Pump Up That Seed-

(Continued from Page 9)

1) Since it hasn't actually germinated, you don't have to worry about breaking off the roots or shoots which have emerged on some seeds.

2) It can be air-dried and temporarily stored (usually under refrigeration) before use, and

3) Since the seed surface is dry, the seed is easier to spread uniformly compared to pregerminated seed. Pregerminated seed, however, is more likely to give a faster stand of turfgrass than primed seed since it is further along in the developmental process, although primed seed can still sometimes give faster results than untreated seed. With pregerminated seed it is critical to maintain a moist seedbed to prevent desiccation.

Because seed priming and pregermination can be more of an art than a science, and the seed from either process has only a limited shelf life, many companies have worked to perfect a commercially successful seed priming process. Unfortunately the results have not been as successful as initially anticipated. Several years ago I evaluated one company's novel priming methods which were designed to allow primed seeds to be stored for extended periods (6-12 months) at room temperature. The test used Kentucky bluegrass 'NuBlue'. I compared the company's treatments against seed I primed myself (in ordinary water for four days) and untreated seed. On August 4, 1995, twenty-five seeds from each treatment were planted in a pot containing a pasteurized spaghnum peat:perlite greenhouse mix. Each treatment was replicated four times. The pots were placed in a greenhouse and monitored at two to five day intervals for germination and subsequent growth (height and clipping vields). Air temperature highs ranged from 86-90 F for the first week and from 79-84 F for the duration of the study. Pots were misted three times daily for five minute intervals to maintain moist soil. The germination results are

<u>reatment</u>	5 days*	<u>10 days*</u>	<u>17 days*</u>
ontrol (untreated)	25	73	76
Recently primed	46	70	80
est treatment # 1	18	78	82
Fest treatment # 2	14	59	6
Fest treatment # 3	29	69	79
SD (0.05)	15	14	12

summarized below (Table 2). Although not all treatments are listed, the treatments shown include the entire range of results.

The results from my particular study showed seed priming (or soaking, since the water did not contain any osmoticum) followed by one day of drying at room temperature before planting performed better than any other treatments. The effect was temporary, as most of the treatments, included the

untreated seed, caught up within 10 days of planting. Of course, the results may have been different if the temperatures were colder than optimum rather than above the optimum, but the results do show that a fair degree of fast establishment can be achieved with minimal effort compared to seed from the bag. If time is not limiting, though, there is probably little need to consider seed priming or pregermination.



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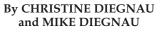
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Our Dad: Hunter of the White Ball

When walking through the neighborhood, how does one spot the Diegnau house? It's probably the yard with long grass and flashes of dandelions, not to mention the man lying on the ground picking out individual blades of quack grass. Although the MGCSA President's *(Paul Diegnau, CGCS)* lawn doesn't receive the same attention as the golf course, our dad takes it personally when a certain intrusive weed dares to call our lawn its home.

The Diegnau house is always in a state of change. We kids are off at college, except for the super-senior who returned home for the free rent. We (Christine and Mike) are both at the University of Minnesota, in the family tradition. Go Gophers! Our mom, Cindy, is the gardener at Tartan Park Golf Course in Lake Elmo and a busy Master Gardener. There is a lot of coming and going with all of our busy schedules. But, in the summertime, our Mom and Dad can often be found sipping margaritas out on the deck, watching the birds at the feeder and discussing the current environmental conditions. There are two other additions to the





Cindy and Paul Diegnau, CGCS in Paris, France.

Diegnau family, our dog, Kelli, and cat, Maggie; however, we would argue that these two are more like children than pets in our father's eyes. In her early years, Kelli would spend hours riding on Dad's cart or hunting rabbits and mingling with the golfers at Keller.

