Brilman of Seed Research of Oregon is the breeder of SR1020 creeping bentgrass, SR7200 velvet bentgrass, and many other successful bentgrass, ryegrass, and fine fescue varieties. Bill Meyer is the new heir apparent at the "Mecca" of turfgrass breeding — Rutgers University in New Jersey. Bill had a highly successful career at Turf Seed, Inc. in Oregon, where he developed Midnight Kentucky bluegrass and many other successful turf varieties. We expect big things from Bill in the future. Mike Kenna was also here to give us an overview of future research directions and policies for the USGA Research Committee.

The meeting in Madison also allowed us to convene the Turfgrass Crop Germplasm Committee. This group provides important advice to the USDA in dealing with the collection, maintenance, and storage of all types of turf germplasm (seeds and living plants). We heard reports of recent successful collecting trips for new types of turf plants from Eastern Europe. We also discussed the need for a clonal repository for vegetatively propagated plants such as bermudagrass and zoysia.

All-in-all, it was a very successful meeting.

Gary Gaard explained the Noer Facility participation in the USGA Audubon Coop Sanctuary Program.

Dr. John Stier, likely the world's expert on *Poa supina*, leads a discussion of his research with this new golf and sport turf — Dr. Wayne Kussow's shade research is immediately behind the audience. Dr. Milt Engelke, a UW-Madison grad (M.S. and Ph.D.) is at the far right of the picture, in a white shirt and white beard. Few know that he was Dr. Doug Maxwell's grad student while studying at the Madison campus.

Romey Orth's *Wisconsin Olde Tyme Mowing Contest*

By Monroe S. Miller

"Geez, there are a lot of guys here," Bogey Calhoun said as he got out of Tom Morris' Ford truck, stretched and pulled up his pants.

"And you shouldn't be one of them," Tom came back, "unless you are going to watch. You must not have much pride, Calhoun. Any one of my kids could out mow you, even the ones who've never worked at Maple Leaf CC."

I looked around as I got out of T.M.'s truck and was surprised to see the parking lot full, almost to overflowing. "There ARE a lot of people here," I mused to no one in particular.

The big crowd had come to the Wisconsin Golf Course Museum in southeast Wisconsin for another Romey Orth dream-come-true - a mowing contest. "I'll do all the work, men," Romey said at the WGCSA spring business meeting and sprung the idea on all of us. "All you have to do is practice up all summer, come to the Museum and compete."

Of course, as much as we all love Romey, no one objected. Some were curious, some were ambivalent, and most were excited even though they didn't have many details. What we knew was that if Romey was in charge, it would be a good event.

Now, none of us had ever heard of a mowing contest, not even the old-timers. I knew, as a youth, neighbors and relatives talked about plowing contests, usually held in the autumn. They were sponsored by agricultural societies or maybe Farm Progress Days or county ag boards. In fact, even today you can compete in the National Plowing Contest.

But a mowing contest? Leave it to Romey Orth to come up with an idea like this to generate interest among course superintendents and build on the camaraderie we already have. And the publicity value had great potential.

Like he had so often for special events at the Wisconsin Golf Course Museum, Romey had the big red and white tent set up on the lawn of the museum. He was holding court with Betty and son Jim at the registration table. I could see Scott Fennimore and Steady Eddie Middleton visiting, with their index fingers hooked around the handle of a Case/IH coffee cup.

