THE NEWSLETTER

Golf Course Superintendents Association OF NEW ENGLAND, INC.

Sponsors and administrators of the Troll-Dickinson Scholarship Fund – Awarded yearly to deserving Turf Management Students.

December 1998

Golf Course Mechanics Association fosters education & exchange of ideas

The percentages weren't with him . . . in a big way.

Several years ago Steve Lucas mailed fliers to 270 New England golf courses, soliciting interest in the formation of a golf course mechanics association.

"I was underwhelmed with responses," he head mechanic at the Weston Golf Club joshed. "I received two inquiries. Two! Two out of 270. That's worse than my high school batting average."

Whatever, that weak reaction to an idea Steve had rolled around in his head for a long time only served to strengthen his perseverance cells. Today, the pipe dream has developed into reality. The Golf Course Mechanics Association of New England has 200 members, and participation in effecting its goals is on the upswing.

Lucas and Brian Alfond, who keeps the motors humming at the Dedham Country and Polo Club, are the group's founding fathers, if you will. Presently, Alfond is the association president and Lucas is a sort of chairman of the board who keeps reaching out for professional respect and recognition.

"Just as conditioning the course has become a science, so too, has the job of upgrading and refining equipment used to produce a top-grade maintenance program."

Brian Alfond
Dedham Country & Polo Club

"It's very difficult to keep interest rising and members coming to meetings," Lucas told. "We have to do everything on our own. There's very little financial help available. Most of our members have to pay their own dues ($40 per year) and pay their travel expenses to meetings. That's why we don't schedule very many. We try to spread those meetings around, and meet at different clubs to ease the financial strain. Not only that, we have to convince superintendents that they (meetings) are worth giving up work time for."

Lucas is fortunate. He has Don Hearn, Weston superintendent, in his corner. Hearn is a former GCSANE president who spread his wings and flew to the top of the national mountain as GGSAA president. He knows what it means to have to convince others of the importance of a venture such as the mechanics association. His own profession was doing what the mechanics are doing today in the long ago, or when golfers thought courses transformed into top conditioned layouts by themselves. That's when superintendents were called greenkeepers, and supposedly were wrestling with the problem of determining which end of a watering hose was up.

"I think one of the stumbling blocks to our progress is that the golfing community perceives us as a bunch of workers getting together to force salary and benefits demands on management," Alfond offered. "And I suppose that would be a natural reaction. Regardless, our purpose is benefits all right, but educational benefits. We think an exchange of ideas is probably the best solution to most problems. We can facilitate that exchange with a strong association membership."

Alfond has had two supportive superintendents at Dedham: Bob Mucciarone and Jim Reinertson. "They realize that we're not trying to upstage them or put the clubs in a position where they have to negotiate with us." Brian explained. "Our group is geared to job-solving problems. We're still employees. The superintendents are still our bosses."

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THE NEWSLETTER

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Such emphasis on continuing education and using an association to bring that education to golf course mechanics throughout the region follows the high technology road golf has followed for the last 25 years.

"Just as conditioning the course has become a science, so too, has the job of upgrading and refining equipment used to produce a top-grade maintenance program," Alfond said. "When you look at it in dollars and cents, it's staggering. Whereas the total price tag on maintenance equipment was around $100,000 25 years ago, that tag has zoomed to over a million dollars today. And keeping that equipment in working order, that's our job."

Lucas notes that the role of the golf course mechanic is changing, and the change is at a rapid rate.

"When you consider that our duties range from making signs to tuning the motor on a $50,000 piece of equipment, you can see the need for mechanics to hone their skills," Steve reasoned. "We know that many people in the business fear that this is the start of another union. But wages and benefits are the last intent of our group. Most of all we need the support of the superintendent and consolidated support of the club membership."

There is no national organization of golf course mechanics. Lucas says he heard of a mechanics group that had been formed in Chicago. "I called the most visible member, John McGuire, wondering how I could join his association," Lucas disclosed. "He kind of laughed when he said it would be a long commute for me to attend meetings. Then he suggested that I try to form an association in our area. As far as I know, all of the organizing is on a regional level. Maybe it will go national one day. I haven't even thought of it.

