



THE WAITING GAME

By Bruce Worzella



Every golf course superintendent and golfer in this great state of Wisconsin can rightfully say they participated in the annual Spring Game Show. A spin of a wheel, guessing the right price of an object or even making a love connection is easier than assuming when a golf course is going to open or what conditions really await us.

The golf season is here, and I hope everyone is off to a great start. All the preparation we have done in planning and education this past winter will now pay off.

Spring seems to always be our busiest time. A lack of employees, fall projects to complete, and new spring projects clutter our everyday maintenance schedules. The golfers want everything in the same top-notch condi-

tion they have viewed on television the past couple of months. They can usually never understand that Mother Nature normally has us in turmoil. I would imagine that we all wish, at one time or another, that a season would start in which all we had to do is "mow grass".

A dear friend of mine and fellow golf course superintendent told me in my younger years that "WISHING" is a part of our profession. Since we depend so much on the weather and other intangibles, we find ourselves doing a lot of wishing. We wish it would rain, we wish it would stop. We wish the golfers would not start so early, and wish they would not play so late. We pray the irrigation system operates correctly over the Fourth of July, and hope for no diseases. This is why I enjoy this profession.

You are always on the go, and always thinking. You can never assume anything. Planning for the worst always seems to keep you ahead of the game. I believe the majority of golf course superintendents in the upper Midwest lose more weight and more hair during the first three months of every year than in all the other months combined.

I would like to congratulate Dean Musbach, President of the Northern Great Lakes Golf Course Superintendents Association, for a terrific symposium in March. Even a school-closing blizzard did not bring a stop to their educational program. Well, the waiting game is over; the 1992 golf season is here.

Let the (golf) games begin!

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(L to R) Mike Semler, Bruce Worzella, Rod Johnson, Bill Knight, Pat Norton, Tom Schwab, Mark Kienert, Scott Schaller and Mike Handrich.

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COMPUTERS, RUMORS, RESEARCH AND SPRING

By Monroe S. Miller

Let's see. The ice is gone from Lake Mendota, the Brewers are playing baseball in County Stadium, most golf courses are open, and the Masters is on TV this weekend.

It must be spring!

Funny how, at the start of each of the four seasons, most of us declare the season at hand our favorite. Human nature, I'd guess.

The thing that sets spring apart is that there is still the feeling that all things are possible on our golf courses and that the year will for sure be the best ever.

Let's agree to reread these couple of lines again at mid-summer.

Who could have guessed it—a Wisconsin golf course superintendent worried about a "computer virus"?

I am wondering if I was the only one who actually forbid the "booting up" of his IBM on Friday, March 6 for fear the Michelangelo virus would erase a Network 8000 program.

This had to truly mark a sign of the times—me, of all people, sweating out this day of technodoom. Fortunately, that much hyped virus turned out to be a dud.

The projections that millions of IBM PCs would crash was in reality only a couple of thousand—worldwide.

And to my knowledge, none of the 2,000 belonged to golf course superintendents.

One should have known this would be the case, however. Many of the snakes thrown were pitched by people and companies that sell anti-viral software. They stood to make a tidy profit.

The upside to all of the fuss was a greater awareness, especially for amateurs like me, of such possibilities.

Still, I would rather deal with a rogue computer virus than a like infection on turfgrass.

At least there is a solution for a high tech problem like the Michelangelo bug. The same cannot be said for the turf kind.

The weather in recent times really has been goofy. Last year was hot, but not the hottest on record. That may have been because the volcano on Mount Pinatubo in the Philippines blasted tons of ash into the air and the dust veil blacked out some sunlight.

Sometimes, in the past, volcanos have depressed global temperatures for a couple of years. Some computer analyses indicate that the dust from Pinatubo could produce a significant global mean cooling during this year and next. These same models see a return to the much publicized warming trend by the late 1990s.

That all makes sense, until you read that the winter past was the nation's warmest on record, according to the National Climatic Data Center.

The winter season, defined as December, January and February by the NCDC, had an average temperature of 36.87 degrees F. in the 48 contiguous states. That temperature tops the previous record holder, 1953-1954, when the lower 48 states averaged 36.00. Close at third place was the winter of 1933 and 1934 at 35.97.