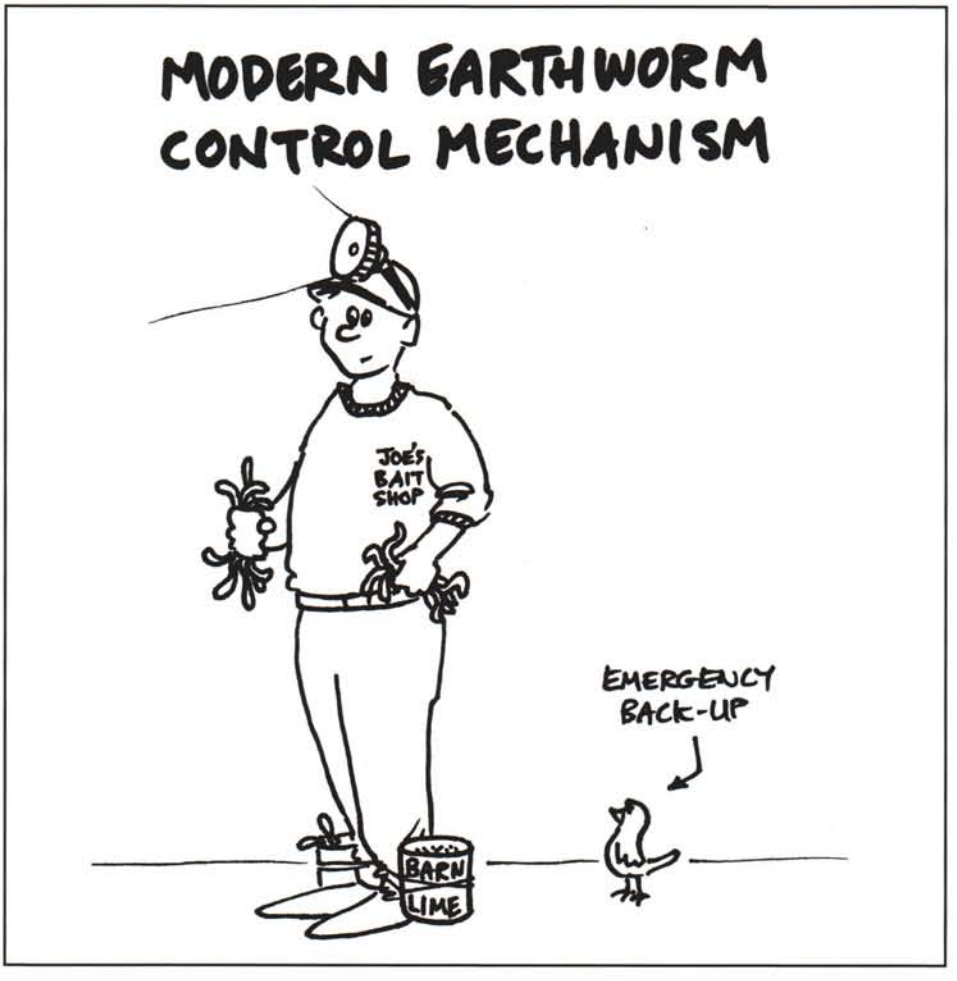
"Which events are you guys signed up for?" Romey asked as we looked over the contest categories. Morris and I were smart enough to lay back, see what this was all about and maybe enter next year. Not Calhoun.

"Get me in all of them, Romey!" Calhoun said loud enough for scores to hear. "I'll win something for sure that way!"

Tom looked at his young and brash colleague and friend with some disgust. "Calhoun," he started slowly, "by the time this is over you'll be known as Bozo Calhoun."

Calhoun only smiled, enjoying the knowledge he was under Morris' skin, like he so often was. "What's the matter, Tom, no self-confidence?"

Tom grunted and then ignored



Calhoun, knowing there was no use in trying to humiliate Bogey.

Banners were hung on the outside walls of the museum; they announced the principal sponsors — Toro, Jacobsen, John Deere and Ransomes. One of the tables in the tent was loaded with trophies, big and beautiful trophies. Romey clearly wanted to generate lots of interest and there were plenty of guys drooling over the trophy table. "Wait until you hear about the prizes," Romey offered as even more enticement of enter. "You won't believe them, especially the Grand Champion's prize.

A large board under the tent listed all the events. It was divided into large area mowing equipment and small area mowing equipment.

The large area categories included the following pieces:

