



Derek Kastenschmidt, Reinders, tees off on the 192 yard 5th hole. The hole features a 170 foot elevation change and your editor was the only one of the group to hit the green!



According to Mark Langner, FarmLinks' Director of Agronomy and Applied Research, fans are a priority to grow Bentgrass in Alabama due to the humidity and stagnant air.

details for each hole. Included with the hole layouts were the grass types and species, fertilizer type and rate, mowers used and cutting height, product studies and aeration practices.

All the greens on the course were a blend of A1/A4, while tees were either, TifSport Bermuda, Celebration Bermuda, Meyer Zoysia, Cavalier Zoysia, Zorro Zoysia or Diamond Zoysia. The tees on many holes featured 3 or 4 different grasses depending on the tee played. The wide fairways (45 acres for 18 holes) were either TifSport, Tifway 419, Thermal Bluegrass, Zorro Zoysia or Paspalum with the Zorro Zoysia offering the best playability with tremendous upright growth.

Native rough areas were Broomsedge, Lovegrass / Switchgrass, Tall Fescue or Hard Fescue or a combination of grasses while the primary rough was Bermuda cut to 1" with pull-gangs. The Bermuda rough was allowed to grow long 3" or more around the bunkers and proved quite a challenge to hit from.

With varied golf swings and ability our five-some saw all areas of the golf course and in hindsight questioned the time we spent looking for errant shots in the woods and native grass areas after the staff killed a large rattlesnake near the lodge.

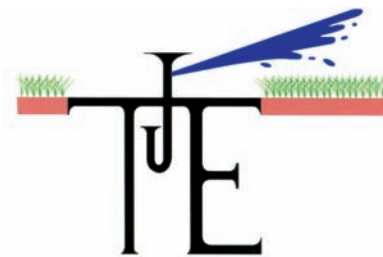
The course was a joy to play and golfers are assisted in combating the heat with a marshal handing out ice cold mango scented towels, water bottle stations at various points, and ice cold apples on the 1st and 10th tees.

In the evening we relaxed and talked turf around two large dinner tables at Parker Lodge and had the opportunity to go bass fishing, play pool, ping pong or Wii and just hang out in the comfortable surrounds.

After Thursday's breakfast we headed to the new Solutions Center classroom to listen to a presentation

by Chris Derrick, Technical Specialist with Agrium Advanced Technologies called the "Smarter Ways to Grow" or how to maximize control the release of nitrogen fertilizer when we cannot control water or temperature the two main release agents of nitrogen.

Chris started with some history of Pursell Technologies which was purchased by Agrium Advanced Technologies and some fertilizer 101 before moving into some new fertilizer technology. No longer are nitrogen fertilizers only considered slow or fast release. Newer products are truly "controlled release"



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Even the clubhouse features a porch and rocking chairs to enhance the southern experience.



Brian Thompson, BASF discusses his work on the 16th fairway while Scott Sann, Greenwood Hills, and Mark Langer, Farmlinks look on.

slowing the release process and allowing the nitrogen to stay in the ammoniacal stage longer where it is shown to enhance root growth over shoot growth.

Fast release fertilizers are mainly released by hydrolysis and we have no control over the timing once a product like urea is wet. Most of the N is released in 24 hours and color and growth are seen for 2 to 4 weeks. These fast release products are cheap to purchase but labor intensive as light rates need to be applied on a regular basis to obtain consistent conditions. The other downsides to fast release products are the potential of turf burning if the products are not watered in and the loss of N through nitrogen volatilization.

Slow release products are better but still released by hydrolysis, microbial activity and temperature so we as turf managers have little to no control over the release timing because we cannot control the water applied by rain. Methylene urea (Nutralene, MethX-40, Contec DG) and Ureaformaldehyde (ureaform and nitroform) lead the way in slow release products. The length of release is set by the length of molecular chain.

IBDU is another slow release manufactured product that is less microbe dependent as it is primarily controlled by water and particle size. Along with the manufactured products many coated products are considered slow release. Damage in manufacturing or product distribution can crack the sulfur or polymer coating causing immediate release and high moisture content can break down the coating faster than anticipated.

