



TEE TO GREEN

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Metropolitan Golf Course
Superintendents Association

President's Message

Special People . . . Special Recognition

Over the years in the golf course business, I've been fortunate to come into contact with many special people—people who have helped make my professional and personal life better. Many of you out there, I hope, can say the same.

For some of us, it's a club member who respects us professionally—and if we're lucky that member is our greens chairman. You know the type of person: the one who's amazed at how things come together after a storm or before a big tournament—and never forgets to mention it to you.

Mine even thanks me—and always has words of praise for my crew too. He's the kind of chairman who's in the locker room even if there's a two-hour delay because of frost or inclement weather—certainly not a "fair-weather friend." I've been fortunate to have the experience of working with a few like that.

A good greens chairman is your ally and greatest supporter, through job highs and lows. He's someone who's there to divert a committee member who's overstepping his bounds or deflect concerns over one of those inevitable turf problems—a hydraulic leak on one of your greens or a tough-to-diagnose ailment on your fairways.

Though your greens chairman clearly plays a critical role *(continued on page 2)*

Special Feature

So You Want Bentgrass Greens

Here's a Look at the New Crop of Choices

For most golf courses, bentgrass has become the seed of choice—particularly for greens. But with the many bentgrass selections available these days, settling on a variety that's best suited for interseeding your greens can be bewildering at best.

What follows are some insights hot off the internet from Kelly Seed Company Turf Consultant Frank Lopes. Integrated in his prose is sage advice from Dr. Richard Hurley, director of research for Lofts Seed Inc. and an adjunct professor in Rutgers University's Plant Science Department, and Dr. James Murphy, extension specialist in turfgrass management in Rutgers' Plant Science Department. The lion's share of their thoughts were drawn from the article "Creeping Bentgrass: The Legacy and the Promise," which they coauthored for the July '96 issue of *Golf Course Management*. (It's well worth a gander for more in-depth coverage of creeping bentgrasses and their origin.)

The Evolution of Bentgrass Varieties

Though Mother Nature has been growing bentgrass longer than any superintendent, what you'll find on today's golf courses is an entirely different "breed" of bentgrass.

Transplanted out of its natural environs, mistreated, and overly groomed, these bentgrasses have been fine-tuned to withstand golf's new—and unnatural—demands. All have improved texture and narrow leaf

blades that create a more dense stand and a nongrainy putting surface.

We have gone from density counts of 900 to 1,000 plants per decimeter with Penncross and Pennlinks to 1,400 to 1,600 plants per decimeter in SR 1019 (Providence), Crenshaw, and Cato. Penn A-1, G-2, and G-6 density counts are even higher with 2,200 and 2,600 plants.

In addition, we've improved heat tolerance, lowered *(continued on page 4)*

Also in This Issue

- ② Mark Your Calendar With These Upcoming Events
- ③ Beware of Poa-Eating Bacteria! Cautionary Notes From URI's Dr. Noel Jackson
- ④ What Area Supers Have to Say About Bentgrasses on Their Course
- ⑨ An Informal Tuxedo Suits Met to a Tee

Special People . . . Special Recognition

in your job satisfaction and success, there are others out there who can be a great source of support—and better—professional expertise and advice. And they're usually just a phone call away: your fellow Met members—both superintendents and commercial people.

It's nice to have that magic directory of names by the phone. Make three or four calls and suddenly you have moral support, as well as some great advice. None of us will forget last year's "Black Sunday," that day in July when many of us suffered tremendous turf loss and trauma. We all thought we were alone until we compared notes with fellow superintendents and found many of us were in the same boat.

Our commercial members can also be a great fund of information and knowledge—about equipment, chemicals, seed, or fertilizer products, what's working, what's not. They see a lot, so

they're able to share the trials and successes of other superintendents; this helps us learn from one another.

Our commercial members also offer us support by being available to loan us equipment—or just transport equipment for us—when we're in a tight spot. One company rep, who's been a friend for years, has even gone so far as to deliver core samples to Rutgers for me for testing. Clearly, he's gone above and beyond the call of duty. I appreciate that.

Before closing this issue's message, I'd just like to thank the many people out there who have offered me their support.

As members of the MetGCSA, we have a tremendous pool of resources literally at our fingertips. We should remember to take advantage of them—and always to reciprocate when we can.

JOHN J. O'KEEFE
President

Upcoming Events

Meeting Reminders!



