

tilizer as suggested by researchers investigating bentgrass decline in the southeastern United States.

Mowing heights. If we can accept that grass leaves are where the energy is produced that enhances hardiness, it follows then to have as much leaf surface area available in the late season as possible. Excessive close mowing, at or below the acceptable range for a particular species, will compromise energy production and reduce winter hardiness. It is advisable to raise the mowing height on putting greens if golfers will tolerate reduced ball roll distances.

There is no research data that indicates that a final "close" mowing will reduce snow mold incidence. Still, close mowing may benefit when the turf is excessively tall and folds over onto itself, matting up in a fashion similar to tree leaves left on the turf.

Thatch. Excessive thatch accumulation will reduce winter survival as a result of plant crowns and other perennial structures being elevated from the soil/thatch interface and less buffered from extreme temperatures. In addition, thatch levels above one inch can promote desiccation and turfgrass disease incidence. Late season core cultivation that incorporates the soil from the cores into the thatch layer can assist with solving this problem and actually improve drainage by breaking through layers.

Disease Management. Two research projects from Japan suggested that low temperature pathogens could "sense" weak plants that might be more susceptible to infection. Subsequently, as indicated several times to this point, maximizing plant health through proper acclimation with water management, fertility and mowing height, could result in reduced snow mold. Nevertheless, species such as perennial ryegrass, creeping bentgrass, and annual

bluegrass are highly susceptible and will require preventative management to ensure survival.

Topdressing. Many turfgrass managers have practiced heavy, late season topdressing that serves to insulate the turf and protect the crown from desiccation in open winters. However, golf turf managers in the north central United States have experienced problems from late season sand topdressing that might be dragged or brushed in. Dr. Don Taylor at the UW-River Falls has begun a study investigating this management practice. Results from the first year were inconclusive. Still, it may not be wise to topdress with highly angular sand and brush it in. This practice may abrade the leaf surface and accelerate desiccation.

Traffic. Of all the management factors that are under the control of the turfgrass professional, minimizing traffic during periods when the soil is frozen or just when turf is not actively growing can be the most difficult. Players want to use the turf and that conflicts with what is known regarding maintaining healthy plants. While there is limited data on early season play, estimates suggest that active play during the "shoulders" of the growing season can require many weeks of active growth for recovery. Therefore, if possible, minimize traffic when the plants are dormant or the soil is frozen.

Turf Covers. The use of synthetic protective turfgrass covers, for enhancing winter survival, has provided variable results over the years. Recent studies from Laval University in Quebec have indicated that snow is the best insulator and should be kept on as long as possible. The next best thing is any cover that used an air layer to insulate the turf from extreme temperature and moisture. Keep in mind that covers accelerate green up in the spring and can result in reduced winter hardiness

if temperatures drop suddenly.

Let's Talk!

With the variety of technology available to the turfgrass manager, winter injury reminds us how "biology rules" and we remain governed by the laws of nature. However, many strategies are available to enhance hardiness through adequate drainage, proper nutrition (especially timing), and minimizing traffic during dormancy or on frozen soil. Still the grass may suffer winterkill.

It is essential for the turfgrass manager to develop and utilize this opportunity to communicate, when users are paying attention to the potential for dead turf. This is a chance to discuss aspects of the management program that is adjusted to meet the unrealistic expectations of late season play, that neglected drainage project or possibly an extra fertilizer application to enhance hardiness. It is human nature to avoid some issues until a crisis. When winterkill is widespread, it tends to get people's attention. Be prepared to seize the moment and talk to the users. ♣

Steuer
TURF FARM

Growers of
'Quality'
Bluegrass

Mineral & Peat

Pickup or Delivery
414-425-7767

A longer, stronger chain of Command.

NEW



FIVE NEW KOHLER® CS PRO ENGINES OFFER AN IMPRESSIVE LINEUP OF COMMAND PRO™ POWER FROM 4 - 26 HP.