Golf has always been a part of our lives. Our parents always bring their work home with them. Dinner talk begins as it would with any family, but quickly shifts to conversation about Japanese beetles,



Paul and Mike Diegnau

turf diseases or invasive weeds. Sometimes, we kids can hardly get a word in edgewise. Moreover, our mom and dad often try to pass on some of their nature knowledge to us. It is not uncommon for the family to be out and about and then get quizzed on the tree, bird and plant species we come across. Alas, the nuances are sometimes lost on us college students studying business. Not too long ago, I asked Dad what his favorite color was, *(Continued on Page 15)*



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14 Hole Notes September 2011



Christine Diegnau and Dad

Our Dad-

(Continued from Page 14)

and without pause he replied, 'grass green.' Our dad is one of those lucky people that love their job. Many years ago, while chaperoning Christine's 5th grade field trip to Wolf Ridge on the North Shore, when asked to pick out a Native American name for himself, my dad cleverly came up with "Hunter of the White Ball." All were amused. For Dad, running a golf course is more than just a profession because he loves the game of golf. On the weekends, our television is always tuned to a golf tournament. And, over the years, he even started collecting golf course logo balls and antique putters. This collection has overtaken the basement storage room and now decorates the family office.

Whenever he can find time away from the golf course, Dad pursues many hobbies including fishing, reading and music. Like many dads, in the summer he often

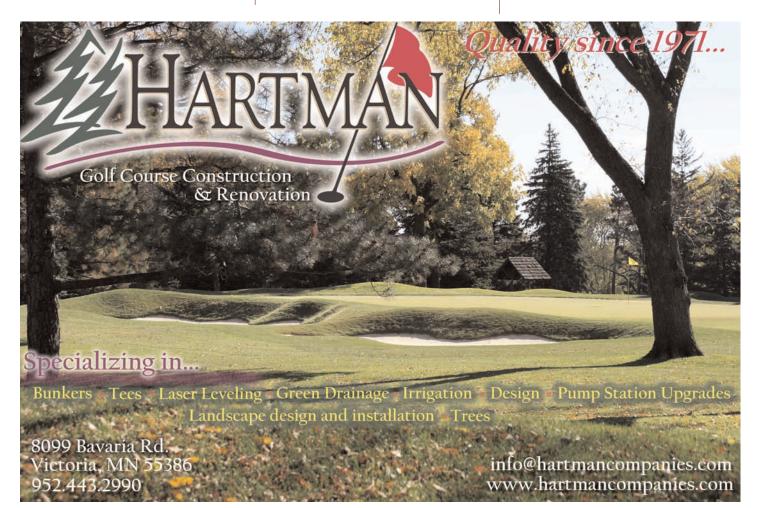
"Come winter, Dad enjoys taking overnight trips to Mille Lacs and Lake of the Woods with friends and family. Sometimes, he stays local and goes failin' on Lake Phalen. We've started to wonder if fish still live in that lake."

tries his luck fishing one of Minnesota's 10,000 lakes. Come winter, Dad enjoys taking overnight trips to Mille Lacs and Lake of the Woods with friends and family. Sometimes, he stays local and goes failin' on Lake Phalen. We've started to wonder if fish still live in that lake. Even on his prolonged dry-streaks, he never gives up. That's what we call perseverance.

At any given time, Dad can be found simultaneously reading at least three books. He is a non-fiction purist. The book topics range from politics to history and even to the extra terrestrial. It seems like our dad is always discovering some new conspiracy theory.

Many of you might not know that our dad has a great love of music - but only "the good stuff," which, according to Dad, means nothing post 80s. Although there is that one catchy song by Lady GaGa...! In his truck or workshop you can always find some Bee Gees, ABBA, Fleetwood Mac or even Neil Young tracks. The Diegnaus are quite the musical family. Our mom can play the guitar and the piano. Mike taught himself the guitar, and Christine is constantly singing. Dad has a pretty good singing voice too and is well known for his falsetto skills. (Ah, ah, ah, ah, Stayin' Alive! Stayin' Alive!)

We would like to end this on a high note (pun intended) by saying that we are very proud of all of our dad's hard work and accomplishments. He's definitely the highlight of our family!



Paul Diegnau Exemplifies a Family Man, Friend and Educator

President. According to the Encarta dictionary a president is the highest ranking member of an organization or institution. In the case of the Minnesota Golf Course Superintendents' Association President Paul Diegnau it is a true definition... but Paul is so much more than a great leader. A fantastic family man, friend and educator he emulates the kind of individual we all respect and enjoy being around.

President Diegnau CGCS, claims fame for his environmental progressiveness, political action activities, years of participation on several 'Green' Association Boards, level headed leadership and good spirited competitor. Indeed he has been a steadfast ally of our industry an exceptional leader and supporter of his peers. Take a read upon what some of his friends in the industry have had to say about his qualities.