Met Area Team Championship Qualifier, Final Round

Monday, October 7
Pine Hollow CC, East Norwich, NY
Host Superintendent: Gerry Kunkel

Superintendent/Green Chairman Tournament

Thursday, October 24
Old Westbury Golf & CC, Old Westbury, NY
Host Superintendent: Phil Anderson

Annual Meeting

Tuesday, November 19
Powelton Club, Newburgh, NY
Host Superintendent: Bob DeMarco

Golf Event

Met Area Team Championship

Monday, October 28
Maryland Golf & CC, Belair, MD
Host Superintendent: Donn Dietrich, CGCS

Educational Events

GCSA of New Jersey Turfgrass, Equipment, Irrigation, and Suppliers Field Day

Tuesday, October 8
Rutgers University Golf Club/Stadium Complex
Piscataway, NJ

For further information, contact Judy Policastro at 201-379-1100.

NYSTA Turf and Grounds Exposition

Tuesday – Friday, November 12 – 15
Riverside Convention Center, Rochester, NY
For further information, call 800-873-TURF.

NYSTA Service School

Friday – Saturday, November 22 – 23
SUNY Cobleskill, Cobleskill, NY
For further information about this equipment service course for golf course mechanics, call NYSTA at 800-873-TURF or Larry Van De Valk at 518-234-5572.

Rhode Island Turfgrass Show and Conference

Wednesday – Thursday, December 4 – 5
Providence, RI
For further information, call 401-847-7666.

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Beware of Poa-Eating Bacteria

University of Rhode Island's Dr. Noel Jackson Warns of Threat to Annual Bluegrass Turf

From Pennsylvania on up through Maine, there have been cases of a potentially devastating disease affecting annual bluegrass (*Poa annua*) this growing season.

Dubbed bacterial blight, this insidious disease seems to be caused by a species of *Xanthomonas* that can wreak havoc on annual bluegrass plants as they finish flowering. According to University of Rhode Island's Dr. Noel Jackson, the prognosis is bleak, at best, if the blight is not detected—and treated—early.

"We've been recommending a fixed copper pesticide—Kocide," says Dr. Jackson. "When applied early in the symptom development, this fungicide/bactericide offers good short-term control. But once the disease is in its advanced stages, there's little to do but renovate," he cautions.

Recommended rates of application

for Kocide are in the 1- to 4-oz./1,000 square feet range. Depending on the formulation used, applications should be repeated in 7 to 10 days.

Apparently, no other products are registered for this type of turfgrass ailment, with the exception of Mycoshield (tetracycline). "But this product has proved only moderately effective, and it's costly and tends to be phytotoxic," says Dr. Jackson.

Though bacterial disease in turfgrasses is not a common phenomenon, a major outbreak during the late '70s/early '80s wiped out all of the Toronto creeping bentgrass greens in the Chicago area. This disease on *Poa annua* has been seen intermittently over the past few years in the Atlantic and New England regions. A severe outbreak killed a good amount of turf at the Congressional Club in Maryland two years ago.

"This poa-eating bacteria is often found in conjunction with other turfgrass ills, such as pythium basal stem rot and anthracnose," notes Dr. Jackson. And as with many of the new and hard-to-remedy ailments striking our turf these days, Dr. Jackson suspects this one may also be the result of excessive wear-and-tear and stressful maintenance practices on our courses.

"Inclement weather, low cutting heights, excessive grooming, and compaction from lots of play are probably the major contributing factors," says Dr. Jackson.

What to do?

"Keep an eye out for the telltale small spots of mottled and yellowed blades on annual bluegrass plants," recommends Dr. Jackson. "Have these symptoms diagnosed immediately to confirm the cause, and treat as soon as possible."

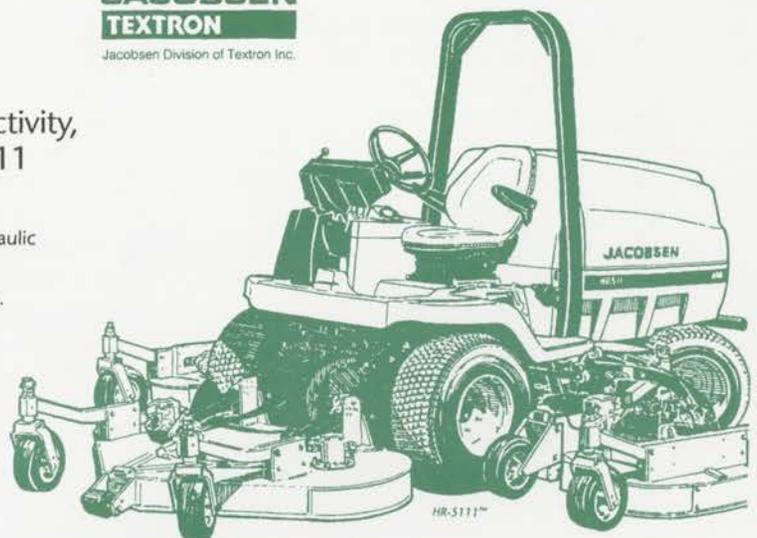
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So You Want Bentgrass Greens