Meteorologists have kept records for 97 years on such weather matters.

You don't know whether to believe warnings about global warming or not. But something does seem to be happening here.

Others have questioned some of the dire predictions. They think we need data from more years to see if any actual changes in climate are happening.

Here's a real wrench in the gears: the nights have been getting warmer but the daytime temperatures haven't budged much in the last four decades.

This bit of confusing information comes from the National Oceanic and Atmospheric Administration. Their report on the matter shows that the temperature at hundreds of weather stations across much of the northern hemisphere showed average maximum nighttime temperatures have increased 1.5 degrees F in 40 years. But the average daytime highs have barely changed.

I guess if I had to make a judgement I would prefer the day temperatures remain the same. Life in grass management is easier that way.

Meteorologists, climatologists and others using weather records cannot, to date, put the puzzle together much better than laymen. Let's face it - when it comes to the weather, nobody knows what the hell is going on.

There is no end to the exciting research that goes on at the University of Wisconsin-Madison. My proximity to the campus amplifies the awareness I have of the enormous capacity the UW has to discover new things.

Every once in awhile one of the research projects I read about could potentially affect my life or work.

That was the case last February when a plant geneticist from the UW-Madison presented a paper at the annual meeting of the American Association for the Advancement of Science.

The findings reported at that meeting show scientists are closing in on the genes that determine how plants respond to cold.

The UW-Madison investigators have identified a gene that responds to cold in *Brasaca rapa*, the plant that produces seeds used to make canola oil. The work is a major step forward in understanding the genetics involved in the relationship between cold weather and plants.

There is similar research being done elsewhere in the U.S., and it is being coordinated by the Office of Plant Genome Mapping at the United States Department of Agriculture.

USDA officials predict that by next year researchers will be able to determine the genes and their characteristics. It is less certain when the genes will be manipulated to change the cold hardiness in plants.

Winter hardiness is likely controlled by several genes; identifying and understanding them is complicated and won't happen tomorrow.

But the potential is what is exciting. Imagine being able to choose a turf that is completely winter hardy and resistant to damage from desiccation and ice damage.

Research like this gives dreaming a sense of reality and possibility to it.

And it is happening right here in Wisconsin.

Since I usually wear the colors of a full fledged traditionalist, each April brings the same question: "Why all the attention over 'Earth Day'? Why is there a need to reinvent the wheel?"

Arbor Day has served our country well for over a hundred years. The day was started on April 10, 1892 in Nebraska. The idea was to devote a certain day of every year to the public planting of trees.

A member of the Nebraska state board of agriculture, who later became the U.S. Secretary of Agriculture, proposed Arbor Day. His name was J. Sterling Norton.

Nebraska made it a legal holiday in 1885. The Arbor Day idea spread to many other states, too.

The plan of making Arbor Day a school festival to capture the enthusiasm of young children was launched in 1882. The National Arbor Day Commission established that the last Friday of each April as the day for observance.

Planting trees to beautify public grounds soon became an occasion to remind young people (and others) of the importance of trees and forests and the need to be active in improving the environment.

It seems too bad that such a wonderful concept seems buried amid the pub-

licity of events like Earth Day, the Releaf Plan and many others.

Golf course superintendents have, again, done an excellent job as community arborists. Golf courses have some of the best collections of woody ornamentals in their communities.

That fact, along with the beauty of the history and the simplicity of Arbor Day, is likely why I regret that Arbor Day seems less important these days.

That's really too bad.

The wrap up here repeats a rumor going around our town. It concerns the person rumored to be the new dean for the College of Agricultural and Life Sciences at the UW-Madison.

Rumor has it that Roger Wyse, associate dean of Rutgers University's agricultural college and head of its experimental farms, is in line to become the CALS dean.

Wyse was offered the job in early April and as these words find paper, the official announcement supposedly could come by the third week in April.

If he accepts the position, the hire would go for final approval before the entire Board of Regents.

