulverize them, then put them into the scanner.

The scanner flashes light in the near infra-red wavelength spectrum onto the samples. The samples reflect light, and the instrument records the light the samples reflect.

From that information, your computer calculates how much of the 12 elements—nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, zinc, copper, iron, manganese, boron, and sodium—are in the turfgrass samples.

At Lakeover, I have our mowing operator collect clippings from each area, put them in small sandwich bags, and mark where each sample came from (#1 green, #4 tee, etc.).

We then remove the water from the plant tissue by running it through our 600-watt microwave. We can dry four samples at one time. It takes about 16 minutes at 100 power.

To keep each sample separate, we lay them out on coffee filters. You can use anything that will tolerate a microwave. We like coffee filters because we have an abundance of them, and I can write where each sample comes from directly on the filter.

Next, we pulverize the dried samples in the grinding mill and put the powder from each sample into its own cell. The tissue samples are now ready for analysis. By the way, the nutrient content of the dried tissues will remain the same forever.

We place the samples in our Karsten scanner, which uses our 386 computer with Mathco Processor to compute our samples' nutrient content. It takes about one minute per sample.

Once the calculations are complete, we're able to generate a report that shows the percentage of the six macro nutrients and the parts per million and parts per hundred thousand of the six trace nutrients. It also gives us the target values for each nutrient. Another item the analysis computes is the dry matter percentage of each sample. This is important because samples dried in the 92- to 98-percent range offer the most accurate results.

At the bottom of the page is a sample of a report I generated from a tissue analysis conducted on my first fairway.

Putting the Results to Work

Now comes the tricky part: deciding how to treat any deficiencies that show up in the tissue analysis. At first, this involves a certain amount of trial and error. One element we've had our share of trials with is iron—particularly last season on our greens and tees.

We found granular iron most effective in correcting deficiencies, and we devised low, medium, and high application rates to remedy slight, moderate, and significant deficiencies.

In the report below, you'll see our iron levels on the first fairway have actually slightly exceeded the target value. Fine by me.

Now looking at my potassium level . . . if this were the fall, I'd be con-

Fertility Profile of Lakeover's First Fairway

Constituent	100% Dry Matter Corrected Lab Analysis Results	Target Values For Turfgrass Maintenance	
Nitrogen %	3.97	4.20 -	4.80
Phosphorus %	0.40	0.45 -	0.60
Potassium %	0.27	1.50 -	2.50
Calcium %	0.70	0.45 -	0.60
Magnesium %	0.19	0.25 -	0.35
Sulfur %	0.16	0.25 -	0.35
Zinc ppm*	56.69	45.00 - 0	65.00
Copper ppm	22.84	10.00 -	15.00
Iron ppht**	87.94	60.00 -	80.00
Manganese ppm	163.48	80.00 -1	50.00
Boron ppm	24.13	10.00 -	15.00
Sodium ppht	156.32	5.00 -1	00.00
Dry Matter %	(Acceptable Range 92.00 - 98.00)	91.51%	

ppm = parts per million

**ppht = parts per hundred thousand

CHEMICALS SUPPLIES

cerned. I like to keep it on the high side going in to winter since it yields a sturdier, less turgid plant that is less susceptible to winter injury.

Another nutrient I keep tabs on is nitrogen. When it's hot and dry, I like my nitrogen levels to be low to keep the turf on the lean side and protect it from pest damage. The 3.97 reading is right on target for this time of year.

We also keep a close watch on phosphorus. We try to maintain low levels to discourage poa annua from creeping into our newly rebuilt greens, tees, and fairways, which were seeded with bentgrass varieties. So I'm pleased that, in this test, phosphorus falls below the target value.

The other elements on the report are, of course, essential to good plant growth, but I'm less concerned about them because—despite the slightly high readings—they've never caused a problem on our course.

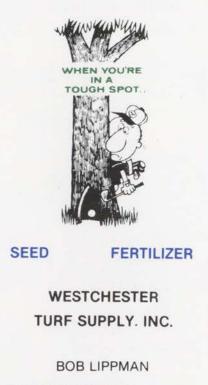
Final Analysis

I can't say enough about the benefits of tissue analysis. With it, we've been able to identify deficiencies well before they're visually apparent—and more difficult to remedy.