fertility needs, increased tolerance for lower mowing heights, and ultimately, increased putting green speed.

As bentgrass varieties evolve, so do our maintenance demands and practices.

For instance, many of these newer bentgrass varieties will thrive at cutting heights of $5/32$ " or less—preferably $1/8$ "—and will respond poorly to continual adjustments to those heights. Aerifying frequently with smaller tines of $3/16$ " and $1/4$ " and topdressing more often and lightly have become necessary to combat the density-caused thatch.

By grooming bentgrass for very specific growing conditions and climates, we've sacrificed some of Mother Nature's diversity, which insures a species' survival over larger climatic environs.

For the superintendent that means bentgrass selection shouldn't be taken lightly: Plant the wrong bentgrass, and you could jeopardize your greens' survival.

Bentgrasses North and South

Before settling on a bentgrass for your greens, it helps to know that these grasses can be grouped into two general categories:

- "Northern types" thriving in moderately warm, humid summers and snow-covered winters with a short growing season
- "Warm arid" types with climates of high, dry temperatures, excessive heat, and an extended growing season

Though the Southeast doesn't quite fit into either category, a subgroup of

bentgrasses is forming within the "warm arid" varieties—as seen at Augusta National—that thrive in the humidity and open winters of this region.

Among the Northern bentgrass varieties that have also shown promise in the Southeast are Southshore, SR 1019 (Providence), L-93, Cato, 18th Green, Cobra, Viper, Pennlinks, and others like Penncross. Generally, these varieties grow more aggressively in the spring and fall months, and the newer varieties in this group have improved heat and humidity tolerance. In addition, they offer some disease resistance and also consistently prefer lower mowing heights over the older types.

The "warm arid" types, such as

What Area Supers Have to Say About the Bentgrasses on Their Course

Steve Cadenelli, CGCS, Metedeconk National Golf Club, Jackson, NJ

"Our greens are relatively new: Half were seeded 9 years ago, the other half about 10 years ago—all with Penncross. Personally, I'm very pleased with this variety. It's reliable. You screw up, and it holds in there. It takes wear, winter damage; it's a great base grass, contrary to some who feel it doesn't make for a great putting surface because the leaf blades tend to be wider and the stand less dense than some of the newer varieties. It does tend to spike up, and that's a concern for clubs who aren't spikeless, but here, the comments on our greens—which we maintain at $9/64$ ", maybe a little closer to $1/8$ "—have been superb.

"Because Penncross is a hybrid with many different sets of parents, it does, over time, tend to segregate. Though we haven't seen that yet, we've begun overseeding with some of the newer bentgrass varieties—to guard against segregation and gain a finer textured, denser stand of turf. We've been

dormant seeding in early December. We do it then because, in spring and summer, we apply a pre-emergent herbicide, Betesan, to keep our greens free of poa. So far, so good."

"When overseeding, we first go in and use stubby, short tines that go down about $1/2$ ". We apply 1 lb./1,000 square feet of seed—a combination of Crenshaw, Southshore, and SR 1020. Then we topdress heavily.

"On greens with a southern exposure, we've seen germination as early as February. It's a slow process, but that's okay. We're in it for the long term."

Scott Niven, CGCS, The Stanwich Club, Greenwich, CT

"Our greens were originally seeded to Penncross, but over the years it's segregated out to various biotypes. We've been overseeding when we aerify in the spring and fall with Pennlinks, SR 1020, or Providence at 1 lb./1,000 square feet each time. We've also been contemplating starting a program where we seed every time we topdress.

"I've been working for years to keep the poa out of our greens, but I've just about thrown my hands up. It's not realistic. The bentgrass just can't make it when we're often double cutting at $1/8$ " to maintain the fast green speeds that our membership wants year-round.