Most organic and waste product fertilizer products are also considered slow release as they need microbial activity along with proper moisture and temperatures to release.

New technology uses more advanced coatings that control the release by using products that release by

temperature which seems to be the easiest of the three release mechanisms to predict when compared to moisture content or microbial populations. The varied thickness of the polymer allows users to pick a product to match their needs and growing season. By applying the products during the cool weather of spring or fall, nitrogen release will begin at a slower rate. By the time temps warm up there is less N remaining so there is no early summer growth flush as found with many other products.

In conclusion there are many fertilizer products and brands out there but no matter which one you use it is important to understand how your product releases in order to obtain a slow sustained growth.

Chris was followed by Mark Hampton, FarmLinks Customer Manger for Toro Company covering what it takes to get a new product to market and how concepts are made into prototypes and developed into the end product. Although FarmLinks is not an "official" Toro product test center it often does see new equipment before and in the final prototype stages to give it real world experience. First generation prototypes are built to test ideas without operator comfort or safety taken into consideration. Each succeeding generation includes more and more of the end product and of course some prototypes are shelved and never reach the market place for a variety of reasons.

As visitors to the farm we had to sign non-disclosure statements so I cannot tell you everything we saw but the most impressive was the Pro Core Processor for one pass cleanup of aerification cores. This time and labor saving device made quick work of the cores from the heavy soils found at Farmlinks.

Also impressive was the Turf Guard systems to track soil moisture content, temperature and salinity. The



The haze and humidity is apparent at the 196 yard 17th hole with Parker Lodge in the background.

small wireless monitors are installed wirelessly in greens, tees and fairways to provide instant feedback to turf managers as they decide on irrigation practices. Although salinity is not usually a problem in Wisconsin, as more courses turn to effluent water sources measuring the level of soil salts will be imperative to soil health and water requirements.

During the field portion of the presentation we visited the maintenance facility to get a first hand look at the “myTurf Fleet Management System” and how it helps the equipment technicians not only find and order parts but track all preventative and non-preventative equipment maintenance. Optional technology is available for turf equipment to have wireless hour meters that register when equipment is returned to the shop, automatically alerting technicians to the need for preventative maintenance.

After a lunch at the lodge we started our agronomic tour of the golf course led by Mark Langner

Farmlinks Director of Agronomy and Applied Research. The course covers 130 acres with another 50 acres of lawns and maintained roadsides. FarmLinks has a golf course budget of over \$900,000 but like many of us has seen cuts in recent years.

The tour started on the putting green which is seeded in thirds to L-93, A1 and A4 bentgrasses while the soil profile is split in thirds the other direction with sand, sand/peat and sand/Profile. The straight sand soil is warmest in the summer and coldest in the winter when measured at 2”. Alabama offers tough summer growing conditions for the courses A1/A4 bentgrass greens. Constant high humidity and temperatures with little wind to dry the turf cause shallow rooting and disease problems. Mark stated that it would be near impossible to grow bent in the area without the large fans that move the air at each green complex.

During the stress period from June through August putting green speed takes a back seat to turf sur-

vival as the staff looks forward to the time when temperatures reduce. Mark referenced “80’s at 8” or how many days it is 80 degrees at both 8 am and 8pm with high humidity and little wind.

To help the 160,000 sqft of greens combat summer stress they are core aerified in November, needle tined as needed and Dryjected in May and September. The club recently moved core aerification from March which is heavy play and revenue month to November which is a slower month for golfers. The regular “dusting” topdressing program uses 100 tons of sand annually while the core aerification and Dryject program applies 200 tons of sand annually.

Farmlinks follows Dr. Thomas Nikolai’s recommendation to replace daily mowing with every other day rolling. Called “mow a day, roll a day” it allows the greens mowing staff to perform other tasks since greens rolling only takes 4 to 5 hours for one operator in comparison to 3 or 4 operators to walk-mow the large greens. With growth regulator applications and spoon feeding of nutrients the staff is able to keep consistent green speeds with the every other day program.

