(Continued from page 39)

based on root zone mix percolation rates. While some may see this as a heretic statement, I must ask "Why in the world do we in the upper Midwest need perc rates of 6 to 12 inches per hour?" Another suspicion I harbor is that straight sand topdressing is a quick route to localized dry spot. With straight sand topdressing, you lose moisture retention at the putting green surface and, if I'm correct, create the condition necessary for development of the problem. The third and final suspicion I have is that irrigation practices are to blame as well. Deliberately keeping greens "on the dry side" or drying down the greens for tournament purposes is an invitation to localized dry spot.

Will the judicious use of wetting agents ever eliminate localized dry spot? Not in my experience or judgment. I've tried a few of the products where I've been able to observe the effects on greens with and without the problem. The wetting agents lessen localized dry spot, but green quality is not as good as where localized dry spot does not exist. It takes continual use of the wetting agents just to improve the situation. I view localized dry spot in the same vein as *Poa*; once you have it, the problem can never be entirely eliminated with current technologies.

Q: I'm involved in building a new golf course and we are considering native soil greens, based on success of native soil greens all over Wisconsin and the cost of USGA spec greens. Am I (we) crazy or is there merit in this consideration? — COLUMBIA COUNTY

A: As long as you're not anticipating something in the realm of 30,000 rounds plus of golf per year and have access to a sandy loam or loamy sand soil with at least 70% sand, I say "Go for it!" There is a caveat to this statement, however. I still recommend construction that includes tile drainage in a bed of pea gravel. We don't want to recreate some of the bath tubs of earlier years. You will have to give careful thought to future cultural practices, particularly core cultivation and topdressing. I'd try to make sure of long-term access to the native soil and use it for topdressing. If this is not an option and you need or wish to go with straight sand, then I recommend a rather intensive core aeration program for a few years to minimize creation of a distinct soil-sand interface.

Q: I'm a devoted user of Milorganite. My enthusiasm is based on years of success. A salesman from another company suggested I'm flirting with trouble in the form of micronutrient toxicity. Does he have a valid point? — IOWA COUNTY

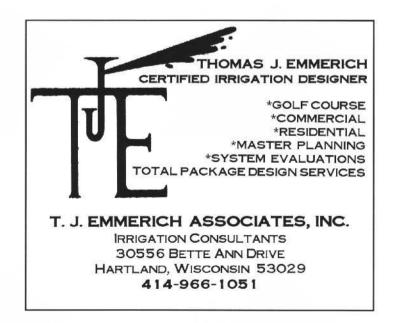
A: Let's examine the facts. There are four micronutrients of concern: boron, copper, manganese, and zinc. The contents of these in Milorganite are approximately 0.0014% B, 0.019% Cu, 0.0062% Mn, and 0.033% Zn. By comparison, turf fertilizers with micronutrients added typically contain 3 to 15 times higher concentrations of these nutrients. Factoring into our thinking the N content of Milorganite vs. other higher analysis fertilizers leads

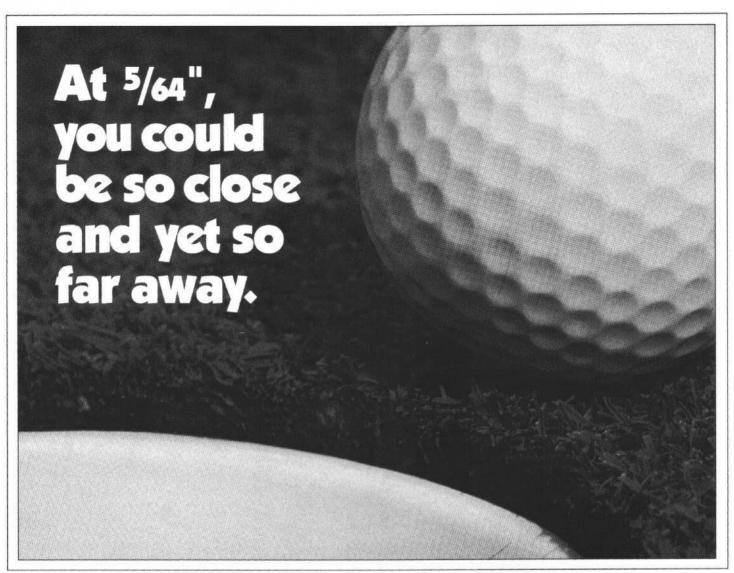
to the conclusion that exclusive use of Milorganite will, at most on an annual basis, supply less micronutrients than a single application of a typical micronutrient-enriched turf fertilizer. Does it say somewhere on the labels of these fertilizers that repetitive use can lead to micronutrient toxicities? Of course not. In this light, the claim made by the salesman is pure bunkum.