Easy starting. Longer running time. Quieter operation. More power. The KOHLER Command CS PRO 4, 6, 8.5, 10 and 12 HP engines offer versatility for virtually any application without sacrificing an ounce of dependability. Rugged, reliable power. We figured the best way to improve on perfection was to add more of it. From 4 - 26 HP, now Kohler offers a longer, stronger chain of command.

Call 1-800-544-2444, ext. AS1, for more information.
www.kohlerengines.com

KOHLER®
engines

BORN TO RUN™

©1998 by KOHLER CO. All rights reserved.



At the Crossroads

By Pat Norton

Whether you're a superintendent, a sales rep, or anybody else in this industry . . . sooner or later you'll come to the crossroads. It doesn't matter your age, or your background, or your qualifications. The fact is that you'll come to the crossroads, and definitely more than once as your career progresses. Sometimes the intersection will be clearly marked . . . you'll have a clear sense of direction . . . and will breeze right on through.

At some point, though, we all come to a major crossroads in our careers. The road ahead will not be clearly marked . . . there may not even be a good road to follow at all! It will be a major intersection . . . and will require a major decision to get through successfully and be on your way. And there may be compelling, uncontrollable factors that push you towards that crossroads . . . possibly against your will.

In my case . . . at this golf course . . . 1998 has been a year in which our entire ownership group has been

propelling us toward the point of no return . . . which is forcing me to make a major, crossroads type of career decision!

This year has seen our group finish and begin operation of a new clubhouse and restaurant . . . and seen it all deteriorate to the point where . . . many or most of our partners agree that the time is now right to sell our beloved golf course!

If your golf course ownership group is poised to build a new clubhouse . . . and think that they've got the entire perspective . . . and are certain of their intentions . . . tell them to please stand back . . . ask their management for their opinions . . . and listen to the voice . . . any voice of reason and moderation.

In our case, we have a middle of the road, bentgrass fairway, public golf course . . . we are not the fanciest, not the most upscale . . . and have quite a few golfers who consider themselves to be common men, just as I

VORLAN DF

DACONIL ULTREX

HERITAGE

FUNGO 50

KOBAN

FLUID FUNGICIDE

Scott's FUNGICIDES

FLUID FUNGICIDE II

FLUID FUNGICIDE III

EAGLE WSP

PENSTAR FLO

ALIETTE

Michael Semler Technical Representative 608-849-1537	Bruce Schweiger Executive Technical Representative 608-756-3912	Dean Musbach Technical Representative 715-356-6444
--	---	--

consider myself to be a common superintendent.

Our strength has always been with the common, average golfer . . . who loved our common golf course . . . and its common green fee. They loved our common mobile trailers . . . and our common price for a bottle of beer and a sandwich! They loved our commonly priced annual membership, our uncommonly good service, and that great communal feeling between golfers and the management/ownership. We gave/give them a great deal . . . and they loved it!! They gave us . . . all of their patronage . . . which enabled us to prosper nicely!

So why did we overbuild on the clubhouse, saddle ourselves with too much additional debt, and scare off our golfers? Probably for the same ridiculous reasons as any other golf club . . . this clubhouse 'white elephant' thing is so common, it's almost funny! As a result of building this fancy clubhouse . . . with its fancy linen decor, and unspoken rules and regulations . . . we have, to a degree, scared off and certainly alienated many of our golfers!

As with any consumer oriented business . . . customers must be cultivated, understood, listened to, and never taken for granted! We made the mistake of assuming that this type of clubhouse/club operation was what

our clientele wanted and would support. And although everybody still loves the golf course/golf shop/events, etc., they've made it quite clear through their lack of support for the new bar and restaurant that we're definitely on the wrong track.