Even in its relative infancy, the New England mechanics group has started to emulate the image-improving history of the golf course superintendents. There is a continuing message to upgrade educational goals, and a certification program looms right around the corner. Once that is established, recognition of the mechanics' role in the maintenance process is sure to follow.

"Right now we're trying to build on our numbers and put a fire under our members to participate in meetings and seminars," Lucas explained. "We have two meetings and four seminars a year. We've also had a hand in the New England Turf Conference. But, to tell the truth, what we really are looking for is support from our bosses, the superintendents. We'd like them to gives us the time to make meetings and participate in seminars. If they support us, our clubs should support us, too. That's what we're striving for."

Sounds like the golf course mechanics are making a right move. But the next move isn't up to them. They need a little help from their friends . . . and their bosses. That's their message in this missile.

GERRY FINN

"We know that many people in the business fear that this is the start of another union. But wages and benefits are the last intent of our group. Most of all we need the support of the superintendent and consolidated support of the club membership."

Steve Lucas
Weston Golf Club

Calendar

December 11	**GCSANE Christmas Party** Belmont Country Club Belmont, Mass.
January 12	**GCSANE Monthly Meeting** Franklin Country Club Franklin, Mass. Supt. - Gary Luccini
Feb. - TBA	**GCSANE Monthly Meeting** Heritage Hill Country Club Lakeville, Mass. Supt. - Robert Garrity
March - TBA	**GCSANE Monthly Meeting** Hickory Ridge Country Club Amherst, Mass. Supt. - Robert Ruszala

The Super Speaks Out

This month's question: *How do you run your chemical application program, including who does the actual spraying work, and what kind of reaction comes from your members?*

Bill Zuraw, Crumpin Fox Golf Club: "I'm pretty locked into my chemical application action here because I probably do 80 to 90 percent of the spraying myself.

That sounds like a large chunk of responsibility for just one aspect of a maintenance program. However, we are supposed to be one of the highly-rated courses as to design of the layout and so on, so it's almost mandatory that the condition of the course coincide with its playability reputation.

"This means the onus is on me and I have to respond the best way I know how. One of ways has to do with the chemical application part of the overall picture, and I'm head-on into it.

"There is one other member of my crew licensed to apply chemicals and usually he does the heavy end of the spraying on our fairways. Incidentally, everything around here is bent. That picks up the need for more chemicals and a more extensive application of them. Whatever, whenever my spray helper is doing the job, I'm on the site.

"Because of the demands that the course condition keep up with the course reputation as one of the outstanding tests of golf in the country, I make sure we stay right on top of a prevention program for our greens. With that in mind, chemicals are applied to the greens at 10 to 14-day intervals.

"This year was a tough weather year for us, as it was for other parts of New England between the early downpours and then stretches of bone dry conditions. Overall, we had a few grubs in early summer and some dollar spots on the fairways as the season progressed. I was there most of the time to combat the trouble. I knew where the chemicals had to be applied, and I was there to see that the job was done.

"I kept records of all the spraying, and have them on file so that I can check the results when the spring rolls around. I'd say we're very aware of the importance of chemical application and doing it right to comply with laws and restrictions. That's why I'm on top of things at all times."

Arthur Miller, Nabnasset Lake Country Club: "I've kept a close check on what chemicals are sprayed here over the years and have a ready reference to fall back on when it comes time to spray again.

"Nabnasset Lake is a nine-hole course. I have the application license and I do all of the spraying. I feel comfortable about that, because I'm the one who's responsible for everything that goes into the conditioning process here.

"My spraying schedule varies because I spray only when it's needed. I apply chemicals for seven or eight things, and the weather always becomes a factor. This was especially true this year, one where the weather definitely wasn't on the side of the superintendent.