The chipping green was seeded to Diamond Zoysia and will be mowed at .08 to increase putting speed. With roots at 8 to 9 inches this green was near impossible to ball mark no matter how hard Mark threw a ball at it. Zoysia greens need less water and fertilizer than the bentgrass, however the one downside is the zoysia is tuff on mowers as it is difficult to cut so regular reel grinding is a must.

Mark and the staff at FarmLinks use a mapping product called Strata Point to use GPS information in a windows based format to show square footage of all features, irrigation and drainage lines. The program has a tree module that can show shading by time of day and different seasons based on tree

height and shape. It allows for accurate application of turf protectant products, topdressing and irrigation.

The Club Car fleet is managed by Guardian SVC (Satellite Vehicle Control) Manager allowing staff to see where carts are at any time, and control where carts can and cannot go. The zones can be set to slow cars to 2mph, 7mph 10mph, reverse only or stopped. Our car (not driven by me) ventured off the cart path on a "cart path only hole" and it stopped and would only go in reverse back to the path before we could proceed. At the end of a day or week cart managers can look at a course map to see where traffic patterns have been and put out ropes or signs accordingly.

The system allows managers to change restricted zones as often as possible and sometimes cause a little mischief. Unknown parties mark off the cart park area as a restricted zone stopping the cart staff in their tracks or causing them to go backwards to park carts. Mark mentioned some staff meetings being brought up after that.

After another huge dinner and networking at the lodge we were ready for bed fairly early. Friday morning had a full agenda with breakfast at the lodge and then back to the Solutions Center to listen to Brian Thompson, FarmLinks Project Leader for BASF.

Brian started with some history on BASF a company with 95,000 employees worldwide. The company was founded in 1865 to produce Dyes and BASF stands for Badische (the region in Germany) Anilin & Soda (Dye Stuff Components) Fabrik (Factory). Turf maintenance products are just a small part of BASF's business as it is considered the largest chemical company in the world.

It is amazing that new chemical products ever get created when you consider it takes 10 years and 300 million dollars to bring a new product to market. For every new active ingredient brought to market thousands are discarded. The long route to the marketplace is something that generic products do not have to complete as they use previously proven products eliminating most of the upfront costs associated with turf chemicals.

Using generics is a difficult decision for us as turf managers. We need to weigh the value of supporting the companies that provide research and new products with the often large cost savings generic products can bring. We can save money by buying the generics but if the major companies stop improving technology we may be without effective products in the future.

Along with discussing the newest in fungicide, herbicide and insecticide technology we were reminded of the importance of spray patterns and coverage and the benefits of the newer Air Induction nozzles that have coverage similar to the flat fan but with less drift.

The rest of our time on the farm while we were



Mark Langner, Farmlinks leads a discussion on the Diamond Zoysia chipping green with Joel Baxter, Alpine Valley and John Holberton, SweetGrass.

waiting to go back to the airport was spent networking, and either golfing, fishing or touring the property. I choose to tour some of the 3,500 acre property and the Pursell homes and soon to be hunting areas for birds, turkeys and deer. The property is expansive and offers some terrific views.

The trip home had some fun and excitement as we only had 30 minutes to change plans in Atlanta which happens to be the busiest airport in the world. It worked out that the three biggest guys decided not to check our bags to save time in Milwaukee. However our plan to Atlanta was small so we were forced gate check our bags with the promise they would be waiting for us when we deplaned in Atlanta.


Well, they bags were not waiting for us and instead it took about 10 minutes to get our bags after landing 10 minutes late giving us 10 minutes to go 25 gates in terminal C, catch a train to ride to terminal A and then get to gate 7. I was happy when I figured we start at gate 1 so gate 7 is a short dash from the escalator. That was not the case.

We jogged through the first terminal, took the escalator down, a quick train ride to terminal A and departed the train to hear the PA make the last call for our plane causing us to high step up the two story escalator carrying our bags just to turn the corner to find the gates started at 27 meaning we had 20 to go.