People used to flock into the old mobile clubhouse/trailers for sandwiches, drinks, and camaraderie . . . in '95, '96, and '97 . . . a full crowd every Saturday and Sunday! This year people actually approached the dining room/bar . . . and saw the empty, formal linen covered tables . . . and decided to have a quick one . . . or maybe divert off through the front doors and recongregate at some other watering hole!

The irony of this all is that our golf professional, John Keegan, and I know most of these golfers . . . and shortly after opening the new clubhouse . . . these golfers/members would tell us in one way or another that they didn't like what we were offering! Our corporate treasurer, who is 74 years old and has made tons of \$\$\$\$ in the bar/restaurant business, was hearing the same thing! And this was all incoming information as early as July . . . so we've wasted an entire golf season . . . letting things slide downhill . . . and not making the



**Steve Stricker, Mark O'Meara
& Tiger Woods**
know the game



**Brian McCloud, Ray Knapp
& Pat Staehler**
know your TURF



SPRING VALLEY
www.springvalleyusa.com

correct management decisions. The entire thing still doesn't make any sense!

Why would we all do such a thing, you may ask? In this case, it's . . . four senior owners who call the serious shots . . . and support each other . . . right or wrong . . . almost always. It's sort of like two lieutenants/captains in the military getting their orders after the four generals had concocted a faulty battle plan and then expect their subordinates to implement it.

This season I really did find myself cruising the golf course quoting Alfred Lord Tennyson's *Charge of the Light Brigade* . . . "into the valley of death charged the six hundred . . . ours is not to question why, ours is but to do and die!"

It's also about politics and egos . . . strong opinions by one owner and his wife . . . who were given management approval by the board . . . and obstinately insisted that they all of a sudden knew what our golfers wanted and needed . . . and even strongly felt that we shouldn't be relying on the golfing crowd to float our financial boat.

We needed, they said, to encourage and cultivate a fine dining philosophy here at our very public, very common, very rural golf course. It has been a formula and a


philosophy for mediocrity this entire season, has led to great frustration . . . and in fact, is precipitating the entire idea of selling the golf course!

Maybe we superintendent types are too used to being captains instead of generals . . . and are trained not to question too vigorously those that are higher up in the golf hierarchy. I fully understand and know that I am guilty of this shortcoming. I just wonder if I'd ever have what it takes to be my own general . . . which I'm sure is a common enough thought for any superintendent.


Selling the golf course would definitely have both its positives and its negatives. Negatively, nobody in their forties with involved children really looks forward to the possibility, however remote, of uprooting and relocating . . . even if it would probably be back to Wisconsin. Life here is pretty good . . . and getting better each year.



Positively, selling this place . . . or at least shaking up the ownership group . . . would be liberating in a way and force some of us to really look at all of the possibilities out there. I have been advised . . . and have continually been advising myself . . . that this superintendent thing is a young man's game. For every Oscar Miles or Monroe Miller out there . . . who are elder statesmen in this profession . . . there are about a hundred of us common types who will eventually run into a wall and want




North Star Turf Supply



St. Paul, MN 55117 Eagan, MN 55121
612-484-8411 612-454-3106
800-592-9513 800-551-4857



NOVARTIS

*Together . . .
Responsible Management
of the Environment*



LESCO... a team of professionals serving your turfgrass needs.

- Fertilizer
- Repair Parts
- Seed
- Equipment
- Golf Course Accessories

LESCO and Grow With Us are trademarks of LESCO, Inc.

(800) 321-5325

LESCO™

HERE. THERE. EVERYWHERE.

HOW'S THAT FOR APPLICATION GUIDELINES?



On greens. On tees. On fairways, roughs, flower beds, transplants — even in your divot mix. Milorganite delivers outstanding results for a uniform playing surface. No other fertilizer is easier on plants or simpler to use. Milorganite's slow release, organic nutrients won't burn or cause a flush of growth. Plus, it's high in micronutrients such as iron to promote dense, vigorous turf. And Milorganite resists leaching, for a sound environmental profile. So call your distributor today, or call Milorganite's turf professionals direct at **1-800-304-6204**. It's easy.



or need to do something else in our professional lives.