"Another part of the spraying situation concerns our golfers who have become aware of the chemical application interest along environmental and ecological lines.

"With this in mind, I try to schedule spraying at times when the traffic on the course is very light. That means early morning starting time for me and an attempt to be as inconspicuous as possible. You know, you put on a spray suit and are walking around the course and golfers might start scratching their heads in some kind of questioning fashion. I try to avoid that.

"Posting what, where, and when in regard to spraying also is a must for me. I post all that information in the clubhouse before any work is done and make sure our players are able to see it. The only question I usually get is, 'what are you spraying for?' That's okay by me if that's as close to a complaint that I get."

"I have a very complicated, yet refined system of record keeping (computer mode), and know everything, past, present, and future, about our chemical application approach."

Jamie Pavlas
The Ridge Club

Jamie Pavlas, The Ridge Club: "In the beginning of my chemical application program, I did most of the spraying myself. That was my first year here, two years ago. However, now my assistant does most of the spraying. It's a sign of the times and an upgrade in the overall course maintenance picture. I have 21 people working here at the height of the season, and the demands of supervising them has to take priority.

"However, that doesn't mean that I've divorced myself from the responsibility that goes with the chemical application procedure. In fact, I have a very complicated, yet refined system of record-keeping (computer mode) and know everything past, present and future about our chemical application approach.

"The process of keeping that file has become so sophisticated that I can tell you everything about a particular chemical as to when I bought it, from whom, and how much I paid for it. That's in the records, along with how effective or ineffective the chemical was. I'm a stickler on this part of the program, and it's paying off.

"I'm also a firm believer in educating members about using chemicals on the course. I'm always open to questions, and I go out of my maintenance schedule's way to keep the spraying process at a low key level. I post the spraying times on both the first and 10th tees, and make it a rule to schedule spraying at the earliest possible hour of the morning.

"Probably the most vital part of my whole maintenance program is to have a handle on every aspect of the grooming process. I have that with emphasis on the chemical application phase. You have to know where it's been and where it's coming from. That knowledge is golden."

GERRY FINN

Turf Science

Evaluation of new turf products, Part II

by *Gail Schumann*
Univesity of Massachusetts
Monica L. Elliott
University of Florida
Paul Vincelli
University of Kentucky

(Part II of two parts; Part I appeared in last month's *Newsletter*.)

Statistics: Statistical analysis can be simple or complex, but it is an important way to determine how sure you are that an effect is due to a treatment. Here is a simple example:

Imagine two different experiments where you are testing two new products: Bio-Sure and Eco-OK for dollar spot control. In each experiment, there are four replications of the three treatments: 1) the non-treated control, 2) Bio-Sure, and 3) Eco-OK. The data numbers in the table refer to the number of dollar spot infection centers in each plot. Note that both experiments have the same average results: 103 dollar spots in the non-treated control, 23 dollar spots in the Bio-Sure plots, and 10 dollar spots in the Eco-OK plots. The data look pretty convincing that both products are giving significant control compared to the non-treated plots, but can you also conclude that Bio-Sure gives better control than Eco-OK? A statistical analysis can answer that question.

Watch out for "testimonials" and exercise some healthy skepticism.

Even though the averages are the same in both experiments, look at the variation in the numbers in the four plots. Which set of results is more convincing? In Experiment A, the numbers are similar in all replications of each treatment. This gives you more confidence that both products gave disease control, and that Eco-OK reduced disease better than Bio-Sure. In Experiment B, there is more variation and overlap between the numbers in the various replications. It is not so clear that Eco-OK worked better than Bio-Sure even though the average numbers are identical.

Statistical analysis tells you how to interpret the average numbers because most reports list only the average (or mean) of the replications. If they are "statistically significant" they are more like the numbers in Experiment A and you can have more confidence in them.

