DAKOTA Greens Report

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January-February 2004

AGRONOMIST CORNER

ARE TODAY'S ACCEPTED AGRONOMIC PRACTICESACTUALLYADDING TO THE MUSHROOMING THATCH PROBLEM?

By BOB OELKE
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When talking with Superintendents in today's market, one of the major issues spoken of is thatch accumulation and management. Once new courses or renovations hit the second season of play, the amount of thatch accumulating seems to accelerate to unmanageable levels in many instances.

My thoughts are that this occurrence is predictable and results from accepted management practices that are minor changes from the last ten years.

Starting ten years ago, the change to 30 cm of suction from 40 cm as the laboratory standard has lowered the overall water holding capacity of golf greens/sports fields. This is not in and of itself detrimental but was the start of the practice of "drying out" greens. This is added to with increased rates of water infiltration (perc rate) to accelerated levels. This also speeds water through and allows lower water amounts to be desired. The use of straight sand as topdressing has also lowered the water capacity for the surface layer but is the layered buildup for the future shallow root zone. With time, frequent and/or heavy top dressing of sand on top of a fast draining root zone will leave the green even more prone to fast water movement. When sand is mixed with the biomass, this dilution will again cause the undecomposed organic matter to be preserved (mummified) due to limited exposure to water, nutrients and microbial agents- all essential components for complete decomposition. While reduced amounts and controlled release forms of nitrogen limit the buildup of microbes that accelerate biomass breakdown. Other factors such as new, high biomass producing turf cultivars have accelerated thatch accumulation in many greens constructed since 1993.

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12 Inches of Growth in 12 Weeks!

by Warren Strandell,

A timeout has been called halfway through construction of Honey Creek Golf Course & Estates just south of Boone, IA. Course owners Jeff Prouty and Jim Nelson have something else on their minds these days. Both are fulltime National Guardsmen and their unit, the 109th Aviation Support (helicopter) Co. was activated in early February to serve their country in Operation Iraqi Freedom. CW5 (Chief Warrant Officer 5) Prouty is a helicopter test pilot and Master Sargent Nelson is an inspector.

The first seeding was done in the early part of July, which was the worst possible time, Superintendent Brian Eldridge says. "It was right in the heat of the summer, but we had to get it going. We had some exceptional growth results on the greens despite some very uncooperative weather. The first nine holes were briefly open last fall," Eldridge says.

"Although our October weather was terrible, we still got about 200 rounds in. The last couple of greens were only 4 to 5 weeks old and were still a little thin, but the people enjoyed the golf course and we got some exceptional comments. We're looking forward to spring when the grass can fill in and be ready for play."

About the greens that were seeded first, Eldridge says, ***"We had from 10 to 12 inches of root mass in only 90 days. On the greens that were seeded later and were only 4-5-week old greens when we opened for our fall preview, we had from 8-9 inches of root mass.*** The preview was held so local golfers could play the course and have an understanding of the quality of the course. Secondly, we wanted to show the banker that it was going to be a viable business.

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BOOTH 4445 *SEE YOU AT THE SHOW*

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12 inches of Growth Continued from pg. 1

"I've done four courses and never before had one grow in so you could actually play golf on it in just 4 months. We were able to get it in respectable shape with a crew of four guys and the owners, who worked out there with us whenever they could," Eldridge says.

Architect Bradford Benz, an Iowa native who lives and offices in San Jose, CA, believes the peat used in the blends for greens and tee boxes had a big part in the strong growth. ***"I attribute much of the success we enjoyed to the peat and the precision with which it was blended with the green sand. The mix was uniform and in proper proportions in accordance with my specifications. It did its job very, very well for both putting greens mix as well as tee surface mix,"*** reports Benz.

Benz became an advocate of Dakota Peat after an Iowa State University study determined it was the best organic product for greens mix. The study compared peat to several materials that might be used as substitutes. ***"Nothing has the water retentive characteristics that peat does,"*** Benz says.

The new course features some very unusual character in the greens surfaces. "We were able to create some incredible rolls, valleys, small mounds and other features, things that under normal circumstances would become a little too wet in the low areas and parched and dry on the high areas," Benz says. "But that didn't happen. I found that once the root mass gets established to the full depth of the soil-sand profile, all those problems go away. ***Peat is definitely an advantage in terms of the grow-in of the grasses on greens and tee surfaces. I won't consider any other product than Dakota Peat."***

In the development of Honey Creek, Eldridge says, "We got those exceptional results even under some difficult conditions. When we did get rain, it was 3 inches. And then we went 67 days in the fall without any precipitation whatsoever. I had to go out in January of this year and put water on the greens because I was afraid it would be so dry we would lose turf.

"We put a 350-gallon tank on the back of the Pro-Gator and hauled six loads of water to each green. The plan is to get the front nine in perfect playing condition. I'm looking for a good spring and, with the superior root zone we have to hold the nutrients, continued development of clearly exceptional greens at Honey Creek."

Thatch Issue Continued from pg 1.

This problem is continuing to surface even though practices of coring and aerifying do limit the accumulation, with time the condition will return to critical levels. This tells us that the problem is being perpetuated by the management practices prescribed.

My previous exposure to other experiences in life point to a situation that the layer of organic matter (thatch) is being preserved in partial decomposition and obtaining a stable status in the soil horizon. I have seen similar situations in a related industry and in that case, the goal was to preserve the biomass. This is the situation as I see happening in the turf industry and its happening by accident. I believe that this situation is the heart of our present dilemma.

The reason I've noted this situation and offered this concept is that I've not seen thatch as a problem in situations where turf is topdressed with an organic material that is near neutral pH and mixed with sand. This material is Dakota Peat and has shown results that absolutely contradicted the accepted standard of top dressing greens with straight sand. This mix holds additional water, nutrients and promotes microbial populations that keep thatch at the minimum for an active organic matter cycle. This is necessary for a healthy, self-sustaining, disease limiting and nutrient efficient root zone. I observed golf courses with little or no disease presence in the middle of other golf courses with high disease presence and damage. The ideal environment and conditions for the pathogen to overwhelm greens was optimum.

I have consulted with knowledgeable agronomists and soils scientists at various turf universities and have had acknowledgement that my concept has merit for existence as the cause of the situation. My real life experience says that this is the actual cause of the present day concern. The real bonus is that the solution is well known to some- Use Dakota peat according to manufacturer's recommendations in the mix to suppress thatch accumulation. This will keep the turf healthy, vigorous and efficient in today's challenging economic conditions.

While this may be taken as critical to today's practices, I feel that the recommendations were correct with the limited view. Now that the trend can be observed and potentially correctly viewed, the answer is easy to implement. Hopefully, future research can include minor additions in testing to verify my hypothesis of cause.

I welcome calls and comments- positives or negative from superintendents, consultants, university researchers and any other professionals about this concept and potential solution. We are all focused on solving this problem for the good of the game and the security of owners and managers.

I can be contacted at 1-800-424-3443 or bob@DAKOTAPEAT.com.