By the way, I heard Oscar Miles recently at the NCTE . . . and the thought struck me as I'm listening to his fine presentation . . . "this guy is Miller's older brother . . . they look somewhat alike!"

It is also pretty weird to think of my involvement here possibly coming to an end. I am not especially attached to this golf course . . . it's not nearly as good a golf course as Cedar Creek . . . where I muddled my way through before Scott Spier rescued the place. It's more of a sense of identification with the golf course and the club in general. This feeling is strong because this group took a very raw, unsuccessful golf course and transformed it in five seasons into a very successful, financially valuable entity. There is a certain amount of pride in being identified with it all.

And so in this almost off season which has seen golfers still out there in mid-December . . . which in itself is sort of weird . . . we all contemplate the possibilities. Chances are only about 50/50 that some form of our group will be here for next season . . . there is a possibility of staying on in 1999 . . . and I would have some anxiety in possibly working for a golf management company.

These crossroads decisions are never easy . . . and almost everybody in this business has to make them. It is just that I can feel that this one will be a big one . . . it's strange how you can feel it coming.

Contrary to assurances by some . . . that the selling contract will insist on their retaining key management people . . . there are certainly no guarantees of that. Nor would I want to be locked into anything . . . if it turned out to be a bad situation.

But hey, I consider myself to be extremely fortunate . . . all things considered. I can't imagine the feeling of being suddenly and permanently laid off from an executive or any other well paid position . . . as has been announced by more than a few companies recently.

So, hey, the crossroads is approaching . . . but I'm ready. I'm actually looking forward to it. I've seen other guys and their spouses negotiate it all in fine fashion . . . and guess what? They're doing just fine, I should think.

Like them, I'm quite sure that we'll make the right decisions and choose correctly when we do reach that upcoming crossroads intersection. It's not as scary as you think! ♻

ProGreen Plus  **LLC**



A WISCONSIN COMPANY

Have Your Fertilizer Needs Covered

GREENS GRADES

Very fine, consistent particle sizing with Nutralene and Sulfate of Potash.

PRE-EMERGE

For fairway and rough with Barricade, Dimension, Gallery, Team, and Tupersan.

COMBINATIONS

SOLUBLES

Dissolve instantly - perfect for spoon feeding and quick response.

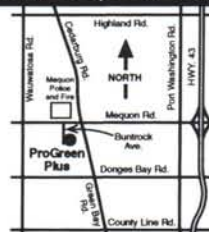
CALL... JORDAN SENSIBAR
GOLF COURSE SALES MANAGER

CAR... 414 750-7551 • PAGER... 414 318-4280

TOLL FREE... 1-888-PRO-GREEN

7 7 6 - 4 7 3 3

MEQUON



11020 Buntrock Ave.
242-9100
Fax: (414) 242-2117

NEW BERLIN



16680 W. Cleveland Ave.
789-9550
Fax: (414) 789-9509

Q. Why FLOWTRONEX PSI?

A.

REASON #1.

SUPERIOR PRODUCTION.

The Silent Storm Variable Frequency Drive pump station combines efficiency and simplicity to save you up to 50% on your power bills and countless hours in maintenance to your pump station and entire irrigation system.

REASON #2.

INDUSTRY LEADERSHIP.

FLOWTRONEX PSI is the world's largest pump station manufacturer, with more installations than all of our competitors combined.

REASON #3.

WORLDWIDE SERVICE.

Using the revolutionary FlowNet service network, FLOWTRONEX PSI is able to provide 24-hour support and fast on-site service when you need it.