The two common ways to indicate statistical significance are shown in the table. The first is to report the Least Significant Difference (LSD). If you subtract two averages from each other and the difference is greater than the LSD, then the difference between the treatment averages is probably real and not an artifact of the experiment. For example, the LSD in Experiment A is 7.5. The difference between the averages of Bio-Sure and Eco-Ok (13) is more- than 7.5, so you can be 95% sure that the difference is real. In Experiment B, the LSD is 16.0 and the difference between the averages is still 13, so the difference is not statistically significant. You cannot be confident that Bio-Sure works better than Eco-OK from the data in Experiment B. (Most LSDs are calculated at the 90% or 95% confidence level which is indicated by p=0.1 or p=0.05, respectively.)

Another way to indicate differences is by placing letters next to the average numbers. If the two averages have no letters in common, the differences are statistically significant. In the table, you can see that the letters are different for the averages of the Bio-Sure and Eco-Ok treatments in Experiment A but are not different in Experiment B because there was no statistically significant difference between them. Next time you attend a field day or read a research report, look for the statistical analysis to help you determine how confident you can be in the results.

Treatement	Experiment A: Number of dollar spot infection centers in each of four plots	Experiment A: Average of all four plots	Experiment B: Number of dollar spot infection centers in each of four plots	Experiment B: Average of all four plots
Non-Treated Control	105	103 a	107	103 a
	97		97	
	100		105	
	110		110	
Bio-Sure	27	23 b	34	23 b
	25		35	
	19		10	
	21		13	
Eco-OK	11	10 c	10	10 b
	9		7	
	12		5	
	8		18	
	LSD (p=0.05) for Experiment A - 7.5		**LSD (p=0.05) for Experiment B - 16.0**	

If the product is for pest or disease control, does it have an EPA registration number?

This is important for several reasons, not the least of which is your own liability. There are many unanswered questions about the efficacy and safety of many of the new products, just as there are with traditional chemical controls. There is some concern about potential allergy problems, especially with fungal formulations. Some bacterial

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Turf Science

A report on 1998 BioJect System field trials

by John J. Bresnahan and Andy Drohen

Introduction

The BioJect System manufactured by Ecosoil, Inc. and distributed by Turf Partners in New England is an innovative approach to produce and apply the biological control organism, *Pseudomonas aureofaceans* Tx-1 to golf course turfgrass. Laboratory studies presented by Dr. Joseph Vargas of Michigan State University suggest that the bacteria *P. aureofaceans* Tx-l can suppress the growth of dollar spot (*Sclerotinia homoeocarpa*) in controlled environments on selective media. It is the purpose of this study to evaluate the ability of the BioJect System to suppress dollar spot development during typical golf course fairway maintenance.

The BioJect unit is a self-contained apparatus which is located in the golf course irrigation pump house. The unit will ferment or grow *P. aureofaceans* at high populations ($1x10^8$ cfu/ml) throughout the "brew cycle" and then inject the bacteria into the main irrigation lines to be applied during the irrigation cycle. Initial studies by Dr. Vargas suggest that *P. aureofaceans* should be applied at $1x10^5$ cfu/ml to effectively suppress disease. It is recommended by the manufacturer that the BioJect solution be applied nightly during the growing season. During periods of wet. humid weather, it is suggested that distribution be accomplished by utilizing a syringe cycle, or approximately three minutes of irrigation.

The objectives of this experiment were to: (1) Evaluate the ability of the BioJect System to produce viable populations of *P. aureofaceans* Tx-1 on a consistent basis to suppress dollar spot on three golf course fairways in western Massachusetts. (2) Evaluate the ability a golf course irrigation system to distribute *P. aureofaceans* Tx-l throughout the property.

Dollar Spot Control

The main study of this experiment was designed to evaluate the ability of the BioJect System to consistently produce high populations of *P. aureofaceans* and the ability of this bacteria to suppress dollar spot development on three western Massachusetts field sites: Hickory Ridge County Club, Amherst; The Orchards Golf Course, South Hadley; and Twin Hills Country Club, Longmeadow. Six treatments were applied to plots 3' by 6' in a complete randomized block design and replicated four times. The study sites were located at the beginning of fairways at Hickory Ridge C.C. and The Orchards G.C., and on the driving range at Twin Hills C.C. Treatment areas were maintained under normal maintenance schedules except that no fungicides were applied by the superintendents.

