

Seed Priming—

(Continued from Page 20)

Priming large quantities

Various problems arise when we need to prime large amounts of seed using this petri-dish concept. This is because grass seed has several requirements that have to be met if the set is to germinate to its full potential:

□ **Grass seed has a light requirement.** Grass seed is photosensitive. That is, it does not germinate as well in total darkness as it does with even a small amount of light. That is one of the reasons why you plant many seeds shallowly. Seeds have the same requirements during the priming process that they have during germination in the field.

□ **Grass seed has a high oxygen requirement.** Water does not contain enough free oxygen to meet the needs of germinating grass seed. The seed realizes this and will go dormant in standing water. That's why we aerate the water, preferably with an oxygen supplement.

□ **Grass seed excretes toxins that inhibit germination.** When seed *imbibes* (takes in) water, it excretes chemical toxins. In large quantities, these chemicals are harmful to the seed and can inhibit seed germination.

□ **The germination rates of grass seed differ among species, varieties and seed lots.**

We designed the experimental seed-priming apparatus to meet the needs of the grass seed and deal with the problems of priming large quantities of seed. The aquarium holds 18 clear testing columns, each containing priming solution and seed. A pump supplies a combination of air and pure oxygen through the bottom of the columns to aerate the solution. We fill the aquarium itself two-thirds full with water to create a waterbath, which we heat or cool to maintain a constant temperature. The seed gets adequate light, oxygen, the right temperature and the right water concentration. We change the priming solution every 24 hours to remove all excreted toxins.

Because germination rates differ among species of grass, among varieties within a species, and among seed-lots within a variety, it's hard to know how long to prime a given batch of seed. If the seedlot has a long drawn-out germination, priming needs to run longer than if the seed germinates fairly rapidly. It is possible to end up with seed that hasn't primed sufficiently or seed that has primed too long and deteriorated.

Other research

Priming is very successful with other species of grass, such as bermudagrass. Bermudagrass seed has a very impervious seedcoat causing it to have a long, drawn-out germination rate. But, priming has a dramatic effect on bermudagrass. To quantify the germination rate, we used a germination index; the larger the number, the faster the seed germinates, and the more uniform the germination. Our testing showed that priming with an experimental salt was more successful than PEG.

The high germination index numbers we found also demonstrate

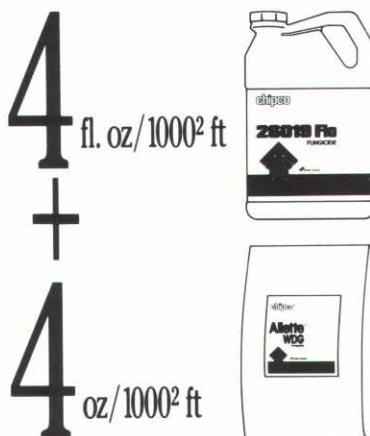
another advantage of priming. Weaker seeds take so long to germinate that they become targets for fungus and bacteria; however, when we give these weak seeds a boost by priming, the weak seeds develop much faster and our final germination count is higher.

Priming can also aid a slow-to-establish species in competing with a more aggressive species when you plant a mixture. This is the case with perennial ryegrass and Kentucky bluegrass. We compared Prelude perennial ryegrass with primed and untreated Baron Kentucky bluegrass to test this concept. The primed Kentucky bluegrass started to germinate on the same day as the perennial ryegrass, whereas the untreated bluegrass lagged behind.

To show what this edge can do for Kentucky bluegrass, we set up another experiment using Prelude in a mixture with untreated Baron Kentucky bluegrass. After 3 months when the stand was fully established, there was twice as much Kentucky bluegrass in primed lots than in the untreated Kentucky bluegrass plots.

Your Own Destiny— (Continued from Page 12)

finish last" might not be wholly true, but it does contain an element of truth. Don't run a popularity contest. Harshberger contends: "If you don't stand for something, you'll fall for anything." By striving to be fair and honest with those around you, you'll win their respect and allegiance. Finally, "the secret of success is very simple, get involved emotionally," Harshberger concludes, "We have imagination. We must learn to use it. Fantasize, daydream and win."



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The Grounds and Facility EXPO will be held Wednesday and Thursday, August 4 and 5, 1993, at Elm Creek Park Reserve from 9 a.m. until 3 p.m. The Elm Creek Park Reserve is located northwest of Osseo, between the communities of Champlin, Dayton and Maple Grove.

The Grounds and Facility EXPO will be the most comprehensive product and equipment show in the state. The EXPO provides vendors the opportunity to update or to make show participants aware of any new products or equipment for the maintenance or development of grounds or facilities.

The 1993 EXPO will be the 11th EXPO sponsored by the Minnesota Park Supervisors Association.



