

(Continued from page 19)

Plumbing the chemical depths of the green ash tree, Dale Norris, a College of Agricultural and Life Sciences entomologist, and graduate student Ingrid Markovic have extracted an array of natural chemical compounds that repel or poison gypsy moth larvae, the leaf-eating caterpillars with appetites the size of oak trees.

"Over the past 50 years, governments have spent hundreds of millions of dollars on gypsy moth research and control," says Norris. "But nobody bothered to look at the chemistry of plants that gypsy moths won't feed on."

Although the gypsy moth caterpillar will dine on any one of more than 300 different trees and shrubs, it exhibits a distinct aversion to the green ash.

"The caterpillars will starve to death before they'll feel significantly on it," Norris says.

"It is essentially immune from one of the most serious pests of plants, period."

That's because the green ash deploys a layered chemical defense, and Norris believes those same chemicals can now be used to defend hundreds of trees and shrub species

now featured on the insect pest's menu.

Norris says that the green ash tree's first line of defense is a group of six to eight volatile chemical compounds that the gypsy moth caterpillar detects at a distance. "This mix of compounds sends the caterpillar in the opposite direction. They can detect these compounds without touching the tree."

If, however, a gypsy moth caterpillar accidentally drops on to the leaves of a green ash and is hungry enough to nibble, the tree deploys a second group of chemical compounds that quickly inhibit eating, and a third group that, when digested, poisons the caterpillar by disrupting its development.

"There is this range of chemistry, from highly volatile messengers that go out from the foliage and repulse the insect from several feet away, to relatively non-volatile compounds that deter feeding and lethally alter development and metamorphosis," Norris says.

These chemicals seem to work at very low concentrations — a few parts per million — and offer an apparently safe and environmentally benign weapon against the gypsy moth.

Norris and Markovic, working through the Wisconsin Alumni Research Foundation, have received a patent allowance on the green ash compounds. Norris envisions their use especially in sticky, protective strips wrapped around tree trunks and shrub stems as an adjunct or alternative to the aerial spraying of the caterpillar-killing bacterium, *Bacillus thuringiensis*, now the most widely used agent in the fight against the pest.

A tacky barrier, impregnated with the natural chemistry of the green ash and wrapped around a tree trunk or shrub stem, would be effective, says Norris, because gypsy moth caterpillars migrate daily up and down tree trunks and stems.

Interestingly, it is as caterpillars that gypsy moths primarily move about the landscape, hanging from threads and using the wind to "balloon" to new locales. They sometimes sail for great distances.

"Between the stickiness of a barrier and its green ash chemistry, we can greatly disrupt the normal movement of the larvae," Norris says. "We think we can give people a slick, safe tool to prevent this pest from denuding their valued and otherwise susceptible plants." 🌱

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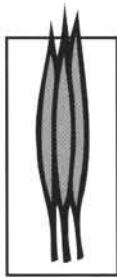


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Summer Field Day Eludes Mother Nature's Wrath Once Again

By Tom Schwab, Superintendent
O.J. Noer Turfgrass Research and Education Facility

On the night before this summer's 14th annual turfgrass field day, all I could think about was the rained out 4th field day held at Camelot Country Club ten years previous. As we were leaving the Noer Facility after doing last minute preparations the skies opened up. I thought I was going to get washed off the road on the way home. I had thoughts of trying to crowd 500 people into the facility the next day like we did into Camelot's barn in 1986. I also thought about towing sunk-in-the-mud trucks and trailers out of the trade show area. Fortunately the rain only amounted to 9/10 inch. Since that was the only rain we received in August it soaked into the ground as quick as it came. Field day was spared. The day turned into a very pleasant one for this annual gathering of turf professionals.

The good weather was only the beginning of the success of field day 1996. There was a record number of vendors that exhibited in the trade show (58, one over last year's record of 57). These vendors give so much support to turf research in Wisconsin that it's great to be associated with

them and to see their numbers increase every year. The attendees are the real benefactors of the larger trade show. It gives each attendee more avenues to attain information on better maintaining their lawn and landscapes.

The morning trade show featured an equipment demonstration that showed off many of these new and improved technologies. There were aerators of all types, mowers for all heights, sod cutters, brush cutters, topdressers, weed whippers, utility vehicles, and anything else you could use in your maintenance operation. They were all there for you to test out and compare with hands-on demonstrations. The new six acres that we seeded this spring was left long for rough mower demonstration. The whole field was trimmed in no time at all by the flurry of different mowers being demonstrated.