The BioJect unit was programmed to utilize a 12-hour "brew cycle" each day. At the end of the brew cycle, the BioJect solution was downloaded into clean five-gallon plastic containers and transported to each study site. The BioJect solution was then applied to the appropriate plots using a watering can to simulate an irrigation application. Each BioJect treatment plot received one half-gallon of solution containing $1x10^8$ cfu/ml of *P. aureofaceans*. The treatments included: (1) Control, where no BioJect or fungicide was applied; (2) BioJect, where *P. aureofaceans* Tx-l was applied nightly; (3) Daconil, applied on a 14-day schedule at 1.5 oz./1000 sq. ft.; (4) Banner Maxx, applied on a 21-day schedule at 1.25 oz./1000 sq. ft.; (5) Daconil Threshold, where *P. aureofaceans* Tx-1 was applied nightly, and if a threshold of five dollar spots per plot was reached, Daconil was applied at 1.5 oz/1000 sq. ft.; and (6) Banner Maxx Threshold, where P. aureofaceans Tx-1 was applied nightly, and if a threshold of five dollar spots per plot was reached, Banner Maxx was applied at 1.25 oz./1000 sq. ft.

Results

The data presented was collected at The Orchards G.C. Data was collected weekly and analyzed when dollar spot was present, using standard statistical procedures. Means were analyzed using analysis of variance (ANOVA). At all dates, treatments were highly significant in their differences, which allowed for a more detailed analysis. Further separation using Duncans Multiple Range Test (P=.05) was conducted. Table 1 presents the overall Duncan Grouping for comparison. Treatments with a different letter under the "Duncan Grouping" heading are significantly different from each other. Graph 1 represents the data collected at The Orchards G.C. illustrating the significant differences between the treatments. The control plots had significantly more dollar spot than the BioJect and all other treatments throughout the growing season.

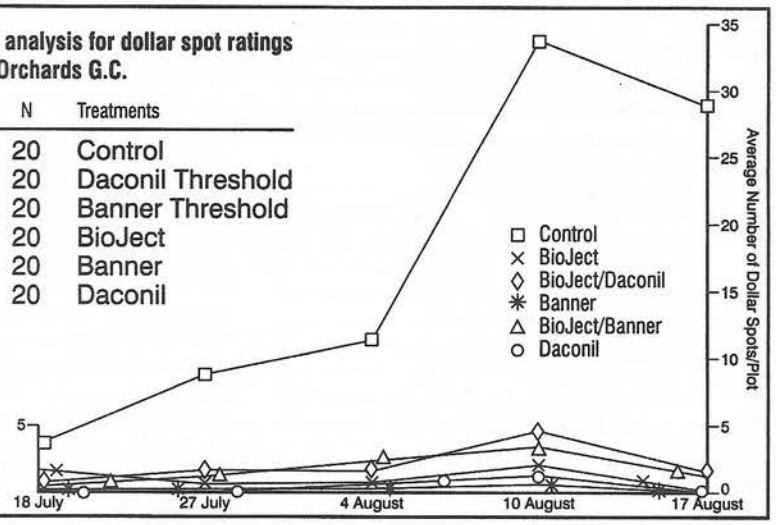
(Part II (discussion & distribution) will appear in next month's *Newsletter*.)

Table 1: Overall analysis for dollar spot ratings at The Orchards G.C.

Duncan Grouping	Mean	N	Treatments
A	17.4	20	Control
B	1.6	20	Daconil Threshold
B	1.1	20	Banner Threshold
B	0.8	20	BioJect
B	0.5	20	Banner
B	0.4	20	Daconil

Graph 1:

Recorded dollar spot ratings for the Orchards G.C.