As dean of CALS, Wyse would direct a college of 2,000 undergraduates and a budget of about \$92,000,000, a working dairy and ten research farms throughout the state. The research farm network includes the Noer Facility. He would also oversee one of the university's largest graduate schools with 1,200 students.

Apparently Wyse was selected from a list of five candidates developed during the UW's second search for a replacement of Dr. Leo Walsh who

stepped down last spring as dean. Walsh held the job for twelve years.

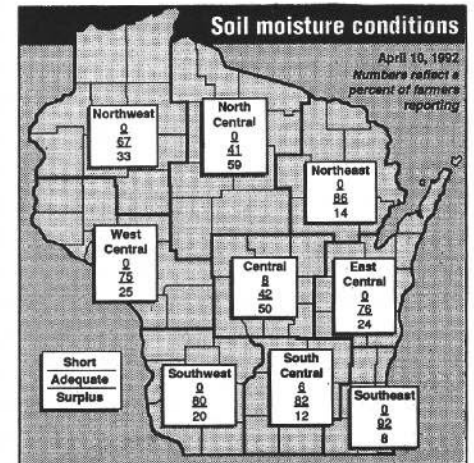
The hiring has been held up, I hear, because the UW is also trying to hire Wyse's wife, Jaleh Daie, a horticulturalist and tenured professor at Rutgers. I'm wondering how a small department like horticulture, which is downsizing like other CALS departments, will find a position for her.

Wyse is noted for research in plant development and CHO formation in plants, mainly sugar beets.

Here's a sure bet: when he gets settled (if he is indeed the person hired) the WGCSA will undoubtedly invite him to the Noer Facility for a meeting.

The Wisconsin Agricultural Statistics Service issued its soil moisture conditions report on April 10th, and a graphic of that report appears here.

Only the central and south central regions of the state are starting out with areas in a moisture shortage status. Let's hope that doesn't get any worse.



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"TWENTY AND FORTY-FIVE" AND STILL ANXIOUS TO GET TO WORK

By Monroe S. Miller

I'm in the first class (first crop, if you prefer) of the baby boomers. I turned forty-five last year. Our mothers and fathers wasted little time in getting their families started right after World War II ended.

I wouldn't be so interested in my 45th year if it hadn't come on my twentieth employment anniversary at Blackhawk Country Club. After all, it is the Four O birthday that sends most into a tailspin. By the time one reaches 45, middle age is reality.

I learned that forty isn't fatal and have pretty much accepted the aging process. I can now clearly understand what Jack Benny meant when he said "age is a matter of mind—if you don't mind, it doesn't matter."

Shortly after forty, one realizes that eating habits have to change. Most of us boomers now eat less, eat differently and eat a lot better. Some take a look at me and question that!

Fruit and vegetables take precedence over mashed potatoes, gravy and meat. Seconds are verboten; so are desserts. The food in our diets is actually healthful for a lot of us.

Ten or fifteen years ago I had a very casual attitude about exercise and fitness. My creed, unfortunately, was somewhat like Mark Twain's from generations previous: "I have never taken any exercise except for sleeping and resting, and I never intend to take any. Exercise is loathsome."

I'm not so cavalier at forty-five. Often, during summer months, I get to the course at daylight, get myself organized and insure the irrigation for the night went well. That way, when the crew arrives, I can cut a few putting greens. We use the low technology equipment—walking mowers. A brisk trip across several greens behind a mower is excellent exercise!

I also find myself going for a long walk most nights after dinner in the winter months. Ten years ago I'd have declared such a habit "pure foolishness."

Like many other aging baby boomers, I've given up killer habits. I never did

drink, but I used to greatly enjoy Winstons. No more. Drinking and smoking, just like eating, require major moderation at forty-five.

The point health brings clearly into focus is that well being is absolutely critical to job execution and enjoyment. At my age, good health cannot be taken for granted; it requires a conscious effort.

One of the great lessons age has taught me is the value of pacing oneself. Vincent has always amazed me by being able to work at the same speed at day's end as he was when he began the day. Even today, at 77, he'll produce more than most 17 year olds. He has known the value of pacing for a long time.

These days, I do too. I recognize that sometimes the pace must change, just like the seasons will change. But the value of steadiness is always there. It makes life and work on the golf course both better and easier.