OMB Awaits EPA Direction

The White House Office of Management and Budget refuses to review pending EPA actions until agency Administrator Carol Browner or a Senate-confirmed Clinton EPA appointee gives orders to do so.

Among the pending actions are seven rule-makings and policies from EPA's Office of Prevention, Pesticides and Toxic Substances. On hold are six policies and rules developed under EPA's authorities delegated in the Toxic Substances Control Act and one rule to establish a final pesticide tolerance under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).

EPA staffers say OMB's refusal has had the same stalling effect as did President Bush's regulatory moratorium.



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Waste Pesticide Collection Schedule For 1993

By Joe Spitzmueller

The MDA has conducted collections of waste pesticides since 1990. Since then 1,500 farmers and other pesticide users have delivered 150,000 pounds of old, unusable or banned herbicides; insecticides, and other pesticides to collection sites for proper disposal.

To participate, individuals must register waste pesticide beforehand and safely deliver those registered pesticides to designated collection sites on collection dates. Only registered pesticides will be accepted for disposal at collection sites. The collection schedule for July is:

For residents of: **Dodge, Dakota, Freeborn, Goodhue, Mower, Olmsted, Rice, Steele and Wabasha counties**

Register: On or before June 25

Collection Time: 9:00 a.m. - 1:00 p.m.

DATE	LOCATION
Mon., July 12	Farmers Union Coop., Hampton
Tues., July 13	High Plains Coop., Plainview
Wed., July 14	Goodhue County Fairgrounds, Zumbrota
Thurs., July 15	Rice County Recycling Center, Dundas
Fri., July 16	Mower County Fairgrounds, Austin

For residents of: **Blue Earth, Brown, Carver, Faribault, LeSueur, Nicollet, Scott, Sibley, Watonwan, and Waseca counties**

Register: On or before July 9

Collection Time: 9:00 a.m. - 1:00 p.m.

DATE	LOCATION
Mon., July 26	Belle Plaine Coop., Belle Plaine
Tues., July 27	LeSueur County Garage, LeCenter
Wed., July 28	Farmers Coop., Lafayette
Thurs., July 29	Farmers Coop., Hanska
Fri., July 30	Faribault County Garage, Wells

Although properly disposing of waste pesticides is expensive, most collection participants dispose of waste pesticides at no cost to themselves. Funds for collection and disposal costs are derived from pesticide registration fees. Pesticide manufacturers are required to pay these fees when their products are sold in Minnesota.

For additional information about the program or waste pesticide collection schedule, contact Joe Spitzmueller at 612/297-5296 (FAX: 612/297-2271) or mail to the MDA's address.



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Keith Faber

Working for Private Owners

By Pat Norton

Working as a superintendent at a privately owned public golf course is different. It's different than working in either a municipal or private member owned operation. It is certainly different than any other employment situation I've ever encountered.

How is it different? Is it any better or worse than other management opportunities? Comparing and contrasting the differences in these different golf course management situations could be very interesting. It should also be very thought-provoking as we go through the 1992 golf season.

Over the past ten years, Wisconsin superintendents have seen an enormous amount of change. Changes in our public image, in our sense of professionalism, and in the technology available to manage today's golf courses, have been rapid and constant.

The emergence of the "upscale" public golf course has certainly helped bring about these changes. These new public golf courses have really become showcases for the talents of some WGCSA members. Ten years ago we didn't have Blackwolf Run, Geneva National, University Ridge, Trapper's Turn, or Cedar Creek. The development of these golf complexes has really brought golf course superintendents into the full field of vision of the Wisconsin golfing populace.

Awareness of these "upscale" public courses first came with the construction of SentryWorld and Lake Arrowhead in the early '80s. The professional demands on Bill Roberts and Jeff Parks must have differed profoundly when compared to other traditional superintendent positions. These courses were developed essentially by private groups, tied up millions of dollars, and took years before they generated significant revenues. The superintendent, to his credit, was and is the person chosen to oversee the transition from construction site to grassy sward to bona-fide, revenue-

producing, profit-making club.

Those of us who have followed Roberts and Parks soon discovered a new and different set of rules. They are as follows:

- 1) build the course quickly, but economically;
- 2) build the course correctly, but economically, and
- 3) build the course without spending a dime. If a dime is spent, it had better be spent economically!

As the new course evolves, so does the management philosophy of the superintendent. Huge amounts of capital are being spent and enormous expenses are being incurred. Justification to the owners for just about everything becomes the pattern. Accountability to a non-golfing businessman or banker is the game, not to some easily molded committee. Mistakes that cost money are not forgotten, and not often forgiven.

The management philosophy changes during this whole process. My philosophy now is that quality has a price that is sometimes far too expensive to justify. And besides, both the owner and the public golfer have a tough time seeing the subtle differences in quality that often dramatically drive up costs.