GCSANE News

Remember when?: A monthly look at GCSANE's past

Remember when? looks at significant individuals and events of GCSANE's past.

25 years ago

News from our friends across the pond tells of a movement by British greenkeepers to influence golf shoe manufacturers to take notice of the damage their products do to greens and other finely manicured areas around the golf course. The men, who keep grass green on the other side of the Atlantic, claim that damage to greens has been on the upswing with introduction of longer, sharper golf spikes. The area most under the sword is the heavy-traffic route around the cup. In some instances golf shoes are stabbing it to death!

It looks as if our British brothers have caught on to something with their charge that golf shoe manufacturers better take a second look at the length of their spikes, or a banning process will be attempted.

15 years ago

Kevin Lyons is doing all he can to shake the snowman image. In our most recent tournament at Tatnuck, Kevin made a serious effort to get the 8s off his card. But, come now, snowy 9s and 10s are not the answer. Maybe the few months layoff from making snowmen on the golf course will rekindle Kevin's spirits and make him ready to shake the image come spring. Tatnuck, our windup tournament, drew 37 golfers in a best ball of two players per group format. The winning team was Ron Kirkman, Dave Barber, Don Levangie, Tom Schofield, and Steve Butler. Thanks go to Steve Chiavaroli and his staff for serving as top-notch hosts.

5 years ago

With the Christmas season upon us and the 1993 meeting season marked down as a definite success, the GCSANE would like to pause for a moment and extend thanks to our golf meeting hosts for 1993: Charlie Dickow, Wayne LaCroix, Gary Luccini, Dave Kahrman, Dick Duggan, Joe Rybka, Rich Caughey, Bob St. Thomas, Paul Johnson, Ron Kirkman, and last if not least, Don Marrone.

Marrone, of course, hosted the Memorial Tournament of the GCSANE at the Wachusett Country Club, and has graciously volunteered to be the host for the 1994 version next August.

The tournament is conducted with the hope of building on the association's Benevolent/Scholarship Fund. Over $6,000 is earmarked for deposit from proceeds generated at Wachusett in 1993. The fund directly benefits members and their families. Therefore, the support of all members, friends, and others is deeply appreciated.

GERRY FINN

DIVOT DRIFT...announcements...educational seminars...job opportunities ...tournament results...and miscellaneous items of interest to the membership.

EDUCATION

Mycorrhiza Symposium: Practical Applications and Biology of Mycorrhizal Fungi in the Growth and Maintenance of Woody Ornamental Plants; Feb. 16, 1999; Stockbridge Hall, U. of Mass. - Amherst. This symposium discusses the role of mycorrhizal fungi in establishment and growth of trees and shrubs. The symposium provides the most current information about mycorrhizal fungi, information that will inform decisions about when and where these products should be used. You'll learn what products are available and how to use them. We'll discuss the role of mycorrhiza in establishment and growth of trees and shrubs, plus the biology of mycorrhizal fungi and their relationships with roots. Presenters will share results of research on effectiveness of mycorrhizal amendments to nursery stock, to trees and shrubs at transplant time, and to established plants to improve vitality. Company representatives will discuss mycorrhizal products available. The symposium concludes with a question/answer period. ISA, MCH, MCA, MCLP, and pesticide credits have been requested. Cost is $95 per person; make checks payable to U. of Mass. Send registrations to: Symposium, UMass Extension, French Hall, Box 32910, Amherst, MA 01003. For more information, call Kathleen Carroll at (413) 545-0895.