Q: Like more and more golf course superintendents, I'm seeing algae on a few of my greens. Any advice?

— LACROSSE COUNTY

A: Algae are photosynthetic plants. Their basic growth requirements are light, water, nutrients and a favorable soil pH. On putting greens, nutrition is not a growth-limiting factor. The extensive use of calcareous sands for greens construction ensures an optimum pH for algae. Light and water can be limiting. Low moving heights allow more light penetration to the soil surface and favor algae. The same can be said for continuously moist soil surfaces. Combining low mowing with soil surfaces that do not dry on a daily basis adds up to algae invasion. Culturally then, these are the two points of attack. Increase mowing heights and turf density to reduce light at the soil surface and take whatever measures are necessary to dry the soil surface on a nearly daily basis. Tree pruning and removal have to be considered, as does the abandonment of rolling. Frequent, light spiking to maintain a loose soil surface favors drying. Sound like impossibilities? In many cases they are, and we're faced with chemical control. But there is no single type of algae that populate putting greens and one chemical does not work for all types. You'll have to do some experimentation. I'd start with chlorothalonil and get the dual action of disease control. If this doesn't seem to work, the next choice would be quaternary amines. There seems to be general agreement among all who have and continue to fight the algae battle that regardless of what approach you take, reestablishment of a dense turf cover is vital.





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SACRED GROUND

By Dr. Frank S. Rossi Assistant Professor of Turfgrass Science Cornell University

The occasion was Tony Spumoni's first visit to Augusta National Golf Club and the second round of the 1996 Masters, compliments of the Great Muddy Golf Course Superintendents Association. For several months he was becoming aware of the magnitude of this event as he visited with friends that are golf fanatics. As the event drew closer, Tony began to gloat. He even had the chance to proclaim his excitement on Great Muddy Public Radio with Carlson "Cottage" Grove.

Tony had bittersweet feelings running through him as the day approached and the plans were firmed up. He knew this would be one of his last functions as a member of the Great Muddy Turfgrass Program. He told me, "I can think of no better way to depart a place I loved than to have it associated with one the great events of my professional life."

Still, there were rules! "If your late, they will leave without you!" cried Jeb Granford. "Blue will leave you at the gate if you don't get there on time." Also, Tony was warned, "No cameras!" However, he did learn that the modified rule is no camera not small enough to be smuggled in by the esteemed trip leader.

The trip coincided with packing day at the Spumoni house in preparation for the move east. There was an eerie feeling of closure that day because he knew upon his return, he was literally, "homeless". He coached a soccer game for his daughter's team, picked up Jeb and they were off to the Super 8 in Milwaukee.

Now, Jeb Granford was interesting fellow. A man deeply devoted to his profession, his University, his family, history, and the Great Muddy. The flip side of this passion was his disdain for all things liberal; taxes, long hair, and men with earrings to name a few. He is a fiercely loyal man. A

veteran of the Ugly War. Still, "Granny" as he's known to his friends, came home with dignity and honor for stepping up when asked serve.

Now, Granny and Tony made it to the flight on time, joining up with their old pals; Bogey Calhoun, Tom Morris, Billy Flagstick, Eddie Middleton and Ole Swenson. A classic Great Muddy breakfast was served on the plane and Tony objected, "How come every time we go anywhere we have to have some variation of smoked sausage, cheese, and that stinkin' leftsaboo."

Ole responded, "Hey Tony, you can always put the leftover grease in your hair."

"At least he's got some hair, Ole," quipped Billy.