- Jacobsen 9-gang pull frames towed by a Ford 641 Workmaster tractor powered by a 134 cubic inch Tiger engine. The hood, fenders and engine were all painted red and accented with a gray grill gray wheel rims. The driver was protected from the sun with an unique black canopy, but he didn't have the advantage of power steering. This would make the maneuvering particularly difficult in the contest.
- Toro 7-gang single point adjustment tow behind mowers, pulled by a 1958 Case 211GP triple-range tractor with a wide front end and a two-tone paint color combination of Desert Sunset and Flambeau Red. The pair made a beautiful mowing rig.
- Ransome 7-gang pull behind mowers towed by a John Deere B with a modified wide front end, suitable for steep grade changes found on some golf courses.
- Worthington F-6 tractor with mounted mowers (cable hoist) and rear wheel steering.
- Worthington Airfield Blitzers with 5-blade reels. This unit was assembled as a 7-gang also, but with four cutting units in front and three trailing them. It was hitched to a 1946 Oliver Model 60 with a narrow front.
- A 1957 Allis-Chalmers D-14 featuring a Power Director hand clutch with high and low ranges, a 149 cu-in. (35 h.p.) Power Crater engine, traction booster system and a roll shift front axle; the Wisconsin manufactured tractor was hitched to a Roseman hydra-gang fairway mowing unit.
- A 1939 Allis-Chalmers C with a six foot PTO driven sickle mower. The Allis had a narrow front also.
- McCormick Deering Farmall B (1947) with a belly hung 70" rotary mower. This rig had a wide front end.

There was a lot of conversation around the board; the older guys were interested in the different kinds of big equipment, clearly familiar with most of the pieces from years of use when they were contemporary to the golf course management scene.

Bogey Calhoun typified the younger crowd. "What's a Roseman?" he asked Morris quietly, not wanting to expose his ignorance. "Nobody ever really used that sickle mower or the Farmall rotary, did they, Tom?"

Morris just smiled.

The small area machinery list was almost as interesting as the big equipment list. And some of the pieces were just as unfamiliar. Included in the competition were:

- Jacobsen 321 walking greensmower
- Toro Series IV walking greens mower.

(Continued on page 44)

(Continued from page 43)

- Ransomes Auto Certes walking greensmower.
- Toro Series V walking greensmower (also known as the "thatchmaker").
- Jacobsen 4-acre mower.
- Toro 36" Whirlwind mower with sulky (required for this competition)
- National 84" triplex

Romey took the microphone and announced that lunch was to be served before the mowing began. The crowd quickly formed a line, looking forward to the kind of feast found at events like this one, a Field Day at the Noer farm or Farm Progress Days. You know — bratwurst, hamburgers, German potato salad, baked beans, pickles, and more. "Heart attack on a plate," noted Tom Morris as he loaded his plate full, just like everybody else.

"That may be, Tom," I said, "but this is Wisconsin and this menu is what we love. There won't be many leftovers."

We were past the subtle hints of change in the seasons. The zinnia beds at the entrance to the museum were loaded with old fashioned colors in the flowers and the leaves were dusty with powdery mildew.

There was a haze on the hilltops beyond the museum, and the crabapple trees were loaded with red fruits. The roadsides, unmowed these days, were filled with golden rods and asters, milk weed and Queen Anne's lace, black-eyed Susan and thistles, all offering those shades of color we associate with the fall season.

This is a more unhurried time of year for Wisconsin's golf course superintendents. Tournaments are over, kids are in school instead of at the practice range and golf course, and players have remembered how much they love football played by the Packers and the Badgers and their local high school team. We are back in charge, aerifying, doing project work, and attending this Wisconsin Olde Tyme Mowing Contest.

Romey was at the microphone immediately after lunch. He got everyone's attention, led us all in the pledge of allegiance to the flag, a 10' X 15' version which fluttered lightly in the breeze atop the huge aluminum pole at the museum entrance. "We would have sang the national anthem," Romey explained, "but I couldn't line up a band!"

The simple act of citing the pledge amplified the "old fashioned" aspect of Romey's new event.

"Now let me introduce you to our judges," Romey boomed over the loud speaker system. His voice traveled clearly for hundreds of rods. I looked at Tom Morris and we both wondered who would score the events and determine winners.

"Dr. James R. Love, Dr. Gayle L. Worf, Dr. Robert C. Newman, and Dr. Charles F. Koval will score all events in the subjective categories —quality of cut, aesthetics, visuals, etc. Professors Kussow, Stier and Maxwell will handle measurements of time, distance, area, clipping weights and all other objective categories.

A cheer went up from the crowd; we all knew the best mowers would win with a sterling crew of judges like this one. Who in the world would argue with any of the four retired profs? And who can argue with measurements? It was brilliant planning by Romey. Plus, it was the first time in years, maybe ever, that the past and current turf faculty from the UW were gathered in the same place at the same time.