Finally, there's that word—"work". How can it be that, at forty-five, I can still hardly wait to get to work every morning? How is it possible to be so excited, each morning, about heading off to the same place I have headed to for twenty years now?

I've reflected on that question a lot lately. Reflection, by the way, is something that comes along with being "over forty".

When so many others in our society express frustration about their work, why am I so satisfied by it?

At a time when there is widespread discontent about the workplace, I am happier than ever.

While others decry the decline of the work ethic and a lessening of job expectations, I see the opposite in my career world.

I hear of the frustration and futility expressed by some in quest of their "dream" job. I found my dream job, luckily, twenty years ago.

Some friends of mine grow weary of the decreasing challenge they find in their profession. "Too much routine," they say. For me, each succeeding year is better than the last. Each new year is more difficult and more challenging.

Others grumble that work "isn't fun anymore." They should have my career at my workplace. I cannot imagine that it won't always be fun.

Each morning still finds me anxious to get to work; some mornings I can hardly wait to get the building unlocked.

I firmly believe there are three things that impact on the degree of career satisfaction one gets at my age after twenty years at the same place.

First is one's attitude about work. I'm from the old school (I guess) that says work is import, that it is a central feature

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in one's life. It is part of my "identity"; I've invested heavily in it. It is important, if for no other reason, because it consumes most of my waking hours. It is obvious that for people like me, work is more than just a means of survival.

Second is the career work you choose. If you are going to spend so much of your life "at work", you'd better like what you do. Generally, that means your work should be more than just a job. It needs to be something enjoyable and challenging and rewarding in a very personal way.

Frankly, I am convinced that golf course management is the most continuously interesting occupation I know of or have heard about.

Golf course management offers the things I need for career sanity. It gives work for the body when you want; it gives work for the mind always. It takes place in a natural world, satisfying the values from my rural upbringing. And it presents a workplace in a social world, among players and members, colleagues and employees.

Golf course management is a wonderful mix of sport and science, art and agriculture. It involves lots of people and lots of equipment and lots of management to put them together in a sensible fashion.

It follows the seasons.

Each day requires really good problem solving skills, a requirement that all interesting careers have.

And the variety of the work each day brings is added frosting to the cake.

Thirdly, the place I work is a tremendously important aspect in my upbeat and happy attitude. I absolutely love this golf course.

I could be doing the same work in a thousand, nay ten thousand, other places and it wouldn't be the same.

Here we have Lake Mendota and the Indian effigy mounds. The property is guarded by stately and mature oak and hickory trees. The view from the clubhouse and its surroundings is unsurpassed, easily one of the most beautiful looks in all of North America.

There is thrill and comfort from our proximity to my alma mater. Wisconsin is one of the most exciting universities in the world.

But most of all, I draw great inspiration and enjoyment from the people who employ me. They are all golfers. We have no swimming pools or tennis courts here. Only golf. For a golf course superintendent, that's an enviable situation.

Some of the most successful people in our community belong to our club; many have become my friends.

For twenty years, we have held to a steady course of improvement. Each year has seen some infrastructure problem solved—shop, pumping station, irrigation system, et. al. Most years see another feature from our Golf Course Master Plan implemented. In fact, this year we revised and updated our master plan because we have done so well on the original.

We are always moving forward, always working to get better. Each season marks progress. Certainly some years see more than others. But, always, we push ahead.

I feel most fortunate to be able to say, after twenty years on the same golf course, "I can hardly wait to get to work in the morning."

The people, the profession and the attitude make that possible. Often I have wondered how many others, with similar time in service at the same place and who are my age, are able to express the same emotions of satisfaction I feel. Can you? Or will you be able to?

And, as I think ahead to the next twenty years, there is no doubt—none—that the same anticipation and the same thrill I feel today when I head off to work will be there.

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What Role for Turf Blends and Mixtures?

By Dr. Gayle L. Worf
 Extension Plant Pathologist
 University of Wisconsin-Madison

One of the approaches often touted to reduce impact of disease problems is to provide some form of genetic diversity in what we plant. This doesn't denigrate the use of resistant varieties whenever we can. Rather, it is intended to reinforce it—to supplement it in whatever way we can—either to deal with problems we already know about, or to avoid setting ourselves up for future pitfalls down the road.