The lunch was again superb and it provided a great time to converse with old and new friends. Following lunch, the announcement of silent auction winners took place. The table was filled with great prizes that were donated by the vendors and some

attendees. As usual those items were acquired for pretty nice prices by the bidders. Those bidders were not the only winners. The Wisconsin Turfgrass Association made \$2,450 from that auction. The field day is one of the Wisconsin Turfgrass Association's main fundraising events. Including the auction, the WTA walked away with a very nice chunk of change totaling more than \$10,000 which will mostly be used to fund additional turf research at the UW.

The main focus of field day is the afternoon turfgrass tour which presents all the latest turf research efforts done at the UW-Madison. A more informal tour was planned for this year than was used in other years. The idea was to be more flexible and allow attendees time to visit each station for as long as they would like, or they could move around with the group and spend short times at each station. Although this year's tour was short on professors with the retirement of Drs. Koval and Meyer and the relocation of Dr. Rossi, we were fortunate that students, Noer staff and industry representatives stepped in to give some



The speck in the sky, which flew over the Noer Facility around noon...



took this great aerial photo of 1996 Field Day.

great talks. The golf manager's tour had presentations on putting green construction, management strategies, and turf selection. Also for golf were strategies on using plant growth regulators and controlling patch diseases and dollar spot. Drs. Maxwell, Parke and Andi Guerin discussed disease controls using some of the new biologicals. The Lawn and Landscape tour featured talks on urban runoff, prairies, and ornamental grasses, along with lawn establishment and renovation strategies and how to control the number one homelawn disease pest—necrotic ring spot.

For the record I'll note that attendance was down slightly this year. There were almost 50 fewer attendees than last year's 425 record number. These numbers exclude speakers, guests and exhibitors. It's hard to tell why the numbers were down but the folks who did attend were treated to another wonderful turfgrass summer field day and lots of new ideas to take home with them. And my fears of the evening before didn't materialize. The weather for field day was, once again, great.

1996 Field Day Exhibitors

Our thanks go to these exhibitors who help so much to make field day possible. Thank them when you get a chance.

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Turf specialist Amy Sausen led one of the many tours of the research area.



Tom Schwab, host of the WTA Field Day.



Professor Kusow ponders a question from the Field Day crowd.



Cherokee's George Magnin visits with Professor Doug Maxwell.



PLCAA president Terry Kurth and WGCSA president Mark Kienert.

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The Noer Facility exists in a large part to this man—Dr. Leo Walsh. He was CALS dean during planning and construction, and was instrumental in guiding industry efforts.



A new flag and flagpole grace the Noer Facility landscape.



This Season Is Now History

By Pat Norton

Well, the 1996 golf season is now over for...at least for us northern types. The relief of 'another long, stressful season being completed' is genuinely mixed with that sinking feeling of 'here comes another long, cold, winter...too much darkness, too much cabin fever...worst of all...too much dry, pale white, pasty, itchy skin...Aaahh'!

As I write this I realize, as many of us do, that autumn and early winter are quite a nice time for us all...most pleasant golf course days in September and October...with the arboreal splendor reaching its peak in mid-to late October instead of two weeks earlier as in our former life...in that other 'dairy state' which is now but a place on the map to us Illinois residents!

Conquered now, and all but forgotten are the challenges that presented themselves this past season on this golf course, or any other, I'm sure. I remember fretting and somewhat freaking out during the last days of August as I contemplated the upcoming autumn...seemingly too much to do, too few people to work with, and not nearly enough course labor \$\$\$ budgeted...not a chance, I told myself, of maintaining this golf course to my satisfaction!!!

Somehow, creative and interesting solutions were found to these and all of the other challenges that superintendents face, usually with positive results...

The end result is that upon closing down the course each November each of us can reflect back upon the golf season...as we 'Carry All Cruise' through our little golf kingdoms, silently talking to ourselves..."Hey man, this little project over here did turn out really goooooo!" or "These golfers are right...I really do know what I'm doing!!! I am a 'golf course genius'!!!

Driving a bit further, though, I encounter a few bad areas still needing my magical touch...still needing a big dose of TLC. But don't worry...the "turf doctor" is still "IN"...in fact, here at 'Everpresent CC', I'm always 'IN'... I'm always out there on the course...that's why they put lights on those damn vehicles, isn't it??? So that we'll never have an excuse for not being there, right???