Nutrient Management Seminar for Landscapes and Nurseries: More Bang For the Buck - Getting the Most Out of Your Fertilizer Program; Feb. 17, 1999; concurrently in Amherst and Bridgewater, Mass. The U. of Mass. Extension Landscape, Nursery and Urban Forestry Program presents a seminar to help professionals hone nutrient management practices by making wise use of soil test reports in developing fertilizer programs. Participants will learn how to use compost in a nutrient management program, and how to reduce nitrogen applications by calculating nitrogen from existing organic components. "Buy a bag of fertilizer, read the label, dump it on!" That's how we used to fertilize. But that was not only wasteful and costly, but also damaging to the environment and often to the plant. Today, we manage nutrient levels in soils to create the best possible growing environment for woody ornamental plants. Buffer pH, soil pH, Cation Exchange Capacity, Base Saturation? This seminar interprets items on soil test reports and show how to use information to develop environmentally sound fertilizing practices. ISA, MCH, MCA, and MCLP credits have been requested. Cost is $50 per person; make checks payable to U. of Mass. Space is limited; preregistration is suggested; send to: Symposium, UMass Extension, French Hall, Box 32910, Amherst, MA 01003. For information, contact the UMass Extension Landscape, Nursery and Urban Forestry program at (413) 545-0895.

1999 Winter Conference: Ecology and the Managed Landscape - Working Toward Better Solutions; Feb. 26, 1999; Holiday Inn, Boxborough, Mass. Sponsored by the UMass Extension, the Ecological Landscaping Assn., and the New England Wild Flower Society, this conference explores the relationship between created landscapes and natural environment. The conference offers specifics on microclimate analysis, compost technology, wildlife garden design, IPM in greenhouse management, and nine other workshops on managing landscapes ecologically. Participants will gain greater awareness of impact of landscape practices on local ecology. This year's keynote speaker is Dr. Mark McClure, U. of Conn. Extension, speaking on *The Impact of Biological Solutions: Hemlock Woolly Adelgid Case Study.* The discussion investigates development of beneficial insects used to control the Hemlock Woolly Adelgid. He will describe how landscape methods may have created problems for helpful biologicals, and how new beneficial insects are researched and released. He will describe the lifecycle of the Wooly Adelgid and the beneficial beetle he has introduced to combat the pest. To preregister, send $115.00 (includes lunch) payable to ELA by Feb. 19 to: ELA Conference, c/o Garden in the Woods, 180 Hemenway Rd., Framingham, MA 01701. Registration at the door is $130.00. For information call Kathleen Carroll (UMass Extension) at (413) 545-0895 or Nancy Askin (ELA) at (978) 897-7490.

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Evaluating new turf products

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biocontrol agents, such as *Burkholderia (Pseudomonas) cepacia*, are secondary human pathogens that could be a serious health threat to people with compromised immune systems.Be aware that some well known biological products are being sold without EPA registration. Some companies are avoiding EPA registration by claiming that disease and/or pest control is due to an improved microbial environment of the turfgrass that reduces the chances of disease or pest problems. The safety questions listed above apply to any microbial application.

Conclusions

By this time, you might be feeling that this is a lot of detail that may not be worth your time or concern. The purpose of this article is to demonstrate what it takes to determine if a new product really works as it claims, and why it is not easy to conduct such tests on a working golf course or on a customer's lawn. Non-treated areas, replications and statistical analysis are time-consuming and best left to people whose job it is to evaluate such things. That is the philosophy that led to the founding of the land-grant universities and the Cooperative Extension Service. Unfortunately, year by year, support for this unbiased source of research results has been whittled away to a fraction of its former level.

What if you can't find any reliable research and you want to try a new product?

Try new products on a small area first. Try them where they are least likely to cause serious problems if they injure the turf or don't do what they claim. For example, try new products on fairways rather than greens, on nursery turf areas, or on one green rather than all of them at once.

Find a way to leave a non-treated test area for comparison so you can better judge the results you obtain. Buy a piece of plywood and place it in the center of an area to be treated before you spray. Remove the plywood and you have a non-treated test area. If you treat a lawn or golf course wall-to-wall and then proclaim that "it worked great," you will never really know what would have happened had you done nothing at all.

Network with your colleagues. Ask those who have evaluated new products if they followed the guidelines outlined above: replications, non-treated controls, etc. The more of this that they have done, the more confident you can be in their comments. Watch out for "testimonials," and exercise some healthy skepticism.

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