I met Paul at the interviews for my current position. After I was hired I worked out of his shop for a few months until mine was done. That is when I really got to know Paul. Paul has helped in numerous ways regarding my job. He is a wealth of knowledge and helped with my growth and maturation. He would listen to my ideas and give me constructive advice or just let me figure things out for myself and be a sounding board. Often times he would listen to me with a smile on his face and laugh when I didn't grasp how working for the government is different from the private sector.

He has been in the industry long enough to have seen most turf problems and lived through them. He keeps telling me that "the grass will come back." I also made him feel better when he saw all the dead turf I had. As far as a friend he is pretty fun to hang out with. We go shooting together and ice fishing in the winter. I really enjoy getting him going on politics. He has a good sense of humor and quick wit. I respect him a great deal as a friend and mentor and think he has done a very good job as president of the MGCSA. *- Rob Adams*

The Ponds at Battle Creek GC

I can still remember the day I met Paul. (I wonder if he can say the same?) Dale Parske invited us to play Rochester CC so that day I met the Supt. from Riverfalls CC. My old high school golf coach played there so I always heard what good shape the course was in.

I can't remember how he played that day. Then when he moved to Keller soon

By Various Minnesota Superintendents

the word was that Keller's greens were better than ours!! Then I knew that Paul was good at what he did. (Murf was still boss then ha, ha.)

Working in Ramsey County, the home of the DNR and Mn Dept. of Ag., Paul has really kept up on issues that face us, the MGCSA, whether regulatory or invasive species related. He has served us very well in that way even before he was a board member. As President he has done an outstanding job with all the changes and challenges that we face with regulations (local and national) and a stalled economy. He is a well read person and that shows. He knows his business, you can see that on the Turf Net and through the educational seminars he has brought to our conferences. Moss doesn't grow under his feet, and probably not on his greens. Even at the OTF he usually has something to contribute or great questions to ask.

When preparing to build our new facility I knew his building was one to visit. Again he knew all the regulations that needed to be met with OSHA, Dept. of Labor etc. It was very helpful to get ideas from him.

As a person he's just a nice guy and would probably give you the shirt off his back. I did get to know him better curling. He is a competitive guy. The camaraderie was priceless. He added a lot of personality to the team both on and of ice when we were having conversation with the other team. I'm not a ping pong player so I can't tell you much about that but I have heard about the matches.

As a leader of our association he is like a gentle giant.

- James Bade Somerset Country Club

Just mentioning the name 'Paul Diegnau' a bunch of words and phrases come to mind and I won't be able to print them all, but will give it a shot if I may; dedicated, passionate, determined, caring for the environment, always willing to help anyone out, bagger when it comes to golf, always in a good mood and pretty good sweeper (curling), more to come dealing with curling.

I've been fortunate to have met Mr. Paul Diegnau about 10 years ago at one of our March Mini Seminars when I was introduced to him by my former assistant, Rob Adams (now Superintendent at The Ponds at Battle Creek, Ramsey County). Once Rob met Paul, he called me to say I



Paul Diegnau, CGCS, with the MGCSA President's Gavel

really have to meet this great guy (Paul) because he thinks I'd really get along with him, boy was he wrong! Just kidding Paul. Rob was exactly on with that prediction; it's been an honor to meet and get to know you all of these years.

Over the years of playing golf together (and Paul taking all my money because he won't give me any strokes), I still won't learn and keep golfing with him year after year. I figured something out. Well, I hope I did - by partnering up with Paul in our Minnesota Wee One event and other MGCSA sponsored events, except when he forms a team and omitting me from it.

Now to this curling thing. Our team consisted up of four members, myself, Paul, James Bade and Dale Parske (our skip). Quick understanding of curling; played on sheet of ice, skip is leader and vocal person on team directing team while rock moving, one person slides rock,two people sweeping in front of rock and skip as mentioned, directing the placement of rock. Well one evening while in middle of game, James slid his rock, Dale skipping and yelling at Paul and I to continue to sweep as a take-out was called. As mentioned earlier, we play curling on ice and ice is slippery, just ask Paul!