"We are, however, looking at some of the newer bentgrass varieties that are supposedly bred to withstand lower cutting heights. In fact, last fall and this spring, we established a nursery with 25 bentgrass varieties, each replicated three times in 10-foot-square plots and maintained at green height, to see how they perform. We'll know more next spring.

"At the Rutgers Turfgrass Field Day, I did see some bentgrass varieties that looked really good: The new G and A varieties—particularly the A-4, G-6, and G-2—had a nice fine texture and upright growth. The G-2, however, seemed to have suffered more winter damage and was slow to recover. Here it was early August and the turf hadn't filled in yet. It doesn't have much of

Crenshaw, Cato, SR 1020, L-93, and Putter, tend to excel when adequate heat is achieved. These varieties have an upright growth and, therefore, will not fill in as quickly as the semi-erect or prostrate varieties. They offer a non-grainy putting surface and are more thatch producing. They are also less tolerant of adjusted mowing heights, prefer tighter mowing conditions, and are more drought tolerant. Within this group is data suggesting a subgroup of more humidity-tolerant species, such as Penn A-1 and G-6

Along with their increased density is their unique breeding history. They have been topcrossed with the base of only one clone. This speaks volumes for reduced segregation potential, but it is generally not accomplished because

successes or improvement are rare. These bentgrass varieties, however, are proving to be strong performers across the Southern trial sites.

Top Performers From Coast to Coast

Results from a 1993 national bentgrass test sponsored by the National Turfgrass Evaluation Program (NTEP) indicates significant performance improvements in many of these newer bentgrasses. The findings, which were drawn from 26 university putting green sites across the U.S., show A-4 and L-93 to be the top two performers, followed by Providence, A-1, Crenshaw, Cato, G-6, G-2, and Southshore, respectively.

These varieties all produced higher quality ratings than Penncross, which,

released in 1955, was the first improved seeded creeping bentgrass available to superintendents. Though Penncross recovers well after thinning from excessive traffic, disease, and insect activity, it requires an aggressive maintenance program to minimize thatch buildup and control excessive grain.

Other performance notes of interest drawn from Drs. Hurley and Murphy's *Golf Course Management* article:

- In trials established by University of Georgia turf extension specialist Dr. Gil Landry at Atlanta Athletic Club in Georgia, he found that some standard bentgrass varieties thinned excessively during hot July and August temperatures. Performing consistently well during this period, however, were A-1, Crenshaw, G-2, G-6, L-93, SR 1020, and Southshore.
- In breeding Crenshaw and Cato, Texas A&M turfgrass breeder Dr. Milt Engleke concentrated on developing varieties tolerant to extreme high-temperature stress. When put to the test on a 5-year-old green by University of Georgia's Dr. Robert Carrow, Crenshaw and Cato had the least root-length density loss over the summer (within the 10- to 20-centimeter root zone when maintained at a high nitrogen level). Crenshaw also had a higher average root-length density in late summer than Penncross. Though developed for heat tolerance, says Dr. Engleke, "there is no reason why Crenshaw and Cato would not perform in transition and cool climates."
- In trials at Rutgers, L-93 produced high-quality, attractive summer turf without preventive fungicide applications. It also displayed good resistance to dollar spot, snow mold, and brown patch. Other characteristics of this variety: good winter color retention and a medium-dark-green color during the growing season; a desirable density level with an upright, almost grain-free growth pattern.

Though L-93 will produce a finer, denser turf than most commercially available varieties, it's not as dense as the A and G series varieties from Penn State.

(continued on page 6)

the aggressive creeping kind of growth—like Penncross, for instance.

"Depending on what we see with our experimental plots, we may, in the next four or five years regrass—strip and sod—all our greens with a newer, hardier bentgrass variety."

Gregg Stanley, CGCS, Hudson National Golf Club, Croton-on-Hudson, NY

"The course's greens were seeded last summer and fall with a half-half mixture of Pennlinks and Southshore. Our fairways were sodded with Crenshaw and Southshore. Honestly, I can't really tell the difference between the three varieties. They all look quite good.

"Because the course is so new—it opened to play this summer—we haven't had any problems with the turf. It weathered this past winter well, and makes for a nice playing surface. Of course, it helps tremendously that our play is spikeless—*what* a difference it seems to make. We're maintaining the greens at 1/8" and have seen very little poa—so little, in fact, that we've been

able to remove it by hand.

"We overseeded this year on August 20 and will continue to do it annually—maybe a little earlier next year to be sure the greens recover from the process before poa germinates and gains a foothold.