This trip was beginning to remind Tony of a jaunt they took in "Steady" Eddie Middleton's minivan last year to the model train show in Luck. Tom and Ole insisted we stop at the Norske Nook. Once they were served, Tom, Ole and Granny broke into a verse of "Ode to Lutefisk".

Oh Lutefisk, Oh Lutefisk I love thy dense aroma Oh Lutefisk, Oh Lutefisk You put me in a coma.

The plane touched down in Georgia and a brown haze covered the red clay soil. The southeast was experiencing a dry spring. Little did the visitors know how this would make Augusta that much more stunning.

As they arrived at the club, Tony could hardly contain himself. "Tony, I haven't seen you this excited since Field Day and EXPO last year." observed Bogev.

"Yeah, the last time he was this excited was when Granny gave him that earring" remembered Billy.

Finally, Blue passed out the tickets and they were off. On the bus, Eddie suggested that they should all head down to "Amen Corner" before the crowd gets there. They took the advice and wandered down the pine forest path. As the scoreboard came into a view, a brilliant shade of green was reflecting in the eyes of "turf (Continued on page 44)



(Continued from page 43)

guys". It reminded Tony of the opening scene of "The Sound of Music" with Julie Andrews in the field and the camera sweeping over her to show the Alps. He fell to his knees, completely overcome with the beauty of the Azalea hole (#13).

Granny looked down to him, "Tony, you okay?"

Tony murmured, "This is sacred

"It seems funny that I am so entranced with a game that I have always worked around" reflected Tony. To break up the reverence that began to permeate the crew, Tony tried to get Granny's gander, "it sure is beautiful, but this is a homogenous portrait of an elite, white guy establishment that does not reflect the true nature of America."

Granny glanced over; trying to avoid launching a full scale conservative attack on social programs, taxes, and Clinton's character; he shook his head and sighed, "you'll learn".

Nevertheless, all agreed that the beauty and nostalgia are as deep as the Great Lakes. It is the history of the Masters and reverence for the

land that permits even the most stalwart liberals to look past the "snobbiness" and feel the beauty of a spring day in Georgia, at the most prestigious of golfing events, on the most beautiful course in the world.

Progressing around Amen Corner, Golden Bell #12 and White Dogwood #11, the crowds began to grow. At Camellia #10 green we noticed Clancy McSorley, a big shot with the National. Immediately. Granny seized the opportunity on this fine spring day in Georgia to knaw on a piece of Clancy's ear. The dreaded "affiliation agreement" reared its ugly head. The only breaks in the discussion came when golfers were putting. Freddy Boom Boom sunk a beautiful 15 footer for bird, and as the crowd erupted, Tom Morris joined the discussion. Tony listened.

The whys and wherefores were expressed. The only consensus reached was that sometimes men of unquestionable integrity and honor must agree to disagree. Each man shares the common bond of working toward a vision of a better profession in the best interests of the individual members.

Bogey begins to eavesdrop and notices Tony is not engaged in the discussion. "Tony, how come your not mixin' it up with those guys". He looks closer and detects that Tony is "glazed over."

"Bogey," Tony whispers, "my heart won't allow me any distraction today; I'm walking on sacred ground on a glorious day. If my family was here it

would be a perfect day."

The group continued up the 10th until they came upon "Ike's Cabin". At first, Tony just stood there and tried to imagine the days when lke would wander out to the practice green. Then Billy asked if Tony was okay. No one had ever seen Tony so quiet or spellbound.

"Billy, I am overwhelmed with the sanctity of this place," Tony remarked. "You know, this entire course except for the greens is perennial ryegrass, but I love it anyway." Tony continued, "I worry about the impression the lightning fast greens and perfect conditioning makes on the average golfer and subsequent pressures placed on superintendents to provide these conditions, yet I am still impressed."

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Terra International, Inc. • 3525 Terra Court • Sun Prairie, WI 53590 Conrad Stynchula CGCS • (800) 456-0948 (office) • (608) 235-4999 (mobile) We looked again at lke's Cabin and Ole asked if lke was a good president. Tony responded, "I'm not sure, but I think he was considered, moderate except for his alignment with "Tricky Dick" Nixon." Tony should have seen it coming.

"What do you want a spineless, draft-dodging, womanizing, no-character liberal like we've got now," Granny fumed. "When he was asked to step up he didn't!"