As we were running, with bags in tow we heard "this is the last and final call for flight 134 to Milwaukee". Well then it was a full out sprint with Joel Baxter of Alpine Valley leading the way followed by yours truly with Gene Van Liere of Eagle Creek a half minute behind after being taken out by a little old lady. While

the others in our group giggled at our sweaty red faces taking gasps of breath the other passengers were terrified at the thought one of us might be sitting with them.

We got even with the others for their giggeling when we had our bags in hand and theirs never made the connection in Atlanta. On the positive side I have started a new exercise trend at the YMCA with the luggage carry on the stair stepper.

Many thanks to Reinders for allowing us this great opportunity to expand our horizons and Blake Garrett our host at FarmLinks for putting up with us. If you are given the opportunity to attend FarmLinks it is a experience I would not pass up. 



Parker Lodge offered great accommodations with a mix of hunting and golf related themes.

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Worried About Controlling Snow Mold?

By Paul Koch, Turfgrass Diagnostic Lab and Dr. Jim Kerns, University of Wisconsin - Madison

One of the most common questions I get as manager of the Turfgrass Diagnostic Lab is what I would suggest applying to control snow mold. While I know every person who asks the question would like a one to three word response, depending on how many fungicides I would suggest tank mixing, the truth is there are a host of combinations that work effectively to control snow mold. Each golf course is unique, and several factors need to be considered when selecting what is likely the single most expensive fungicide application a course will make in a year. Factors to consider include climate, history of snow mold, course expectations, and foremost in many peoples minds the cost of the fungicide.

Course climate can vary greatly just within the state of Wisconsin. Average seasonal snowfall totals range from around 40 inches of snow in the south to approximately 200 inches in the northern snow belt. Many courses in the southern portion of the state might not put a great deal of effort into their snow mold control program, while snow mold control for the upcoming winter might be thought about on July 4th for many in the northern portion of the state. Putting aside average seasonal snowfall totals, some golf courses or portions of golf courses in the south seem to defy logic and experience significant snow mold damage every year. Knowing this is key for developing your program. The expectations for course conditioning also play a large role in developing your snow mold program. Ten percent snow mold can be manageable on one course and unacceptable on the next. Taking into consideration a major event held in the spring is also important, as cold springs will hamper recovery.

Considering the current economic climate in both the national economy as well as golf in general, it is understandable that many superintendents need to spend less on snow mold fungicides this season. We tested 64 standard and experimental fungicide treatments in our 2008-2009 snow mold fungicide trials, and many of them provide excellent control under most conditions at affordable prices. But cutting snow mold control expenses to the degree that will lead to increased recovery costs in the spring will negate those savings and might lead to revenue losses as golfers choose to play elsewhere.

The snow mold fungicide trials we conduct every year are meant to give superintendents in Wisconsin and beyond unbiased scientific data regarding the most effective treatments for controlling snow mold under varying disease pressure. The 2008-2009 snow mold trials were held at five sites across Wisconsin, Michigan, and



Figure 1: Snow mold severity at Wawonowin CC was very high in 2008-2009, though a few treatments did provide excellent control



Figure 2: Snow mold severity at Sentryworld GC was also high, though many treatments provided excellent protection.

Minnesota to provide a wide array of snow mold pressures. Sites at Edina CC in Edina, MN; Bent Creek CC in Eden Prairie, MN; and Timberstone GC in Iron Mountain, MI did not experience significant snow mold pressure and did not yield significant results. The remaining two sites at Sentryworld GC in Stevens Point, WI and Wawonowin CC in Champion, MI did provide an excellent test of different treatments and will be featured here.

Wawonowin CC is 20 minutes west of Marquette in Michigan's upper peninsula. They receive on average over 200 inches of snow annually and experience continuous snow cover for nearly half the year. One would expect extreme snow mold pressures at this site, and they would be absolutely correct (Figure 1). One or two applications of each treatment was made according to

the cooperator's instructions, with the early application made on October 2nd, 2008 and the late treatment made on October 28th, 2008. Over 220 inches of snow fell on the area in the winter of 2008-2009, and continuous snow cover was 170 days. Non-treated controls had 96.3% disease, an astronomically high number that shows just how severe snow mold can be (Table 1). Most of the 64 treatments we tested did not provide acceptable control of snow mold, which we defined as less than 5% disease.