"How cool!" Steady Eddie Middleton gushed.

"Listen up, gentlemen," Romey continued. "The criteria for each contest are listed at that area of the museum grounds where it will take place. Read carefully and understand. The judges' decisions are final. If there is a tie, we have a provision for a mow off to determine a winner. And it will not be drawing the highest number from a golf hat!

The place was a beehive of activity. Each event had a manager who explained the rules. The judges split up and went to their assigned events, scoring pads and pencils and tapes and scales and prisms in hand. Hand held bullhorns called competitors when their turn came. It was a colorful, busy and exciting scene. Out of the corner of my eye I happened to catch movement on the roof of the museum. I looked up and there was Romey, camera in hand, shooting pictures like crazy! A video camera on a tripod was catching the action in real speed.

And it was fun. Each mower was out of any kind of adjustment before each competition; part of winning was properly setting it up — height, reel to bedknife adjustment, etc. The older members were serious; Frank Mueller was lying on his side, carefully bringing the bedknife and reel into adjustment on the Airfield Blitzers, slowly turning the reel and listening for the right metal on metal sound.

Joe Stephens even went so far as to check the oil in the Ford 641 Workmaster tractor before starting it and pulling the 9-gang Jakes onto the field of competition. Both Joe and Frankie were long retired WGCSA members, but the mowing contest had them talking and grinning the whole day.

The same was true for Buddy Meyer and Kick Logan, Ole Severson and Ben Baxter, Nels Jacobsen and Pat O'Brien. Patty was taking long draws on his pipe while he checked

out the Series IV Toro. And Nels declared, "I might be the only man here who has cut grass with one of the two cylinder John Deeres."

That doggone Romey designed a tough contest. The big equipment had both straight line tracks to mow and lines with seeping arcs and curves as well as tight turns. It was no field for the faint hearted or the inexperienced.

Mostly, people hesitate when confronted with the unknown; the same was true here. There was a hesitancy, especially among the younger guys after they watched retired men getting right to work. The confidence of the older group was hard to ignore. "After all, " Tom Morris observed, "it is an 'olde tyme' mowing contest and the old-timers know most of this equipment better than the working crowd of today."

But it is also true that a generation or two ago, golf course superintendents were nearly 100% self-sufficient. If a mower needed adjustment or sharpening, they did it. Some were very accomplished mechanics, out of necessity. Today, for a whole host of reasons, many of them are helpless if the course mechanic fails to show for work. "And they aren't very good operators, either." Frank Mueller chipped in. "Look at Calhoun and Middleton and Fennimore and some of those others. They're lost."

But as the events and hours went along, those very same young guys were right in the thick of it. And Bogey was leading the way, missing plot boundary markers in one place and knocking them over in another. He was a disaster on the 9-gang, couldn't get the F-6 mowers lowered and fell off the sulky on the old Whirlwind.

T.M. loved watching his young friend provide the entertainment for the rest of us. Rather than suffering embarrassment, Bogey was having a great time. "He's got a great sense of humor!" Tom said with admiration in his voice.

"You are running with the big dogs now, Calhoun!" Tom laughed as Bogey took a bite out of an adjacent field with his mower.

The afternoon passed quickly, too quickly, and Romey was offering leftovers to those who were hungry. The first Wisconsin mowing contest was a huge success, and no one was leaving, instead preferring to wait until the last event was over, points tallied and winners declared. It was a rich experience, one I felt deep in my heart.

Most of us, at one time or another, experience a longing for days gone by, of times past. We suffer great nostalgia and a need to return to where we began. It is a need, maybe, for more fundamental things, for experiencing the satisfaction that comes from depending on one's self. It could be an aching for simpler times and their essentials.

That's impossible, of course. We'd be disappointed and dismayed if it was. But Romey hit a responsive chord with his Wisconsin Olde Tyme Mowing Contest. We'd be back next year, and for all the years to come, looking for that elusive emotion in our lives.

Oh, yes, I almost forgot the prizes. In addition to the big trophies Romey had designed and made to order, there was an embroidered hat for each category winner, and a toy tractor model for each category of towed mowers. And the overall winner received the ultimate prize — a LIFETIME pass to the Wisconsin Golf Course Museum, and his portrait on the Wall of Fame!