It's a strategy that makes sense. Certainly there are examples all around in the plant world where narrow genetic bases have set the stage for a previously unforeseen malady to emerge ferociously. The most classic example is the southern corn leaf blight epidemic of two decades ago. It took about 15 years following the conversion of virtually every corn field (other than sweet corn) to "Texas male sterile cytoplasm"—so that seed producers wouldn't have to detassel corn and ride herd over teenagers with other interests—for the fungus to build up its inoculum and for the epidemic to explode. Oat producers had a similar experience with "Victoria blight" in the 50's when a single gene for rust resistance was introduced into most varieties. Within two years after its widespread introduction, an indigenous soil-borne fungus that had never caused anybody a problem before suddenly found a crop to its liking. The turf story we know about is 'Toronto,' or C-15 bentgrass, and the bacterial blight disease that singularly attacked it. The latter problem was aided and abetted by the fact that C-15 was vegetatively propagated. Once in the nursery stock, of course, it was an easy task for a vascular pathogen like the bacterium to move about. Then all that was needed was some local spread and the right environment for destruction.

So the idea of diversifying the genetic base with blends of different varieties, or better yet, with mixtures of different species, has some appeal.

And we see sod producers now doing this with their Kentucky bluegrass blends, and occasionally with ryegrass mixtures. You can do the same thing with your fairways and roughs where appropriate, and maybe you're doing some of it.

But with a perennial (permanent) crop like turf, we have other considerations. This is especially true when we're dealing with amenity turf, because you have to put something out there that provides sufficient commonality of color, growth rate, dormancy, and other characteristics so that you don't produce an uneven, unattractive, or poor playing surface. And we don't really know what percentages or what combinations are needed.

About four years ago we initiated a growth room and greenhouse study that involved permuted blends (0, 10, 20, 40, 60, 80, and 100%) of two bluegrasses differing in susceptibility to "Helminthosporium" disease, e.g., 'Park' ("susceptible") and 'Adelphi' ("resistant"). We also mixed each of these similarly with 'Repell' perennial ryegrass, which is considered virtually immune to the two species used for

these studies. For the sake of discussion, I'll burden you with the results of one trial which really serves to illustrate the overall results:

Table 1: Effect of *Drechslera poae* and *Bipolaris sorokiniana* inoculations upon permeated Turfgrass blends of 'Park' and 'Adelphi' Kentucky bluegrass and in mixtures with 'Repell' Perennial ryegrass