"This time around, we overseeded with only Pennlinks—1 lb./1,000 square feet—primarily because the Southshore wasn't available. We aerified with 1/4" quadra tines, drop spread the seed, broomed it in, and blew off the organic debris. Because our greens are new and consistent, there's really no need to change the structure with topdressing. We *did*, however, add a little topdressing three days later to smooth up the greens.

"I've been surprised and encouraged by how much seed has come up. Five or six days later, the grass was coming up in the holes like crazy. It probably has a lot to do with the fact that we have sand greens. With the sand, we can really water in the seed without sacrificing the greens' firmness."

So You Want Bentgrass Greens

- Shoot densities for Southshore, Pennlinks, Providence, and SR 1020 have been shown to be about 40 to 50 percent greater than Penncross. These increased densities produce a finer, denser turf with improved putting qualities and without excessive grain, thatch, and puffiness.

- New Penn A and G series varieties produce an extremely fine, dense turf best adapted for putting green use. They are a very specialized group of creeping bentgrasses that require a very specific type of management. This includes close mowing, with a maximum height of cut of about $5/32$ " and preferably about $1/8$ ".

Penn State turfgrass breeder Dr. Joe Duich further recommends more frequent and light aerification, using smaller tines— $3/16$ " and $1/4$ "—to keep the greens from thatching up and getting puffy. More frequent top-dressing and brushing and light grooming also help, he says. Dr. Duich's only caveat: Don't use these grasses on sites where you raise and

lower mowing heights over the course of the growing season.

The Penn A-1, G-2, and G-6 varieties provide shoot densities about 50 to 70 percent denser than Southshore, SR 1020, Pennlinks, and Providence, and 100 to 150 percent denser than Penncross.



"Even if you interseed with the best of new varieties, if your greens have problems—poor soil composition, drainage, air circulation, excessive shade, etc.—you won't change them significantly."



A high-density shoot growth enables the turf to more effectively fend off weed invasion, notes Dr. James Beard and colleagues in a recent research report. But these types of cultivars also

tend to form a puffy surface over time if not mowed closely and frequently.

What's the Best Bentgrass for Your Course?

Look—Carefully—Before You Leap

Though published statistics and ratings about bentgrass performance and color may offer a partial guide in your selection process, it's important that you note where and when the data was collected and perhaps even by whom.

Top performers in Southern test sites, for instance, may be poor performers for us in the North. And let's face it, turfgrass breeders may be partial to their own varieties. Other points worthy of consideration:

- Was the site on modified greens mix or native soils?
- How was the green cared for?
- How old was the plot?
- How much recovery do you need from play?
- Are you prepared and able to fine-tune your maintenance practices?
- Could it help to have earlier spring growth, as well as summer heat toler

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ance? Perhaps a blend of both modified (sand-based) or native (push-up) greens mix could expand your growing conditions and season.

Another often overlooked consideration when setting out to interseed, according to Dr. Richard Hurley is the basic condition of the green. "Even if you interseed with the best of new varieties," he says, "if your greens have problems—poor soil composition, drainage, air circulation, excessive shade, etc.—you won't change them significantly."

Assuming you have good greens, Dr. Hurley recommends first going in with a growth regulator—such as Primo or Scott's TGR applied at the manufacturer's recommended rates—about two to three days prior to seeding to slow the growth of competing grasses.

In their *Golf Course Management* article, Drs. Hurley and Murphy offer the following basic recommendations for using commercially available creeping bentgrass varieties on putting greens:

- **For tournament sites with consistent low mowing heights** of $1/8$ ", consider the following varieties: A-1, A-2, A-4, G-2, G-6, L-93, Providence, Southshore, and Cato and Crenshaw—the latter two being better adapted to hot climates with long, extended summers. These varieties will better tolerate a lower mowing height and will produce less grain compared with most other commercially available varieties.

Remember, A-1, A-2, A-4, G-2, and G-6 require special care. They shouldn't be cut too high—above $5/32$ "—and excess thatch, scalping, and puffiness may develop.

- **For courses with medium-to-heavy play, moderate budgets, and a moderate mowing height** of about $5/32$ " to $3/16$ " or higher, the following are recommended: L-93, Pennlinks, Providence, SR 1020, Southshore, and Cato and Crenshaw—the latter two, again, being better adapted to hot climates with long, extended summers. These varieties are proven performers. They

have good putting qualities and produce less grain without excessive maintenance.