Despite the high disease pressure treatments 29, 61, and 63 provided complete control of snow mold at Wawonowin CC. Treatment 29 contained the experimental USF26019T, which has since been named Interface by Bayer Crop Science, along with Triton Flo. Treatment 61 contained 26/36 along with a Cleary Chemical experimental, and treatment 63 contained 26/36 tank-mixed with Endorse and another Cleary Chemical experimental fungicide. In addition to these, many other treatments provided acceptable control. The fact that several different treatments provided acceptable control at this site is significant because if it works at Wawonowin, it will likely work anywhere.

Sentryworld GC is in central Wisconsin and has been host to our snow mold fungicide trials for a number of years. While snow mold severity was high at this site, it was lower than at Wawonowin CC and more representative of what many superintendents in the state face at their courses. Fungicide applications were made on October 21st, 2008 and November 25th, 2008 for the early and late applications, respectively. Consecutive days of snow cover reached approximately 100 days at Sentryworld GC. Non-treated controls averaged 76.3% disease, still high enough to provide breakthrough on weaker treatments but not so high that nearly all of the treatments broke down.

The table displaying the results and statistical analysis of the Sentryworld trial has not been included with this article, but can be accessed on the Turfgrass Diagnostic Lab's website (www.plantpath.wisc.edu/tld/pdf/uwsnowmoldreports2009.pdf). Many treatments provided complete or excellent snow mold control in this trial, including several that exhibited significant breakthrough in Wawonowin. Treatments that included Trinity, Interface, 26/36, Instrata, and Insignia in the tank-mix provided the most consistent control, though several other fungicides provided excellent control as well.

Hopefully it is clear from these results that there are more than just one or two fungicides that will provide excellent snow mold control. I urge you to look over the results provided here and on the website, take into account the factors discussed earlier in the article, and make the best decision based on your facility's needs and expectations. There is one question that arises that I do feel comfortable answering in one word. When a superintendent asks if any of these treatments will provide help with ice damage, the answer is no. 🌱

Table 1: Snow Mold and Color Ratings Recorded on April 16th, 2009 at Wawonowin CC