Tony replied, "I'm voting for Ralph Nader this November." Granny shook his head and smiled at Tony like he usually did when Tony would say something outrageous and they all headed to the gift shop.

A mass of humanity awaited them at the gift shop where a each day \$1 million was collected. Granny wanted books, Billy wanted a shirt, Ole needed a hat, Tom wanted a calendar and Tony was looking for stuff for his kids.

They gathered their things and headed back out to the course. Arnie was finishing #18 with a birdie and the crowd erupted. Tony was honing in on Greg Norman, about to begin his second round with a 6 shot lead. No one could have foreseen the destiny awaiting Norman, however, Faldo had the eye's of a tiger as he practiced his chips with his caddie Fanny. Practice, practice, practice appeared to be the key to his eminent success.

Occasionally, the game would take over the conversation, yet, for Tony it was never more than a moment. He was fascinated by the divot repair crew, the guys pulling hose to water the sand bunkers, the guys mowing the greens with 7 feet of elevation change that roll upwards of 14 feet. Tony learned that even the fairways stimped at 9.5 feet.

The day began to wind down and the crew from the Great Muddy began to head for the bus. It was a relatively uneventful day of scoring as the leader board remained unchanged. However, all the turf guys knew that Augusta would give a little before she began to take. And now we all know how cruel she can be to even the brightest of stars.

Still, the star of any day at the Masters is the land, sacred ground. Tony had learned that today and will carry the reverence he felt today with him always.

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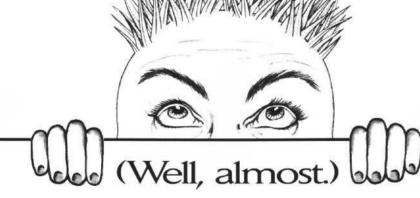
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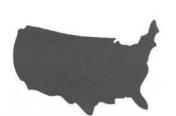
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The Rules of Golf and Your Golf Course Maintenance Staff

By David Finney Head Golf Course Superintendent Lakeview Resort Morgantown, West Virginia

Editor's Note: This is the third time Dave Finney has had an article in THE GRASS ROOTS, and this one appears here before it will in any other golf course superintendent publication. I feel honored, and I hope our readers all do also. The article Dave wrote about the US Open from a golf course superintendent perspective when in was held at Oakmont generated lots of great comments.

I first made Dave's acquaintenance during a chapter publication
editors' seminar. Dave was editor of
THREE RIVERS GREEN at the time.
Although he no longer serves as the
editor of that publication, he continues to enjoy writing. He has also
spent a lot of time gaining considerable expertise in the rules of golf,
and this summer will be serving as a
judge at a number of tournament
events. It seems a remarkable
accomplishment in light of the fact
that so many of us are so poorly
informed on those rules.

This article by a golf course superintendent was written with golf course superintendents in mind. Keep it close at hand as a handy reference for yourself and for your employees.

Are you ever concerned that the daily maintenance activities of your staff and crew might alter the outcome of a friendly match, or perhaps even effect the outcome of a tournament? What happens if one of your crew rakes a bunker that has a ball lying in it? What's the ruling if your fairway mower runs over and embeds a ball in play, or cuts up a ball in play? How do you respond to the golfers, and how do the golfers decide the outcome of a hole or the match, if one of your crew has inadvertently interfered? Armed with the correct information on the Rules of Golf and how they are applied to everyday situations involving your maintenance crews and their equipment is something you need to know.

I've been a golf course superintendent for over ten years, and a student of the Rules of Golf since 1992 when I began studying the rules in preparation for the GCSAA certification exam. Since that time I have had the opportunity to attend several PGA/USGA four-day Rules Workshops, and was successful in passing the PGA/USGA rules exam this past spring, at the Bethesda Workshop. Although I am not on par with rules authorities such as Clyde Luther or Tom Meeks of the USGA, I have gathered some pertinent information on the rules of golf and how they affect golf course superintendents, our staffs and our daily maintenance operation.