Well, I assume Paul won't tell you, so I will. We are both sweeping and Dale is yelling for us to sweep and sweep hard (to keep rock going straight for the take-out) and all of a sudden, I don't have a sweeper with me and you guessed it, Paul decided to stop sweeping, ok he wiped out and thank god didn't get hurt. I being true sweeper kept sweeping until rock took out our opponent's rock, then we all ran to Paul's rescue and yes he was

(Continued on Page 17)

Diegnau-

(Continued from Page 16)

ok. I must also add, when Paul went down, he was a trooper and somehow avoid touching our rock that was moving, if he touches it, we have to pull it out which means we don't get to count that rock- great job Paul.

If you haven't had opportunity to meet and talk to Paul, I'd take the time to do it because I can assure you that you won't be disappointed. Thanks Paul for all the memories and continued friendship into future. - Tom Proshek

Brackett's Crossing CC

I haven't known Paul for a long period of time. However, having served with him while he has been President, I can say I'm impressed with the depth of his knowledge of MGCSA and its history. That has been beneficial for me and the other board members as we go about our duties. Paul has a great sense of humor which really helps the flow of the board meetings. Paul also involves board members and consults with them to hear their opinions about various issues that that he must deal with as President. I believe that is a trait of a good leader and it serves Paul and

MGCSA well.

What I have enjoyed most about Paul and working with on the board is that he has gone out of his way to engage me as a new member of MGCSA and the Board of Directors. That has made me a more informed director and his historical perspective has been invaluable to me as a Director.

I'm sure there people out there who have known Paul for a long time. I'll leave the story telling to them.

- Roger A. Stewart Jr. CGCS TPC Twin Cities

Coming to a municipal operation Paul had little choice but to inherit some of his employees, me being one of them. This setup had the makings for a tenuous relationship, each not knowing what to expect from the other. As the season progressed, we shared similar thoughts and ideas about the golf course. Knowing we could count on each other along the way, we forged ahead all these many years.

As it turned out Paul is what you would expect from a Superintendent, giving you the tools needed to being successful. Be it wisdom, a helping hand or the room to develop, Paul makes it happen. This dedication to his profession carries over to his work for our chapter. Ever vig-



Paul's truck.

ilant, Paul has an eye out for new threats to our livelihood, to lessen the impact and make our voices heard. As always he tries to leave a place or position better than when he arrived.

Prior to his arrival at Keller, the grounds were mowed stem to stern. Through his tireless efforts, golf and nature go hand in hand. Watching the flora and fauna thrive here at Keller gives him great satisfaction, but the one thing he really enjoys is fishing. Few fish find their way to the end of his line, but the stories make up for that.

As many of you know Paul likes to laugh, so if you see him, give him a line from "Seinfeld" to get him chuckling and tell him thanks, too.

- Brett Wenzel Keller GC



The Double Whammy!

By BRIAN HORGAN, Ph.D. and JOSH FRIELL

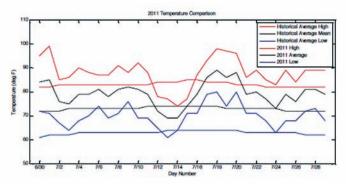
University of Minnesota

My last post on weather described winter in detail and poor spring growing conditions. My goal following that press release was to play golf, go on vacation, spend a relaxing summer with my kids, do some research and write some manuscripts. SIX rounds of golf later (as of 8/31/11), I am bitter. This has been one of those years. Many of you have found religion and pray daily for winter. Careful now in what you wish for. We need some time to grow grass before the white stuff falls.

One GM in the metro told me that these sort of press releases are just excuses for the poor playing conditions. Of course they are. As a matter of fact, if Mother Nature wrote doctors notes, she would reference the same material.

The University of Minnesota Turf team compiled comparative historical data for the hottest 30-day span in the last 25 to 30-yrs. As many of you experienced, during these types of conditions, the turf was unable to perform basic physiological processes, disease was rampant, irrigation and fertilizers did nothing but exacerbate the stress and many of you looked at the "I need to buy a really big fan" website.

For the 30-day span starting on June 30 and ending on July 29 the average high was 87.9 and the average low was 70.2. The average high dew point was 70. The highest minimum temperature for July 17, 18 and 20 was 79, 80 and 80, respectively, which were records in Minnesota. What I find fascinating is that the average number of hours with dew points greater than 75 is 18:



we hit 103 hours during this 30-day span!