Treatment	Rate	Timing ^a	Disease severity ^b	Color ^c
1 Untreated Control			96.3 a	3.3 f
10 Emerald	0.13 OZ/M	Late	58.8 a-j	5.8 a-e
T-Methyl 4.5L	3 FL OZ/M	Late		
11 Emerald	0.13 OZ/M	Late	75 a-f	5.8 a-e
T-Methyl 4.5L	4 FL OZ/M	Late		
12 Emerald	0.13 OZ/M	Late	83.8 a-d	6 a-e
T-Methyl 4.5L	0.75 FL OZ/M	Late		
13 Emerald	0.13 OZ/M	Late	61.3 a-i	6.3 a-e
Trinity	1 FL OZ/M	Late		
14 Emerald	0.13 OZ/M	Late	92.5 abc	5.5 b-e
Iprodione Pro	3 FL OZ/M	Late		
15 Emerald	0.13 OZ/M	Late	73.8 a-g	5.8 a-e
Iprodione Pro	4 FL OZ/M	Late		
16 Trinity	1 FL OZ/M	Late	87.5 a-d	6 a-e
Iprodione Pro	2 FL OZ/M	Late		
17 Trinity	1 FL OZ/M	Late	67.5 a-h	6 a-e
Iprodione Pro	3 FL OZ/M	Late	85 a-d	5.8 a-e
18 Iprodione Pro	3 FL OZ/M	Late		
19 Trinity	1 FL OZ/M	Late	53.8 c-l	6 a-e
Iprodione Pro	4 FL OZ/M	Late		
20 Curalan EG	1 OZ/M	Late	86.3 a-d	6 a-e
21 Curalan EG	1 OZ/M	Early	42.5 f-n	6 a-e
Daconil Ultrex	3.2 OZ/M	Early		
Insignia	0.5 OZ/M	Late		
Trinity	1 FL OZ/M	Late		
22 Curalan EG	1 OZ/M	Early	57.5 a-j	5.8 a-e
Daconil Ultrex	3.2 OZ/M	Early		
Trinity	1.5 FL OZ/M	Late		
Daconil Ultrex	5 OZ/M	Late		
23 Trinity	1.5 FL OZ/M	Late	61.3 a-i	6 a-e
Insignia	0.5 OZ/M	Late		
Daconil Ultrex	5 OZ/M	Late		
24 Trinity	1 FL OZ/M	Late	26.3 i-o	6.3 a-e
Insignia	0.5 OZ/M	Late		
Iprodione	4 FL OZ/M	Late		
25 Tourney	0.37 OZ/M	Early/Late	35 g-o	5.8 a-e
Daconil Ultrex	3.2 OZ/M	Early/Late		
26 Tourney	0.37 OZ/M	Early/Late	1.3 o	5.3 cde
3336 Plus	4 FL OZ/M	Late		
27 USF26019T	4 FL OZ/M	Late	3 o	7.8 a
Triton Flo	0.85 FL OZ/M	Late		
28 USF26019T	5 FL OZ/M	Late	1.3 o	7.8 a
Triton Flo	0.85 FL OZ/M	Late		
29 USF26019T	6 FL OZ/M	Late	0 o	7.8 a
Triton Flo	0.85 FL OZ/M	Late		
30 Triton Flo	0.85 FL OZ/M	Late	3 o	7.3 abc
Compass	0.25 OZ/M	Late		
Daconil Ultrex	5 OZ/M	Late		
31 Reserve	5.4 FL OZ/M	Late	3.8 o	7.5 ab
Compass	0.25 OZ/M	Late		
32 Tartan	2 FL OZ/M	Late	25 i-o	5.5 b-e
Daconil Ultrex	5 OZ/M	Late		
33 Instrata	9.3 FL OZ/M	Late	13.8 no	6.3 a-e
34 Instrata	7 FL OZ/M	Late	5.5 no	6.5 a-e
Renown	2.5 FL OZ/M	Late		
35 Headway	1.5 FL OZ/M	Late	6.3 no	6.5 a-e
Concert	8.25 FL OZ/M	Late		
36 NB36275	0.37 OZ/M	Early/Late	85 a-d	6 a-e
37 NB36275	0.73 OZ/M	Early/Late	85 a-d	6 a-e
38 NB36277	7.28 FL OZ/M	Early/Late	52.5 d-l	5.8 a-e
39 NB36277	14.6 FL OZ/M	Early/Late	32.5 h-o	5.8 a-e
40 NB36278	3.27 OZ/M	Early/Late	83.8 a-d	5.5 b-e
41 NB36278	6.5 OZ/M	Early/Late	88.8 a-d	5.8 a-e
42 NB36691	9.4 FL OZ/M	Early/Late	82.5 a-e	5.8 a-e
43 NB36691	18.8 FL OZ/M	Early/Late	56.3 b-k	5.5 b-e
44 Revere 4000	14 FL OZ/M	Early/Late	2.5 o	5.8 a-e
45 Heritage	0.7 OZ/M	Early/Late	51.3 d-m	5.5 b-e
46 Daconil Ultrex	5 OZ/M	Early/Late	90 a-d	5 de
47 QP T/MC	6 OZ/M	Early	2.5 o	6.3 a-e
QP Ipro	4 FL OZ/M	Late		
QP Propiconazole	2 FL OZ/M	Late		
48 QP T/MC	6 OZ/M	Late	1.8 o	6.3 a-e
QP Ipro	4 FL OZ/M	Late		
QP Propiconazole	2 FL OZ/M	Late		
49 QP Ipro	4 FL OZ/M	Late	15 mno	6 a-e
QP Propiconazole	2 FL OZ/M	Late		
50 QP Ipro	4 FL OZ/M	Late	17.5 i-o	6 a-e
QP Chlorothalonil	5.5 FL OZ/M	Late		
51 Disarm	0.36 FL OZ/M	Late	51.3 d-m	6 a-e
52 Disarm G	4.5 LBM	Late	93.8 ab	5.3 cde
53 Disarm C	3 FL OZ/M	Late	43.8 e-n	6 a-e
Chippo 26GT	4 FL OZ/M	Late		
54 26/36	4 FL OZ/M	Late	18.8 k-o	6 a-e
Endorse	4 OZ/M	Late		
55 26/36	4 FL OZ/M	Late	20.5 j-o	5.8 a-e
Endorse	4 OZ/M	Late		
Spotrete	6 OZ/M	Late		
56 Spectro	5.75 OZ/M	Late	43.8 e-n	6 a-e
CX-30	2 FL OZ/M	Late		
57 26/36	4 FL OZ/M	Late	8.8 no	6.3 a-e
CX-30	2 FL OZ/M	Late		
58 Endorse	4 OZ/M	Late	8 no	6.8 a-d
CX-30	2 FL OZ/M	Late		
59 26/36	4 FL OZ/M	Late	7.5 no	6.5 a-e
Endorse	4 OZ/M	Late		
CX-30	1 FL OZ/M	Late		
60 26/36	4 FL OZ/M	Late	12.5 no	6.3 a-e
Endorse	4 OZ/M	Late		
Spectro	5.75 OZ/M	Late		
61 26/36	4 FL OZ/M	Late	0 o	6.5 a-e
CX-28	1.2 FL OZ/M	Late		
62 Endorse	4 OZ/M	Late	7.3 no	6.8 a-d
CX-28	1.2 FL OZ/M	Late		
63 26/36	4 FL OZ/M	Late	0 o	6.3 a-e
Endorse	4 OZ/M	Late		
CX-28	1.2 FL OZ/M	Late		
64 Chippo 26GT	4 FL OZ/M	Late	35 g-o	6 a-e
Daconil WeatherStik	5 FL OZ/M	Late		