- Variable Frequency Drive or Conventional
- Vertical Turbine or Horizontal Centrifugal
- Prefabricated or Retrofit

FLOWTRONEX PSI
Pumping Systems

Mike Green
Ph: 414-427-1399
6979 Woodland Ct.
Muskego, WI 53150



Seed Savers

By Monroe S. Miller

Ask nearly anyone involved in field agriculture and you will learn two of their favorite events are planting and harvest. Usually those events define their favorite seasons, too - spring and fall.

The key component of planting is, obviously, the seed. Every one is a miracle of an enormous order. From microscopic to substantial, from bland to colorful, they are the basis of life on earth.

Seeds have always interested me; from farm kid to UW student who worked (where else?) at the Department of Agronomy seeds building, I have been intrigued by seeds. Giant pumpkins and horsechestnuts may have been the most fun to grow. One of the most interesting stories I have investigated and developed for a *GRASS ROOTS* article was ten years ago when I wrote about Professor Beal and his creative seed viability experiments at Michigan State University over a century ago.

Obviously, seeds are a keystone to the business of a golf course superintendent. Seeds are how, at one time or another, courses came into being. The seed industry

has a significant visibility in our business, at meetings and conferences and in ads on the pages of our chapter publication. Any full service turf distributor has a seed business.

Progress in cultivar and variety characteristics has had a huge and positive impact on golf course turf, and those characteristics are transmitted maternally, through seeds. In addition to that, seed technology has given us pre-germinated seed, seed coated with fungicides and endophytes. We cannot even guess what biotechnology will give us in the future, even the near future.

But what happens to the old varieties? Can you still buy them? What if an old variety was especially well suited to a niche or performed exceptionally well in limited areas - are old varieties available on a limited basis? Mostly, they are not.

The same question is asked, on a scale that dwarfs the grass seed business, when it comes to flowers and fruits and vegetables and herbs. What happens to heirloom varieties of tomatoes and apples and sunflowers? Once



The view of Heritage Farm as you drive the entrance road.



SSE headquarters building, located above the farmstead. This is a front view.



The backside of SSE headquarters overlooks the farm buildings below.

new introductions are made, do old ones disappear?

Well, not far from us is an organization that is dedicated to the preservation and distribution of handed-down and heirloom varieties of herbs, flowers, grains, fruits and vegetables. The organization is the Seed Savers Exchange, and it is located just a bit north of Decorah, Iowa.

Seed Savers is a non-profit organization that was founded in 1975 by Kent and Diane Whealy, a couple that is still operating the organization today. SSE has grown dramatically in 25 years (almost!) and today has over 8,000 members. The headquarters is a beautiful old farm which is known as Heritage Farm. Its 170 acres are not at all different from a similar farm in southwest Wisconsin; the area is rolling and dappled with wooded lands. Most think of Iowa as flat; parts of it are. But the northeast corner of the state escaped the glaciers, too, resulting in very scenic landscape.

The farm buildings sit in valley floor, gardens are all around and on back from the entrance road. There is a spring-fed pond past the barn, and a stream runs along the west limestone bluff and on through the property. I climbed up the east bluff - I have never overcome my



Co-founders Kent and Diane Whealy in the Heritage Farm Gardens.

interminable nosiness - and came upon a building on the top of the bluff that was a complex of offices and meeting rooms. It was fairly new and located next to what were obviously seed processing and storage buildings.

I went in, introduced myself to some very nice people, looked through all their mail order offerings and went back outside. A pasture next to the lawn of the headquarters building had some odd looking cattle grazing in it; they hadn't been dehorned and the lyre-shaped horns were black-tipped. They had all white coats and black noses, ears and hooves. I went back in, inquired about them and found out they were White Park Cattle from the British Isles. They were there before the time of Christ but now only a few hundred remain worldwide. The Heritage Farm has about 30 of them in their herd. They are preserving cattle as well as seeds!

But the Seed Savers real mission is saving antique garden plant seeds from extinction. The focus is mainly on those varieties that were brought to America with your ancestors and mine when they immigrated. Since 1975, over 750,000 samples of rare and endangered seeds not