"Our general recommendations," says Dr. Hurley, "include selecting any one of these varieties. Or blend two or more if they have compatible characteristics that will enhance their performance."

Topping Dr. Hurley's list of recommended new bentgrass varieties is, not surprisingly, Lofts' and Rutgers' L-93. He cautions that highly rated Penn A-1, G-2, and G-6 varieties have had problems with scalping and puffiness due to excessive density. Also, the varieties SR 1020 and G-2 have had problems with gray snow mold. But then, there are those who say that even bentgrass varieties that have shown improved resistance to snow mold, dollar spot, and brown patch on greens, tees, and fairways, still require fungicides.

Also disease resistance at one location may not be the same at other locations because of a pathogen's potential variability and differences in climate and soil conditions.

Multilocation, multiyear trials will provide greater reliability in assessing disease resistance.

End Notes

It's hard to predict precisely how quick the interseeding process will be. The naked eye, after all, cannot discern a 10 percent—or even 50 percent—take. The conversion process requires time—and the more severe your grooming practices, the more lengthy the process.

If you've already interseeded, start to tailor your maintenance practices to the newer species' requirements by reviewing your watering and mowing practices and your selection and application of fertilizers.

If you haven't yet interseeded but are considering it, survey university test plots, and perhaps more important, other courses' greens. When you find a course with a variety you think might work at your facility, be sure to carefully question the superintendent on the turfgrasses' performance throughout the entire year and over time.



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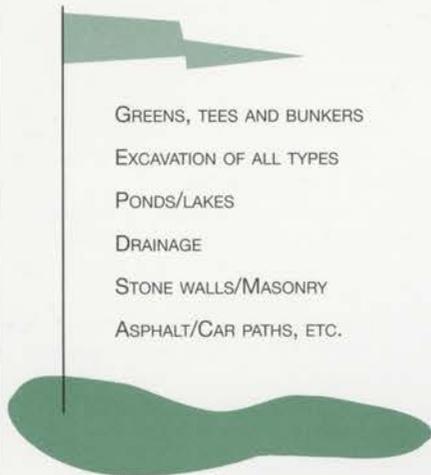
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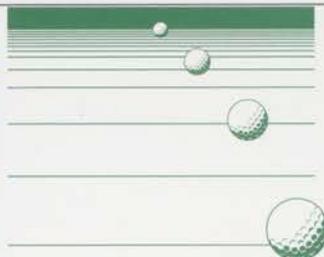
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Our competition for the day was an individual gross and net tourney. It was also the first round of the MetGCSA Class A Championship. We had great play, particularly in the gross division. Here are the results:

Low Gross Winners

76 Mark Millett, *Old Oaks CC*
 77 Ken Clear, *Alpine, the Care of Trees*
 77 Ron Shapiro, *Bruedan Corp.*
 78 Matt Ceplo, *Rockland CC*
 78 John Carlone, *Middle Bay CC*
 78 Mike Medonis, *Bonnie Briar CC*

Low Net Winners

66 Gary Arlio, *North Jersey CC*
 68 Joe Kennedy, *Irra-Tech, Inc.*
 69 Tim O'Neill, *CC of Darien*
 69 Al Tretera, *Turf Products Corp.*
 70 John Gaspar, *Ridgewood CC*
 70 Joe Alonzi, *Westchester CC*

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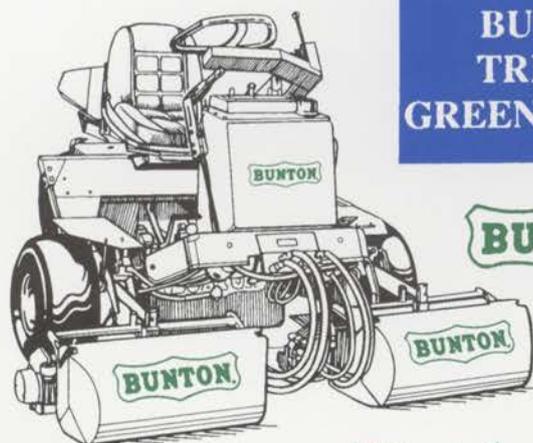
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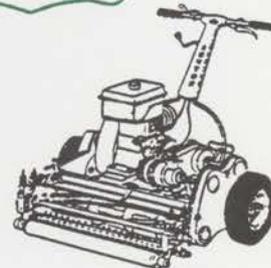
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