Means followed by same letter do not significantly differ (P=05, Student-Newman-Keuls)

^a Early and late fungicide treatments were applied on Oct. 2nd, 2008 and Oct. 28th, 2008, respectively

^b Mean percent diseased area

^c Color was rated on a scale of 1-9 where 1 = straw colored, 7 = acceptable, 9 = dark green

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Wisconsin Loses Another Leader in the Turf Industry

By **Tom Schwab**, O.J. Noer Turfgrass Research and Education Facility, University of Wisconsin-Madison

This year became a very sad one for Wisconsin's turf industry. First we lost Dr. Bob Newman earlier this spring. Now we hear of the passing of Dr. Charles Koval. These two men were two of the cornerstones of the University of Wisconsin-Madison turf program. They influenced and helped so many of us to manage our landscapes with the most current research and advice coming out of our University.

On August 3rd, 2009, Dr. Koval lost his long fought battle to multiple myeloma. He was only 71 years old. I remember when I first ran into Chuck after he was diagnosed: he and his wife Patricia were enjoying the Saint Patrick's parade in downtown Madison. That was almost 13 years ago, and the diagnosis was not good. But Chuck was enjoying the parade and told me about some of their future travel plans. He was always upbeat and a joy to talk to. He truly enjoyed life and lived it to the fullest.

Chuck and Patricia would have celebrated 52 years of marriage on August 24. They raised three children and enjoyed their nine grandchildren. Chuck was raised on a family farm in northern Wisconsin. He married Patricia and then attended Northland College where he earned a bachelor's degree in biology. This was followed by a Ph.D. from the University of Wisconsin-Madison in entomology. Chuck enjoyed a long, fulfilling career as a professor and administrator at UW-Madison. He particularly enjoyed traveling the state and working with students, faculty and community members.



Dr. Koval addresses the crowd at the O.J. Noer Center at the 1992 field day.

Once he was diagnosed with cancer, Chuck became an activist in advocating for more research initiatives and forming patient support groups. To this end, he was a tireless researcher and mentor to other patients and their families.

Chuck will be sorely missed by everyone who knew him, especially his family. I will never forget his friendly conversations when I saw him at work, at Badger games, or at the Saint Patrick's Day parade. He was a leader and one of the best human beings who lived life to the utmost and a person anyone would be proud to call a friend. 🌿

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