A big factor in managing a golf course under these circumstances is the enormous amount of scrutiny that is placed on the superintendent and other staff by the investors/owners. This scrutiny ranges from operational and capital expenses incurred to a scrutinization of one's management style and job performance.

This scrutiny is used as a tool by owners and managers alike. Owners examine the actions of management, which prompts management to closely self-examine (and often second guess) management decisions. This constant review process is usually positive, sometimes too negative, but always geared toward the common goal - operating a golf club for profit.

Operating a golf course for profit

means that the superintendent has to think like the owners. Golf becomes a business, not a sport or a game. What is desirable or important to the management staff is usually not affordable. What is *absolutely necessary* will be considered for acquisition, and nothing more.

The question then becomes, "What is necessary?" Necessary items in my mind are many times viewed as luxuries by the investors. I usually try to opt for higher quality on the golf course, which drives up costs and puts me in conflict with the cost-conscious owner.

My rationale is always that a higher quality golf course brings in more revenue, which is a well-proven fact. It's also a proven fact that if I don't constantly check prices and grind down on expenses, my feet will be held to the fire. It's sometimes hard to remember that it's not my money invested in this golf course. I am not the one having to pay all those bills.

The superintendent in this situation soon begins to think like a businessman. He must balance wants and needs endlessly, always with an eye toward doing without. A temporary lapse in this tough attitude has resulted in a few interesting chats between my owner/investor/boss and myself. These chats usually come as we mutually review all previous month's expenses over a suddenly inedible breakfast.

This businesslike attitude has become a very strong part of my operating philosophy. Will my desired programs and recommendations really be visible on the golf course? Do these programs somehow translate into more golfers on the course and more revenue for the club. Many of the new products in the green industry are hard for me to justify for our operation. The costs are too high, and the apparent benefits are much too low.

(Continued on Page 27)

Private Owners—

(Continued from Page 26)

Quality playing conditions aren't always the most important consideration. I sometimes cynically chuckle when I think of the state mission of the golf course superintendent at many private clubs. Their basic mission is to provide quality playing conditions for the club members and their guests, within the confines of well-established and defined budgets.

Privately owned public courses operate with a different set of goals, resulting in a different mission for the superintendent. Quality to a degree is the goal. Profitability is the ultimate goal - we do not exist to simply break even. Consequently, budgets that are defined on paper may be ignored in the quest for profitability. Management staff must constantly strive to save money or face the consequences.

This businesslike attitude, which I do believe is necessary and has been

beneficial for myself, leads me to think about the logical next step. That would be to own a golf course of my own. Many superintendents think about this idea, but not too many pursue this dream.

What would it take to own a golf course? What are the risks and benefits? Many superintendents would certainly need to change some attitudes and practices in order to survive as business people. Exposure to privately owned operations easily leads one to consider the possibilities.

Some superintendents, through exposure to public golf, have taken the plunge into course ownership. Most have turned it into a successful venture.

The subtle encouragement of this idea by one's owners/employers is a very real benefit of working in public golf. Exposure to their business experience rubs off, gets under the skin and starts the itching.

More superintendents should consider scratching that itch.

—Credit: *The Grass Roots*

Penn State—

(Continued from Page 7)

visor at Beaver Stadium," he says. "If transportation isn't a problem, we might be able to land a student a summer job at Joe Robbe Stadium in Miami."

"As the turf industry continues to grow, it is becoming very aggressive in recruiting qualified people," he says. "With a degree in turfgrass science and summer work experience, our graduates will be very competitive."

Methyl Bromide Ban

EPA is preparing a ban on U.S. production of methyl bromide by the year 2000, according to Susan Wayland, acting deputy assistant administrator of the Office of Pesticide Programs and Toxic Substances.

Wayland says the ban is required by the Clean Air Act. She added that the agency put off the ban until the year 2000 to allow time to identify alternatives.

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Alexandria—

(Continued from Page 4)

there were no shallow spots, so the players wouldn't bottom out and get injured."

In preparation for the special day, Hamelau's crews also double-cut the greens on Saturday night, Sunday morning and Sunday night.

The rains, of course, didn't help Hamelau's efforts, but the sun shone brightly on June 21 and all concerned — players, gallery, members and staff — had good reason to smile.

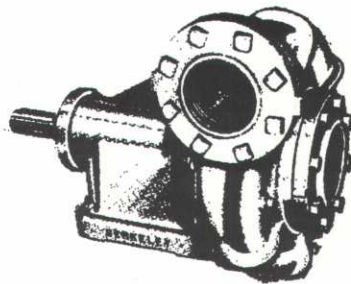
Alexandria Golf Club President Jon Haaven also heaped generous praise on Hamelau and his crew. "They really did a remarkable job, as they always do," Haaven said. "We usually work to have our course peak for the Resorters, but this year it was about a month earlier. However, I'm sure Steve will maintain this excellent appearance."