The heat injury, coupled with the plants inability to recuperate from traffic, ball marking, divots and mechanical damage accumulateD during these extreme weather periods.

I assume we are done with this chaos and growing season 2011 will forever be in the record books. However, your wish of winter early this year is also being predicted by Farmers almanac. If you thought the Japanese beetles were bad this year, if we have another early snow that persists without allowing our soils to freeze, call your local vendor because insecticides will be a hot item next year. May want to consider Vegas for the Golf Industry Show this year. I'm betting on...

(Continued on Page 19)





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The Double Whammy-

(Continued from Page 18)

Below: Data for hottest 30-day span during 2011 and typical data for that time period.

	Start	End
2011 Hottest 30 Day Span	6/30/2011	7/29/2011
	2011	Normal
HEAT		
Mean High (°F)	87.9	83
Mean Low (°F)	70.2	63
Mean Temp (°F)	79.2	73
Cooling Degree Days (base 65°F)	427	240
Growing Degree Days (base 50°F)	857	690
Min Temp Not Reached	60	60
HUMIDITY		
Mean High Dew Point	69.5	65.5
Mean Low Dew Point	59.5	56
Mean Dew Point	64.8	1

Most Hours with DP >=75°F				
Rank	Year	Hours		
		103 (as of		
1	2011	8/29)		
2	2001	78		
3	1999	64		
4	1987	60		
5	1995	56		
Normal	(1981-2010)	18		

MONTHLY DATA

Highest Monthly Averages (1986-2011)				
Year	Month			
2006	July	79.6		
2011	July	78.8		
2010	Aug	77		
2002	July	77		
2005	July	76.8		
1989	July	76.4		
2010	July	76.3		
1999	July	76.2		
2007	July	76		

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GG243-11 Proposes to Delete the Current 40% Limitation Imposed on the Use of Turfgrass

Final action voters should vote against the standing motion to disapprove GG243-11 and in favor of a motion to approve GG243-11 as submitted.

Reason: An arbitrary limitation on a choice of plant material (specifically turfgrass) is too prescriptive and not an appropriate means to address site sustainability goals. A better approach would be to set a performance goal, of which an appropriate selection of plant material type, quantity and location (right plant in the right place) could be used effectively to meet such a performance goal. The focus needs to be on performance and not a narrowly defined (and misinterpreted) means to achieve that performance when there are several viable, practical and effective means to meet a goal. Simply stating a prescription like the 40% turf limitation does nothing to define a goal that will provide for the right level of performance.

Also, given the origins of the 40% turf-

By BRIAN HORGAN, Ph.D. University of Minnesota

grass limitation, the assumption is that the inclusion of this provision is intended to reduce water use. One cannot infer or know that the 40% turf limitation will reduce water consumption of the landscape when the remainder of the landscape is not specified or prescribed in the same way as the 40% turf limitation. Further, restricting turf to 40% of the vegetated area connotes a wholly inappropriate negative environmental value to turfgrass and completely discounts its positive social, economic and environmental attributes.

In a study evaluating the effect of three landscape types on residential energy and water use in AZ, McPherson et al. (1989) found that energy consumed for air-conditioning a home with a rock landscape was 20-30% more than for the turf and shade landscape. This was due to a 4°C depression in landscape temperature attributed to evaporative cooling from the turf. Even when accounting for CO2 and N2O emissions from inputs required to maintain turfgrass in the urban landscape, Townsend-Small and Czimczik (2010) found turfgrass to be a net sequester of carbon when applying up to 400 kg N ha-1 yr-1. Milesi et al. (2005) used satellite imagery and modeling and estimates total potential C sequestration of turf in the continental U.S. to range from -0.2 to 16.7 Tg C yr-1 depending on management. The CENTURY model has identified intensively managed turf can sequester approximately 1 t C ha-1 yr-1 (Qian and Follett, 2002). This rate of sequestration is similar to perennial grasslands following cultivation (1.1 t ha-1 yr-1) (Gebhart et al., 1994), is much higher than unmanaged grasslands (0.33 t ha-1 yr-1) (Post and Kwon, 2000), and is twice as much soil C stored compared to native prairie (Bandaranayake et al., 2003).

(Continued on Page 21)

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20 Hole Notes September 2011