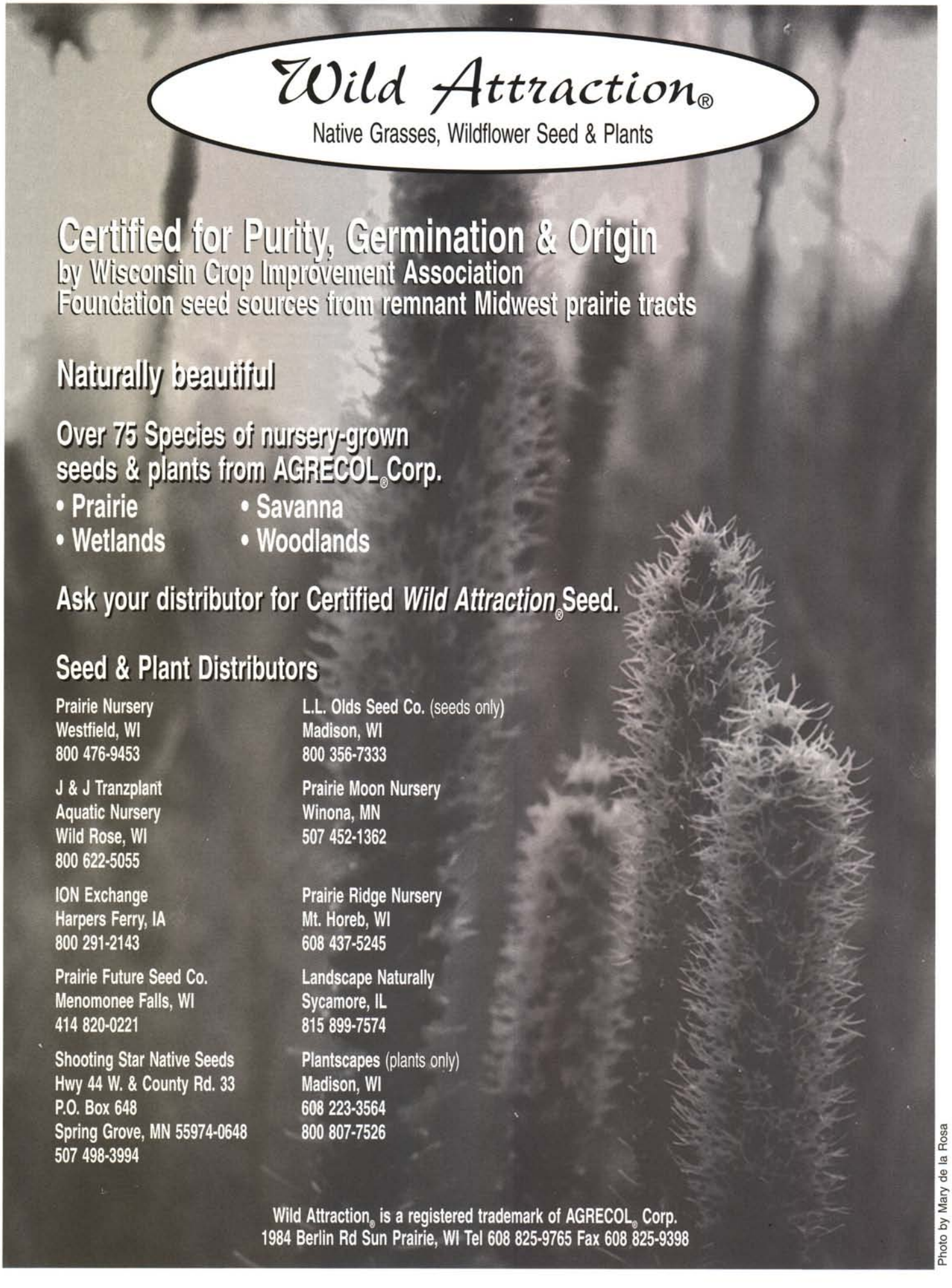

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Photo by Mary de la Rosa

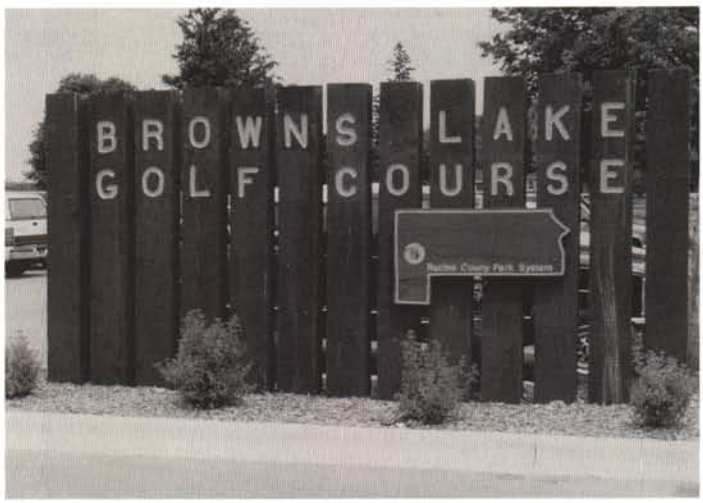
June Meeting Held At Browns Lake Golf Course

By Mike Lyons

Karl Braem was the host superintendent at the WGCSA monthly meeting on June 8th. Sixty attendees enjoyed a lunch buffet and a beautiful day of golf.

The event that day was a 2-man bestball, and there were four flag events. First place went to Woody Huenerberg and Bob Walter with a score of 61. Fifth place went to John Feiner and Skip Willms with a score of 67 and 8th place went to David Smith and Andy Kronwall; they had a score of 70. Flag event winners were all closest to the pin on #4 Mike Yontz, #8 Jack Fowler, #12 Woody Huenerberg, #17 Ed Witkowski. Thanks again to Karl Braem, Mark Hjortness and H & H Fairways Enterprises, Inc. for hosting and supporting the WGCSA.

Please note that the September meeting site has changed from Koshkonong Mounds Country Club to Old Hickory Country Club. The date will remain the same, September 21st.



Browns Lake is a Racine County facility.

The gang gathered after lunch for a simultee event.

While everyone else eats a generous lunch, Dave Brandenburg and Scott Schaller work on the meeting business.

Breeding and Genetics of Turfgrasses at the University of Wisconsin-Madison
A New Research Initiative