"I kidded Steve that, for the 40 hours preceding the exhibition, he must have been out all hours of the night with a flashlight making certain that every blade of grass was cut properly," Haaven said. "Our members were proud of the way the course looked, and the nice comments we received from the players. In fact, Keith Clearwater said our back nine, with its trees and narrow fairways, is every bit as tough as Pebble Beach."

For Lehman, obviously, it was a special day — *and week* — for him and his wife, Melissa, and their two daughters, Rachel, 3, and Holly, 10 months. Likewise for Duffy Waldorf and his wife, Vicki, and their two sons, Tyler, 3, and Shea, 14 months, all of whom relaxed at Arrowwood in Alexandria. Both Lehman and Waldorf spent countless hours on Lake Darling fishing with their youngsters.

At the end of the week the two touring pro's headed for the Western Open. No doubt Tom must have been particularly proud that his hometown course looked so great when he brought his three golfing buddies to Alex.

Said Club President Haaven: "Everything went so well that we're contemplating having another Tom Lehman PGA Day next year."



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EDITOR'S CORNER

By John Harris
Lafayette Club



We finally got in a game of golf. The weather wasn't exactly picture-perfect for our outing at Lafayette Club, but at least we played (and I did water ski). The high winds made the course play slightly longer than it really is, but it's my understanding that most players negotiated it quite well.

It was very gratifying for me to host a monthly meeting and have such gracious guests, regardless of the construction going on around the Club.

* * * *

Congratulations to Jim Nicol and his staff for successfully hosting the 1993 Burnet Senior Classic. Think of the challenges that Jim must have encountered with the deluge from a nagging low pressure system throughout the week. Many of us had to deal with the abundant rainfall in our own way, but our prayers went out to Jim (unanswered) as thousands toured the links at Bunker Hills (ouch!).

* * * *

A full field of superintendents will take to the hills of White Bear Yacht Club for the upcoming Joseph S. Garske Scramble on July 19.

If the weather pattern remains the same, don't be too disappointed if there isn't some sort of restriction on carts. I'm sure John Steiner will do everything possible to accommodate us regardless of the weather.

* * * *

It has been a difficult year for all of us considering the precipitation and cool temperatures. Our trash pump has seen more engine hours than our rough mower. Construction and renovation is agonizingly slow. Just when you think you're going to get a break, the monsoon season extends into the next week. That cart path you thought you would finish today extends into next week. Applications are scheduled and then postponed. Cutting, cart control, creative drainage...all take on new meanings (can you say ulcer).

However, I have managed to play or see a few other facilities out there and, considering what we are up against, there are a number of your golf courses in spectacular condition. I think this says a lot about the people in our association. Somehow we all manage to overcome and persevere.

Also, I must apologize for the tardiness of this issue. Up to now I have had to pay a little more attention to the job that brings home the bacon. However, I had a pleasant chat with Greg Hubbard and, as always his support is

understanding and very reassuring. Thanks Greg.

I also have a deep appreciation for the job that Dale Wysocki did with "Hole Notes." Every one of his issues were a delight to read.

* * * *

Just one more final note on the Joseph S. Garske Scramble. Steve Garske is receiving a number of phone calls referring to the Scramble as his. This is not the case. This tournament is in memory of his father with all proceeds going to Scholarship.

See you at White Bear.

—John Harris
Editor

New Members



Amy Rolando-Oliver

I was born and raised in the Twin Cities area. My golf career started about the age of 8. I played class AA high school golf, and ended up at the State Tournament my senior year. My interest in the weather brought me to the University of Wisconsin Madison, where I graduated with a B.S. in Atmospheric Science. I've worked in

several different industries related to weather. Writing the weather page for several U.S. newspapers, creating weather graphics for ABC affiliate stations, working as a radio broadcast meteorologist for MNN, K102 and KFAN are just a sample. I've recently moved back to the Twin Cities and started a company called Weather Watch, Inc. We are a private weather consulting firm for golf courses, landscapers, snow plowers, general contractors and municipalities. In my spare time I enjoy golf, tennis, swimming and traveling. It's nice to be back in the Twin Cities!

I have lived in Mt. Lake all my life. I have been married for 35 years and have four children. I am self-employed. I have a tree-moving business.

After I quit playing softball, I took up the game of golf. My wife Marlene and I joined the golf club. I served on the board for three years, one of those years as President. My son was superintendent for a few years. My time on the board and having my son working as superintendent was a great learning experience. I have been the superintendent for the past four years. Taking care of a golf course is one of the most challenging jobs there is.

Our course is located on 81 acres. Much of the natural terrain was left along when the nine-hole course was built in 1970-71. Our greens are 63,000 square feet.



Willis Krahn