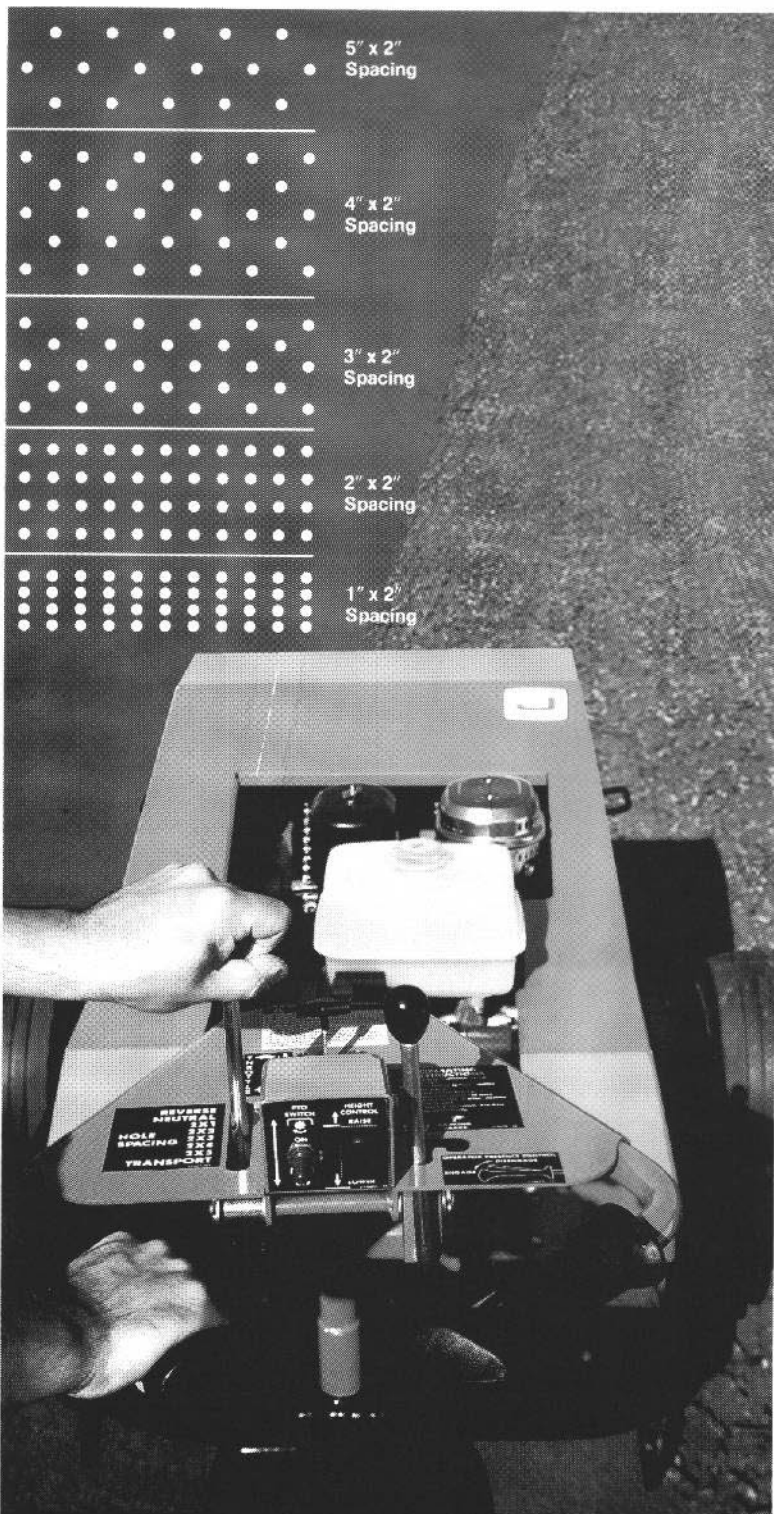
Permutation/Combination	<i>Drechslera poae</i>		<i>Bipolaris sorokiniana</i>	
	lesions*	symptoms**	lesions*	symptoms**
100% Park	2.8	4.3	2.5	3.4
90% Park, 10% Adelphi	2.5	4.0	2.5	3.6
80% Park, 20% Adelphi	2.1	3.1	2.0	3.1
60% Park, 40% Adelphi	2.9	4.3	2.0	4.3
40% Park, 60% Adelphi	2.8	3.9	1.4	3.9
20% Park, 80% Adelphi	2.0	3.3	1.0	3.8
10% Park, 90% Adelphi	2.5	3.0	1.5	3.3
100% Adelphi	2.0	3.0	1.0	3.5
100% Repell	0	0	0.2	0.3
90% Repell, 10% Park	0.5	0.5	0.2	0.6
80% Repell, 20% Park	0.5	0.6	0.2	0.4
60% Repell, 40% Park	0.9	1.6	0.5	1.0
40% Repell, 60% Park	2.0	2.3	0.5	0.8
20% Repell, 80% Park	2.1	2.8	0.8	1.3
10% Repell, 90% Park	1.4	1.8	1.9	2.3
100% Park	2.8	4.3	2.5	3.4
100% Repell	0	0	0.2	0.3
90% Repell, 10% Adelphi	0.2	0.4	0.2	0.4
80% Repell, 20% Adelphi	0.2	0.6	0.9	1.3
60% Repell, 40% Adelphi	1.0	1.9	1.0	1.9
40% Repell, 60% Adelphi	1.0	1.5	1.1	3.3
20% Repell, 80% Adelphi	1.3	1.3	0.5	2.8
10% Repell, 90% Adelphi	1.0	1.3	1.0	3.3
100% Adelphi	2.0	3.0	1.0	3.5
lsd (P = 0.05)	0.2	0.5	0.2	0.5

* Lesion rating: 0 = none; 1 = few; 2 = moderate; 3 = heavy

** Total symptom rating: 0 = none; 1 = trace of infection; 2 = estimated 1/4 of host tissue diseased; 3 = 1/2 of host tissue diseased; 4 = 3/4 of host tissue diseased; 5 = entire host tissue diseased.