Man, sometimes I get so sick of being at that golf course so much!!! Can I go home now??? Can I go home...ever??? Please, please, please, I just...want...to...see my family...for a few hours!!!

Those solitary drives around the course are when I do my best ranting and raving...usually by the time I reach my ultimate destination I've calmed down somewhat, wiped the foam away from my mouth, and refocused my vision.

I realize then that things aren't so bad...I could be working in a shoe store somewhere just like Al Bundy...in fact, my family says that there are many similarities between us...

I realize also, as another season is but mere history, that too often I focus in on the negatives about this line of work...the long hours...and simply how much time and

effort it takes to do justice to this or any other golf course! And just about every superintendent that I know personally has this same problem...it's a very personal thing when that entire golf course out there has your signature all over it.

To do it right, it simply takes a lot of time...well, now that the season is over let's all take a month or six weeks off from work, and relax!!!

There are tons of things that I've learned since getting involved down here at this course in northern Illinois. One idea that's really gotten into my head this season is this idea of 'customer service.'

Great customer service is something that I had always discounted, taken for granted, and never felt was one of my responsibilities...until I began working with a guy who really understood customer service and has used it to great advantage, both personal and financial.

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After a couple seasons of observing him, and having it rub off on me, I realize thoroughly that great customer service is helping our golf course stand out from the rest...at least a little bit. Public golfers really appreciate being treated nicely, and usually reciprocate by giving us their repeat play.

We fully realize that we're definitely not the best public course down on this side of ChicagoLand. But we do have an ever improving golf layout, a great golf value, and a reputation for providing great customer service. Other better known, more popular courses close to Chicago have very poor reputations when it comes to golfer service. Probably they can afford to be a bit unfriendly, or even rude. They have the luxury of being closer to all those public golfers...we on the other hand realize fully that the bulk of our play comes from the far SW suburbs. These golfers have a lot of 'choice' golf course available to them before they ever get out here to Morris. Heck man, we're 20 minutes SW of Joliet!! We're not exactly surrounded by huge numbers of scratch golfers!!

Great customer service as a successful business philosophy does not mean that things are priced and sold at bargain prices everyday. It means that everything that a public golf course sells...green fees, cart fees, membership fees, outing package prices, shop merchandise, food, and drink...everything-is priced such that golfers will accept your pricing structure and repeatedly patronize your course because the course is almost always in very good shape, improvements are constant, and the service is great. It all adds up to higher and higher levels of income, and a thriving public golf course.

If any of the key ingredients are missing, however, you are dead in the water, pal. And that is where some public golf courses struggle...treat people at your course better even than you'd expect to be treated when you golf. Isn't that simple?

So how can a superintendent provide great customer service? Most of it is internal, 'behind the scenes' type of stuff...like communicating with the golf shop staff when course cultural practices are imminent...and being cooperative when 'the big dogs' in the ownership group ask a guy to do something...or simply having a good sense of humor and talking to the golfers and members as much as possible.

A very important way for us to provide that great customer service is to have our staff people well trained in the delicate art of getting the work completed without bothering the golfers...which sounds easy until you consider my situ-

ation. We have quite a few Hispanic/Mexican staff personnel...some of whom speak almost no English...needless to say the ability to speak Spanish, at least somewhat, helps immensely.

Even with that ability, though, it's a daily challenge to communicate with and train these people. Usually, we're all going back and forth between the two languages...starting a sentence in Spanish, then switching to English when the need arises.

All in all, though, this golf season was a very good one for us. Other courses that are within 45 minutes of us would much rather forget 1996...they had a disastrous year, due mainly to the weather. A very wet spring, then the huge mid-July storms and the resulting flooding...a very bad year for some courses.

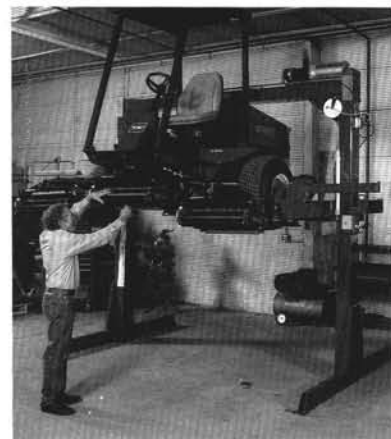
The big trick is figuring out ways to keep those income figures climbing! The other big trick is figuring out ways to avoid spending money for course maintenance...fortunately for me the focus of our entire group is the golf course...one of our main goals is to increase the value of the course for reselling someday.

