

TurfComms



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PURPOSE: To pass on what we learn willingly and happily to others in the profession so as to improve turf conditions around the country.

GCSAA Conf. & Show continued: Dr. Tom Hodges then came on to tell us about developments in the genetically modified species. He thought genetically engineered turf cultivars should be available in 3 to 5 years.

I then went to the "Are your Greens Singing the Blues" session. Here Dr. Nick Christians talked about inorganic soil amendments. I liked his comment, "the only reason to use sand as a base is that it is less prone to compaction problems." He is correct of course because all those other reasons you can think of are possible to obtain in any soil in excellent tilth. You just can't keep any soil in excellent tilth under normal putting green or football field conditions.

Dr. Christians discussed some recent research where he compared Profile, Bioflex, Axis and one other inorganic amendment which I failed to get. These were incorporated into the upper six inches of a sand profile at 10% by vol. He noted some differences, a few of which I have noted here: Profile resulted in a 7% increase in CEC, 100% increase in exchangeable K, 30% increase in exchangeable Mg and a 4% decrease in exchangeable Ca. Profile increased the saturated hydraulic conductivity (K_{sat}). Although overall there was a 75% decrease in hydraulic conductivity over the first two years. *Ed. this is why those deep roots found on new greens disappear.* There was however, an interesting significant increase in K_{sat} in the Spring of 1999 over the Fall of 1998. He felt that might have been induced by the winter freezing and thawing in Iowa. Both Profile and Axis increased the -40cm water retention but only just 10%.

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Rob Kloska (a Florida supt.) gave reasons he felt needed to be considered for not going to the new ultradwarf bermudagrass cultivars. These were: 1) must have the internal drainage of a USGA type mix. 2) Must not have too much slope. 3) Walking greens mowers will be needed. 4) Finer textured fertilizer blends will be needed. 5) More light frequent topdressings are needed. 6) May need more greens mowers. 7) May need a better mechanic or at least more time from the one you have because of the lower height of cut and increased topdressing.

Two advantages of the ultradwarfs he noted are: 1) in the deep South you may not have to overseed. 2) 419 collars don't encroach.

Other negative comments were: 1) faster thatch buildup, 2) slower ball mark recovery, 3) more topdressing and grooming, 4) not much lateral growth thus a lack of healing, and 5) very poor shade tolerance.

His grow-in advice was sprig at 30 bu/M, get to 0.125 inches as quickly as possible, and spike frequently. Topdress and fertilize more frequently than you would with Tifdwarf and consider purchasing and using frequently a water injection aerifier. Forget deep vertical mowing! During the summer months the N:K ratio should be 1:2 or 1:3. Foliar feed frequently (2 times/week) during cold weather. I assume he is talking nights between 35 and 50°F. Beware mounds in these cultivars shed water. Shaded wet areas are disease prone. His experience is with TifEagle.

Dr. Bert McCarty, Clemson U., in S. C., discussed research with the Aerway and the gas exchanges, temperature differences and rooting. Researchers are worried about summer build up of three toxic gases: CO₂, H₂S, CH₄. They also are concerned that the ODR (Oxygen Diffusion Rate) may not be quick enough in most greens during warm summer conditions. They know that high CO₂ levels cause root die back. High CO₂ levels are easy too obtain in the summer because the higher soil temperatures increase biological activity in the soil. CO₂ reacts with the water to produce carbonic acid H₂CO₃ which is toxic to roots. This acid can lower the pH to 4.

Using cylinders as mini-greens they were able to show that CO₂ levels at 2.5% or higher reduced rooting amount and length. But only saw a quality difference in the turf at 10% CO₂. Both pulling air into the soil profile and pushing air out the top lowered soil moisture levels with the latter doing it the most significantly. 4 A.M. to 6 A.M. was the best time to pull air into greens in the summer time. But, still they only saw a 1 to 2°F difference. Pulling air in during the rest of the day will heat the soil. However, pulling and pushing air continuously day and night reduced soil temperatures in the summer.

Anne Streick discussed factors that affected BRD (Ball Roll Distance) or Stimpmeter speed. She noted that plant growth regulators had the biggest single effect. In the Spring mowing height was very important; while in the summer irrigation frequency was most important. Grooming at 1/3 lb.N/M/month actually slowed greens. Vertical mowing slowed greens. Light frequent topdressing optimized BRD across other treatments. There were too many interactions for me to analysis and take notes on during such a short presentation.

Stephen Cadenelli, Supt. - Cape Cod, told of his experience growing in L-93 greens under severe fertilizer use restrictions. He used 4 lb.N/M the first year and 4&1/2 lb. the second. His seeding rate was 1&1/2 lb./M. He started topdressing as soon as possible. He found that recovery from

aerification was so slow (*Ed. at that N rate on new greens it shouldn't be surprising.*) that he could not aerify with 5/8 inch tines.

John Baker, golf course owner and etc., encouraged superintendents to steal every good idea you can. I sat there thinking that was a good reason to have a consultant come visit you. But beware they will steal away your good ideas. Mike Eversten, supt. at a 9 hole club in Iowa, talked about "cooping" for 9 hole courses to increase their purchasing power. I liked his joke on what was the difference between a trampoline and a golf course superintendent. - "The members will take their shoes off to jump on the trampoline."