Just as important, we're able to produce healthy turf by feeding it only what it needs. That's made tissue analysis not only a money-saver, but also a great IPM tool. We never waste valuable budget dollars on unnecessary—and costly—fertilizer applications, and our turf is never overly lush. That means it's less susceptible to pest damage and requires fewer chemical applications—a combination that's tough to beat.

If you're considering tissue analysis for your course, give me call. I'd be happy to give you a demonstration and put a piece of *your* turf to the test.

DENNIS PETRUZZELLI, CGCS Lakeover Country Club



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Scorecard

Willow Ridge Crowned Invitational Champs

hunderstorms rumbled in the background as 132 players made their way to the final hole in the June 21 Invitational Tournament at the Country Club of Darien. Though the scores were close, Willow Ridge rose to the top with a low net score of 59. Congratulations!

Here's a look at how all the top contenders fared:

Low Net Winners

Low Gross Winners

67 Century Country Club

68 Wee Burn Country Club

Robins, Bill Sanders

68 Middle Bay Country Club

Jim Fulwider, Barry Frank,

Rick Schock, Roy Pace, Todd

John Carlone, Alan Feldman,

Gary Schwartz, Doug Steffen

#11 John Carlone, Superintendent,

Middle Bay Country Club

Rock Ridge Country Club

#17 Don Samatulski, Golf Pro,

(won on match of cards)

Nelson Long Jr., Richard Schwartz

- 59 Willow Ridge Country Club Bert Dickinson, Bob Ganz, James Jond, Warren Light
- 60 Mount Kisco Country Club Fred Scheyhing, Don Adams, Nick Manolios, Tom Odea (won on match of cards)
- 60 Silver Spring Country Club Peter Rappoccio, Bill Arnold, Stan Garrett, Larry Wills

Closest to the Pin

- #5 Alan Feldman, Club Official, Middle Bay Country Club
- #7 Mike Aronstein, Green Chairman, Westchester Country Club

Longest Drive

#12 Todd Ohlmeyer, Amateur, Woodway Country Club

#18 Kelly Moser, Golf Pro, Brae Burn Country Club

Special thanks to our host and MetGCSA President Tim O'Neill and his crew for seeing that the course was in perfect condition. Many thanks, too, to Club Manager Ian Fetigan and Golf Pro Ed Nicholson and their staffs. They did a first-class job.

Reminder: We're looking for meeting sites for 1994. Anyone willing to offer their club for one of our monthly meetings should give me (516-766-1838) or Matt Ceplo (914-948-5023) a call.

JOHN CARLONE, CGCS Middle Bay Country Club



The new Invitational Trophy holders (left to right) are Willow Ridge's Superintendent, Bert Dickinson; Golf Pro, James Jond; and Co-Green Chairmen, Warren Light and Bob Ganz.

Scorecard

MetGCSA Two-Ball Update: Round Two

s the summer heated up, so did the quarter final matches in our Two-Ball Championship. Advancing to the semi-finals were:

- #16 Chuck Martineau/Fred Scheyhing 3 and 1 over
- #9 Les Kennedy/John Streeter
- #13 Mike Mongon/John O'Keefe 1 up over
- #12 Dave Arel/Joe Cotone
- #10 Tony Grasso/Greg Wojick 3 and 2 over
- #2 Bob Alonzi/Joe Alonzi
- #14 Mike Leary/Tony Savone 2 and 1 over
- #11 Gary Arlio/Bob DeMarco

The top seeded teams have been defeated, with the 10th, 13th, 14th, and 16th seeded teams surviving to the semi-finals. The importance of team chemistry (better known as ham and egging) has been echoed over and over by the victorious teams. Congratulations to the winners! Semi-final matches must be played by August 26.

DAVE MAHONEY Siwanoy Country Club

Upcoming Events

Meeting Reminder

Golf Meeting

Monday, September 20 Hampshire Country Club, Mamaroneck, NY Meeting Host: Will Heintz

Educational Events

MetGCSA Professional Turfgrass Field Day

Tuesday, October 19/Rain date: October 20 Westchester Country Club, Rye, NY For further information contact Field Day Committee Chairmen Al Tretera, 203-763-3581, or Jeff Scott, 914-967-2570.

Turf and Grounds Exposition

Tuesday-Friday, November 9-12 Rochester Riverside Convention Center Rochester, NY For further information, call NYSTA, 800-873-TURF.

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