Consequently, we've been able to take a really rough golf course property and begin the transformation into a course that makes us all proud!!

So, as the season just completed gets hashed and rehashed by our golfers, our management team starts to focus on 1997!! There is certainly no shortage of areas needing budgetary funding...like maybe the compensation package of that 'near genius' superintendent??

It is getting to be that time of year, isn't it?? 🍀

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Whistling Straits: Destined to be One of the World's Greatest Golf Courses

By Monroe S. Miller

I wasn't prepared for it. The little I had read about Whistling Straits was all flattering but clearly understated compared to what we saw on the WGCSA tour, led by Mike Lee last August. This newest Kohler Co./Pete Dye creation is going to be stunning.

No one should be surprised. Kohler Co.'s dynamic Blackwolf Run — so successful that the two golf courses are too busy — demonstrated how Herb Kohler Jr. insists on doing things. The intention with the new course was made clear by Mr. Kohler: "Instead of doing just another course, we're going for something spectacular." No kidding.

Spectacular it will be. During the background given by Mike Lee and his staff prior to the walking tour, we learned that before earth moving equipment moved in the grade change from the lake (eastern) edge of the course to the construction headquarters was only ten feet. It was, after all, a military base. It seemed impossible to believe as I looked eastward at a mountainous sand dune looming above me. It was man made.

It takes a lot of work and imagination to transform flat ground in Wisconsin so it looks like links land on the shore of Scotland. It also takes a lot of material.

The Kohler intention is to make Whistling Straits a singular golf experience by recreating the feel of a links land golf course in Scotland. It will be a walking course only — no golf cars and no cart paths — with greens and tees in close proximity. The massive sand dunes on the west edge of the Straits course segregate it from the rest of the world, and pretty much all you see from the course is the course itself and Lake Michigan. The lake could well be the Atlantic!



Tour host and golf course superintendent of the Kohler courses — Michael Lee.



There we were, from all over Wisconsin, tromping through the mud. With no complaining!

Like many Scottish courses, the Straits course will, according to Mike Lee, have vast naturalized areas and a minimum of inputs. Irrigation will be infrequent with the use of lots of fescues. So serious is their desire to give us a true links course, they even considered not providing any irrigation at all and letting the cool lakeside temperatures and natural rainfall take care of water needs.


Even though the course wasn't completed the day we walked it, you got that somewhat wild, natural feeling from

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the surroundings. It was hot on the trip over to Haven from Madison, and as we sloshed through the mud on the way to construction headquarters I was dreading the heat of the day. Miraculously, as we crossed through and beyond the dunes, we caught an easterly breeze and it was 20 degrees F. cooler. Their plan is working brilliantly; I thought I was somewhere else.

Pete Dye has said a lot about the opportunity Whistling Straits is presenting to him. The property is dramatic. Mr. Kohler wants a course that will compare with the top 20 courses in the world. "There's nothing like it," Dye has said of the site.

He also has high regard for Wisconsin golfers. Witness: "These people up here in Wisconsin don't want a patsy. They want a fight." Our tour showed us Whistling Straits will be anything but a patsy.

(Continued on page 29)



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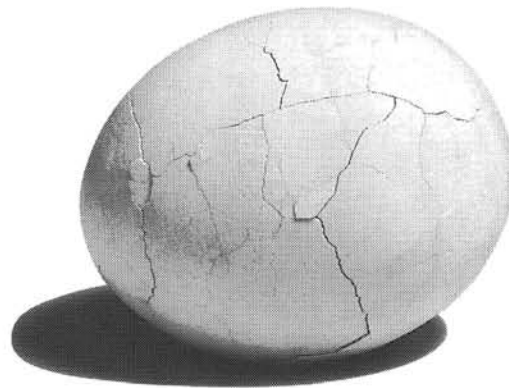
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(Continued from page 27)

Also: "There are more ardent golfers in Wisconsin than anywhere I know. You have more people around here with that type of enthusiasm." Most WGCSA members would agree with Pete on that.

The summer of 1996 will be memorable for many of us because of the generosity and hospitality of Kohler Co. Watching this spectacular course come into play in 1998 will be more interesting for those who were there.

I enjoyed the day for another reason; walking tours were the essence of WGCSA meetings two and three generations ago. Education was everything to our forefathers, even in the summer months. This trip made it clear that our summer meeting schedule can include things other than playing golf. For that reminder, special thanks to Kohler. And to Michael Lee for making it happen for his colleagues. ♣

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