Tom Russell, supt. from Montana, noted that the State Forester in his area showed that the golf course they were planning to cut out of a virgin forest would draw less on the aquifer than the forest would.

Henry Marsh, an Olympic runner, gave a "pep talk". I thought it certainly was a good one. So here are some of his comments mostly on STRESS. "Stress is our response to events we perceive as threatening to our needs."

Seven Natural Laws: 1) If the results of my behavior do not meet my needs there is an incorrect principle on my belief window. 2) Results take time to measure. 3) Addiction is habitual behavior which produces short term satisfaction and long term harm. (we often take the short term fix when we feel the pain of change is too great) 4) when dealing with others we usually focus on behavior. 5) When dealing with others we should focus on beliefs. 6) When my self worth is dependent on something external I will not meet my needs over time. 7) When the results of my behavior do meet my needs over time, I experience inner peace.

Zoysia forum or the Winrock Zoysia Farm portion of the program. Kevin Morris the director of the National Turfgrass Evaluation Program went over the basics. First, general trends between cultivars: The coarser the cultivar the faster spreading. The more it retains winter color the less winter hardiness. Most zoysias like low pH. Matrella types do better in the shade.

Then some cultivar comparisons: Royal has slightly finer leaf texture, darker color, and better summer density than Meyer. El Toro and Crowne are more open than Meyer. Royal, Cavalier, Crowne & Palisade are faster establishing than Meyer. All new cultivars are more cold sensitive than Meyer. Zoysia patch attacks all cultivars. Go to www.ntep.org for more info. I have no notes for the rest of the forum.

2/19/00 Started the day with the Innovative superintendent session:

We heard about the **phantom crew** from Michael J. Lee, supt. at Kohler, Wis. The goal at that resort was no interference with the customers. The whole crew started 2 hours ahead of the golfers on hole 1. To accomplish the goal he needed a large crew and lots of equipment. But, with careful planning they could do this and actually were able to get a lot done because they worked each day without interference from the golfers.

From another supt. we heard about the hose reel, from another the **collar stick**. The latter scratches out collar width as the greens mower does the cleanup pass. The **360° bubble level** for leveling irrigation heads. **Gas can and trimmer holders** to eliminate gasoline spills. Irrigation

drive assembly **pullers** so one didn't have to reach quite so far down to pull those. A **smart level** which gives a digital slope for drain lines. Little **recorders** for the notes you should be taking each day and don't. Also **palm pilots, full circle nozzles, and sod grown on plastic.**

Merrill J. Frank, an old supt. now at Chevy Chase, MD., talked about how to grow *Poa annua*. I'm not sure I needed to be reminded about how to grow this weed but if you are an East or West Coast supt. you may not have much choice so here are a few pointers he made. Concentrate on growing roots. Apply gypsum after aerification. Fertilize in the Fall only and use only water soluble nitrogen. Aerify twice in the Fall and once in the Spring. Never use deep tines. Topdress with straight sand. Use winter blankets from January through March and be sure to apply fungicides for snow mold and brown patch before you put down the blankets. Don't use preemerges or plant growth regulators. The hydroject is very important - use it. Syringe 3 to 4 times per day, use solid roller and spikeless shoes only.

From Vincent Keats, one tip on growing sparse (thin) native plant areas. Isolate them and manage them completely separate from the turf, i.e. no water or fertilizer. Got to the last part of the golf course architects session and saw some neat pictures of their reclamation projects. And last Conf. session but not least:

The USGA Green Section Session. Foy told us why large rotaries are now gaining ground for rough mowing in the South. Brome talked about a supt. so in love with interns that he produced a video and a brochure to attract them. Dr. Erusha suggested you should be using the USGA website as an information source. www.usga.org/green As the regional agronomist each have little updates there on current problems it should be checked out monthly. Stan Zontek suggested spreading these municipal composts now available on poor soils; or Milorganite and Houactinite.

Paul Vermeulen showed us pictures of putting in drainlines by boring under greens and then pulling in drainlines. Anything to avoid spoiling those putting surfaces. Then they put vacuum on those lines to remove water and CO₂. Probably the only way those drainlines in a mix that has low macro porosity are going to work anyway is to have assistance from a suction device.

Keith Happ showed a quick method for pink snowmold determination. Put 2 inch plug in wet paper towel, then seal in plastic bag. Place in cool spot (40 to 50°F) and in 24 hours should have white mycelium mass. Now place in sunlight and it should turn pink.

Matt Nelson showed slides of covering a cart path that crossed the fairway with a heavy rubber mat to more closely match turf conditions when hit by a golf ball. I suggest you go one step further and use the green mats put out by P.E.M.[™] Matting Products, (800) 783-2358, 5914 Shortleaf Ct., St. Louis, MO 63128. Great looking stuff. Excellent traction for alternate spikes and is now sold under the Softspikes brand. Breaths so the wood underneath rots a lot slower.

I'll have a few more comments about the Conf. in the next issue. I have comments about the Show and one session I obtained the tape for but did not attend.

- END -