So what is the interpretation of these results? There are several: (1) The bluegrass (alone) blends were okay in reducing leaf lesions caused by *Bipolaris* when 60% or more of the blend contained 'Adelphi.' But it didn't work so well with the more aggressive *Drechslera* fungus, and when crown

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3" x 2"
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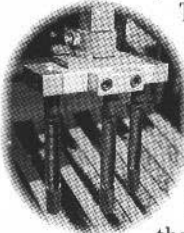
2" x 2"
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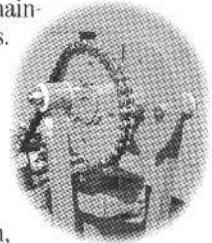
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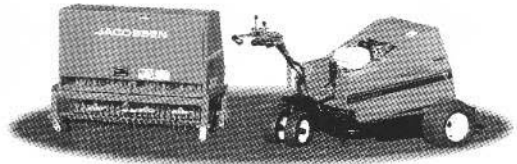
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(Continued from page 7)

effects with either pathogen became noticeable, no percentage helped. That probably occurred because in the greenhouse the resistance we see in the field doesn't come through; (2) By contrast, mixtures containing 60% or more ryegrass did a fine job on both foliar and crown symptoms, e.g., the genetic diversity was sufficiently great to do the job.

So the greater the diversity, the better off we're likely to be. Combinations with narrower bases probably are useful in many settings. I'd like to see a similar trial conducted in the field with more realistic conditions. In fact, that's what we intended when we started this study—we had fantasized that the O.J. Noer Turf Research Facility would be available a couple years before it occurred!

Blends and combinations are easier to establish when planting. But what about "drift," or shifts in percentages, that may occur a few years after planting? And how do we establish or re-establish satisfactory combinations via overseeding or other means in existing stands—especially if such a thing as "allelopathy" or related factors interfere? Good questions that should be the subject of more discussion—and research—for another day.

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5'	\$43.00
6'	\$54.00
7'	\$65.00
8'	\$79.00
9'/10'	\$99.00

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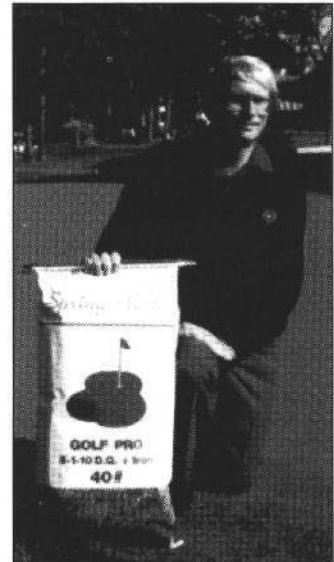
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*Hydro-Wet is a registered trademark of Kalo, Inc.
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A Thank You Note from Bill Roberts



GCSAA

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March 25, 1992

Mr. Monroe S. Miller
Editor, "The Grass Roots"
3809 Patrick Henry Way
Madison, WI 53562

Dear Monroe:

I wanted to write and thank the WGCSA for the "Bill Roberts Issue" published for March/April, 1992. The coverage of my election to GCSAA's presidency was terrific, as was Lori Ward Bocher's "Personality Profile". It takes on special significance for me coming from my old friends in Wisconsin.

I'm looking forward to a very busy, productive year as I really believe our association and our profession are positioned to continue to have the major impact on the industry and on the game of golf itself. That positioning is a direct result of the commitment and professionalism exhibited by our membership and personified by groups such as the Wisconsin Golf Course Superintendents Association.

I'll be over to see you this year.

Sincerely,

William R. Roberts
President

WRR/lar

cc: Bruce Worzella