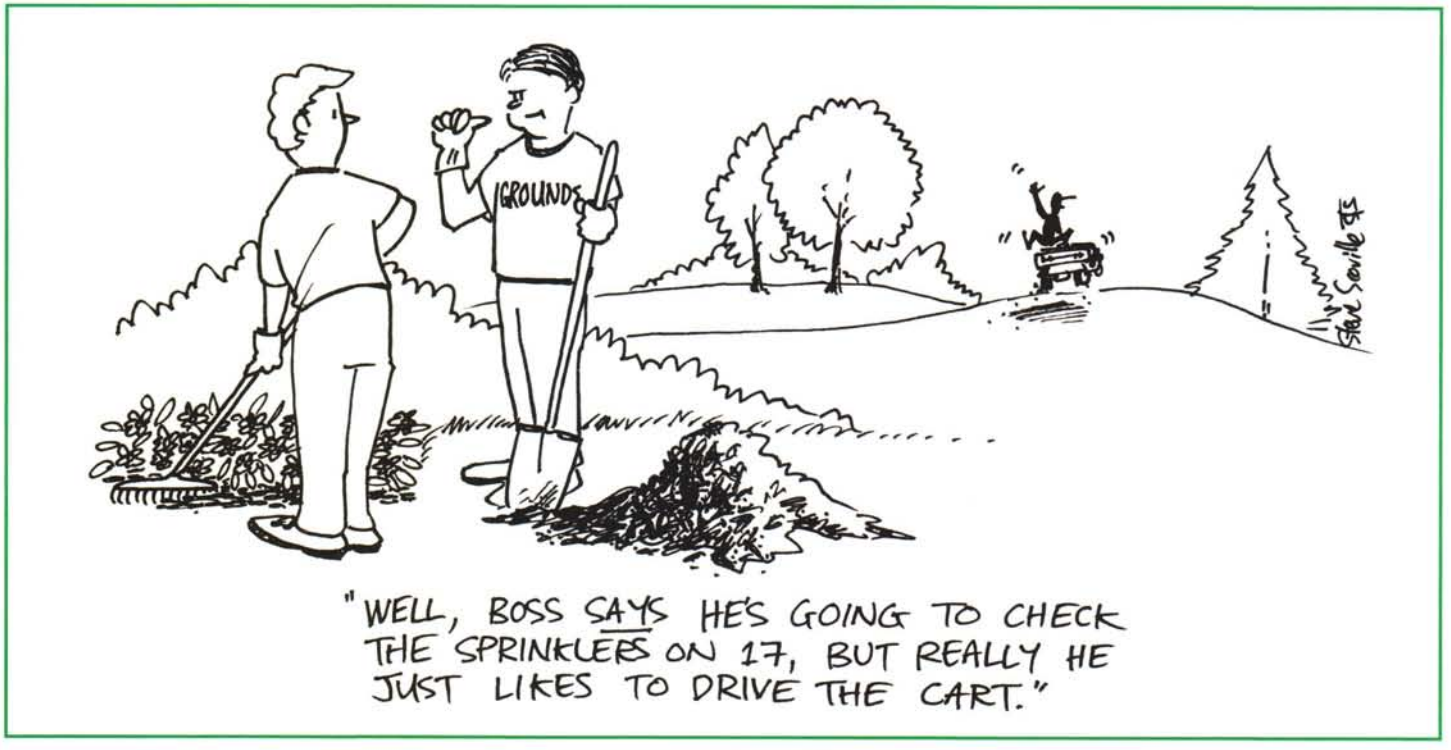
By Dr. Michael D. Casler, Department of Agronomy,
University of Wisconsin - Madison
Collaborators
Dr. John Stier, Department of Horticulture
Dr. Douglas Maxwell, Mr. Jeff Gregos, Department of Plant Pathology
Mr. Mike Mlynarek, Department of Agricultural Research Stations

Introduction:
Background and Rationale

The turfgrass seed industry averages approximately $600 million in gross sales each year. Nearly all of this seed trade is based on improved cultivars developed by breeding programs in the USA, with a small amount coming from Canadian and European cultivars. For cool-season turfgrasses, the majority of the breeding work has been conducted by private companies in the Willamette Valley of Oregon. They are located there because of a climate that provides the most favorable conditions for cool-season grass seed production in the USA.

That general location facilitates breeding for resistance to some diseases and for seed production traits. Similarly, plot trials in Oregon and making collections from old turfs in other locations allows selection for turf traits. However, centering breeding efforts in Oregon does not allow specific selection pressure for tolerance to many stresses that are not present in Oregon. For example, screening for drought and heat tolerance, cold or freezing tolerance, snow mold resistance, and resistance to many other pests is not generally possible in Oregon programs.

Alternative to the Oregon-based programs, some companies have expanded their post-synthesis testing programs to include many sites across the northern USA. However, post-synthesis testing, the testing of synthetic populations which are candidate cultivars, is an inefficient way of finding or improving stress tolerance, particularly if multiple stress tolerances are important. It relies heavily on statistical probabilities and the serendipitous discovery of superior levels of unselected traits. For example, recent studies have shown some small differences among creeping bentgrass (*Agrostis stolonifera* L.) cultivars for snow mold (*Typhyla* spp. and *Microdochium nivale*) resistance and, independently, *Poa annua* L. colonization, neither of which has been a specific, conscious selection criterion in a breeding program. The differences observed in these studies are completely serendipitous, but clearly indicate that larger differences could be obtained with conscientious breeding efforts in an appropriate environment with appropriate procedures.



In addition to the private Oregon-based breeding programs, there are four public breeding programs that focus on cool-season turfgrasses in the northern USA. These are located at the Pennsylvania State University, Rutgers University (New Jersey), University of Minnesota and University of Rhode Island. The eastern environments are all much milder than that typically found in Wisconsin and neighboring states. Winter temperatures, snow mold fungi, and the potential for severe summer drought stress are all more severe in the north central USA than in the northeastern USA. Furthermore, only the Penn State and Rutgers programs are of any size to have a significant impact on the turf seed industry.