The best piece of information I've ever come across is in the Decisions on the Rules of Golf book. It is Decision 1-4/1 which basically states that "Distraction are a common occurrence which players must accept." This is great; it is sort of a carte blanche for our maintenance operations. What it means is that the noise from a maintenance vehicle passing by a group of golfers, the engine noise from a mower, and even the noises associated with construction such as chain saws are no excuse for a bad shot. Of course, Decision 1-4/1 doesn't give us the right to throw the courtesy normally shown to golfers out the window, but it does say that the noise we make while working on the golf course cannot be used as an excuse for poor play, missed shots or lost matches.

For the most part, our maintenance crews and equipment are considered to be "Outside Agencies." An outside agency is anything that is not part of the match, or in stroke play, not part of the competitor's side. Whenever our crew members or equipment interfere with play of the ball, rules 18-1 (Ball at Rest Moved by Outside Agency), and 19-1 (Ball in Motion Deflected or Stopped by Outside Agency) will come into play.

Rule 18-1 simply says if a ball that is in play, and at rest is moved by a mower, a utility vehicle or even a crew member (any outside agency), the ball is to be replaced before the player plays another stroke, and there is no penalty to the player.

Rule 19-1 gets a little trickier for the golfer and actually introduces an element of luck into the game. Rule 19-1 says basically that there is no penalty if a ball in motion is accidentally deflected or stopped by an outside agency, and the ball shall be played as it lies. This is referred to as "rub of the green." The term "rub of the green" can mean either good luck or bad luck for the golfer. For instance, if a ball in motion hits the mower while your operator is mowing fairways (in bounds) and is deflected out of bounds, then the ball is out of



bounds. The golfer must proceed under rule 27-1, take the stroke and distance penalty associated with the ball going out of bounds, and replay the shot from where the original ball was last played. On the other hand, if while mowing fairways your operator pulls over and is sitting out of bounds waiting for the players to go through, if a shot played from in bounds goes out of bounds, hits the mower and is deflected back in bounds, the ball is in bounds and playable.

There are two unique exceptions to rule 19-1, both dealing with a ball in motion landing in or on an outside agency. Rule 19-1(a) basically says that if a ball in motion after a stroke other than on the putting green comes to rest in or on a piece of maintenance equipment, the ball shall be dropped through the green (or placed on the putting green) as near as possible to the spot where the ball landed on the piece of equipment. Rule 19-1(b) says that if a ball in motion after a stroke on a putting green is deflected or stopped by, or comes to rest in or on a piece of maintenance equipment, the stroke

shall be cancelled, the ball replaced and the stroke replayed. In either case, if the ball lands in or on a piece of maintenance equipment and the equipment drives away with the ball, another ball may be substituted with no penalty.

In all instances, if the ball in play is embedded by a piece of maintenance equipment, the golfer is permitted to lift, clean and place the ball without penalty (Rule 20-3(b): Lie of Ball Altered). And if the ball is deemed to be damaged by a mower or any other piece of maintenance equipment, another ball may be substituted (Rule 5-3: Ball Unfit for Play).

Rule 25 is the rule dealing with Abnormal Ground Conditions (casual water, ground under repair, certain damage to the course), and there are a number of interesting decisions based on Rule 25 relating to golf course maintenance. Decision 25/14 defines a "hole made by a green-keeper" as ground temporarily dug up in connection with course maintenance, such as a hole made in removing turf or a tree stump, laying pipelines, etc.

Decision 25/15states than an aeration hole is not a hole made by a greenkeeper, therefore relief is not granted. However, a local rule (33-8/32) is suggested which may be adopted by your club that does allow a player to take relief from aeration holes. Naturally, where there are aeration holes, there are aeration plugs. The ruling pertaining to aeration plugs can be found in Decision 23/12. It states that although loose soil is not a loose impediment through the green, aeration plugs are considered to be "compacted soil," so they are considered to be loose impediments, which may be moved away from the ball before making a shot. Just don't move the ball when you move the plugs or you'll be assessed a one stroke penalty under Rule 18-2c (Ball Moved After Touching Loose Impediment).

How should ruts made by tractors be treated under the rules? Decision 25/16 explains that a rut made by a tractor is not a hole made by a greenkeeper. Deep ruts should be declared as ground under repair by

(Continued on page 51)

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