Thus, there is a large vacuum of both focus and activity for turfgrass cultivar development in the north central USA. While the National Turfgrass Evaluation Program (NTEP) routinely runs tests in Minnesota, Wisconsin and Michigan, their tests are typically focused on the visual appearance of cultivars. The emphasis is on turf quality, leaf texture, and genetic color. Ratings for disease resistance are typically made only if natural inoculum allows expression of cultivar differences. Similarly, tolerance to other stresses such as winter temperatures can only be assessed if conditions are sufficient for differential genetic expression. Furthermore, because NTEP trials of a single species are typically repeated only every 5 to 6 hears, there is only a small chance to expose each cultivar to the wide array of stresses that it must eventually survive in a commercial turf.

A directed and focused breeding and genetics program at the University of Wisconsin-Madison will help remedy some of these inadequacies. Our location includes all the important elements of such a program: highly stressful environments; an adequate research infrastructure; turf management and turf pathology programs; and interested, willing, and able collaborators in the commercial turf sector.

Program Objectives and Approaches

Overall: To increase our understanding of turfgrass genetics and breeding principles related to improved functionality for the turfgrass industry in the north central USA.

Objective 1: To develop an improved creeping bentgrass with combined resistance to snow mold fungi and *Poa* colonization.

Winter diseases of turfgrass, collectively referred to as snow molds, are a major problem on all turf areas in Wisconsin and similar regions. Golf course greens, fairways, and tees are of primary concern because of the high dollar value associated with these areas. Fungicides currently provide the only means of snow mold control. Often the fungicides are used in various combinations and multiple applications in an attempt to obtain good control of the diseases. The most effective fungicides are mercury-based compounds, which are now illegal in the USA. All legal fungicides are less effective and some fungal pathogens have begun to show resistance to some of these fungicides. In addition, there is considerable public opinion to reduce the amount of fungicide use on golf courses.

Poa annua is the most troublesome weed on golf courses in

(Continued on page 50)

(Continued from page 49)
Wisconsin and other northern states. There are both annual and perennial types. Annual types produce seed heads under close mowing, including heights cut on golf greens. This seed production leads to replenishment of seed banks in the soil, allowing annual re-establishment. Perennial types are capable of profuse tillering and survival under the most severe winter conditions. They are extremely competitive against commercial turfgrass cultivars. The only effective way to control *Poa annua* in established turf is by visual identification and physical removal, a practice that is not economical in any commercial tuff application.

There is preliminary data that suggests creeping bentgrass cultivars differ in both the level of snow mold infection and resistance to *Poa* colonization. Genetic resistance to these two pests would be an extremely valuable contribution to the turfgrass seed industry. The preliminary data and our own observations indicate that both resistances can be achieved by traditional plant breeding techniques. We have already made numerous collections and will continue making collections on golf courses that show apparent genetic segregation. In addition, we will use small-plot trials to do further selection for both resistances.

There are distinct advantages to this approach. Combining the selection work with some genetic studies of inheritance will allow us to identify the most resistant plants and to ensure that the resistance of those plants is controlled by multiple genes. Multiple-gene resistances to both pests have a distinct advantage over single-gene resistance, because the pest cannot easily overcome the resistance by mutations. Single-gene resistance to diseases can be overcome by pathogens rather quickly, because they only need one virulence gene mutation to overcome the host plant resistance. Similarly for Roundup resistant creeping bentgrass, past history suggest that there are *Poa* plants that are already resistant to Roundup and they will rapidly increase in frequency on greens seeded to Roundup resistant bentgrass that are routinely sprayed with Roundup. Our multiple-gene approach will make it much less likely that these pest can mutate to overcome our accumulated resistances.

Our plans will be to conduct much of our screening and plot research at the O.J. Noer Research Facility, but also to rely heavily on cooperation from golf course superintendents. We will use molecular genetic approaches to identify the number of genes involved in these resistances, but traditional breeding approaches to develop germplasm. We anticipate the development of a creeping bentgrass cultivar that is resistant to all common strains of snow mold fungi and is capable of establishing itself and persisting on *Poa*-dominated golf course greens. Ultimately, we think it