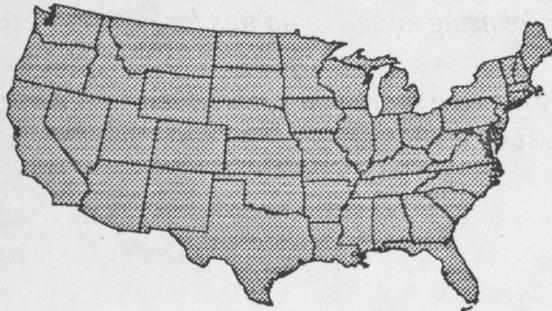


# TurfComms



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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 Conference and Show, Las Vegas:** I spent three full days and came away with the following plus four tapes which I'll play while on the road this summer. I started with the **Research Forum** on Sunday afternoon. Dr. Stuart Cohen talked to us about golf course water quality, saying that the Cape Cod Study was the only one that has been published in peer reviewed literature, as of 1996. He was aware of a total of seven studies concerning 11 golf courses. The average nitrates ( a sign of over fertilization) in these was 1.6 ppm. He said the U.S. Geological Service considers that anything below 3 ppm is from a nonagricultural source, or in other words very minor and may be background level in that area. Of 12,214 samples taken from water at these 11 golf courses only 9 samples had a nitrate level above limits that are consider harmful to your health. Seven of the 9 were from Florida golf courses.

He also indicated that pesticide levels found in golf course waters were generally very low (ppb). He also noted that there is a natural chemical look-a-like that is often mistakenly identified as 2,4-D.

**Dr. Robert Shearman** was looking for 15 golf courses to participate in a National Turfgrass Evaluation Program. If your course is reasonably accessible to a university turf researcher and you would like to participate call him quickly at (402) 472-0023.

Dr. Jack Fry, a Kansas State U. researcher, reported on a perennial ryegrass fairway study he was doing. **He found that over irrigation resulted in less Brown Patch and that he had more**

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**crabgrass where he watered less.** He also discussed some Spring Dead Spot (SDS) research.

They have found three causal organism and have often found two of these on the same golf course. He noted that resistance to SDS is directly related to cold hardiness of cultivars. Therefore for SDS resistance use the most cold tolerant cultivar you can find.

He also noted that four fungicides if applied in September provided good control of large patch in Zoysia. These were Prostar, Lynx, Heritage and Sentinel. Curative applications have not been effective with any fungicide. For more information try <http://ww.oznet.KSU.edu/DP-hfrr/>

Dr. Charles Mancino reported on some work trying to quantify sand shape as to the effect on root zone properties. He reported a couple of things that really bothered me; these were: 1) Bulk density goes up as roundness increases and, 2) that angular sand has greater porosity. Yet he points out that angular sands can set up. I asked him for a clarification on this and got back: "Yes, I did say (1) and (2). With USGA testing, a round sand will have a greater B.D. because the hammer is not sufficient to really compact the angular sand. An angular sand has many edges; and therefore, a lot of frictional resistance. However, the angular sand can become very compacted, given proper soil wetness and traffic. Over time the angular sands can lock together causing poor infiltration, root penetration, gas exch., etc."

My next question went unanswered but, perhaps none is needed. You can expect to see a slight change in the USGA testing procedure soon, I believe.

Dr. Robert Carrow's talk was entitled **Organic Matter Dynamics in the Surface Zone of a USGA Green: Practices to Alleviate Problems.** The fact that organic matter accumulations are causing major problems on USGA greens first gelled for me after hearing a talk by Dr. Leon Lucas, the North Carolina Pathologist, on tapes from the 1994 GCSAA Conf. I reported this in V.7, I.9. Dr. Carrow noted how organic build up in the surface layers of greens causes summer problems in bentgrass greens especially in the transition zone. (Lucas noted that this layer stays too wet and thus contributes to disease problems.) Carrow said, there is a substantial organic matter increase in the top one and one half inches of the soil mix. He has documented a doubling or tripling in five years. This organic matter plugs up infiltration and decreases oxygen levels in this layer and the sand below. This decrease in oxygen level increases greatly in the summer as the roots die and the temperatures increase microbial decomposition.

Dr. Carrow has found that using the Hydroject in the raised position increases hydraulic conductivity for as long as 24 days after treatment. Where as other types of aerification (including regular Hydroject use) only had a short term affect. How do you use the Hydroject in the **raised position?** Good question. Call Toro. The word I get from the local tech. rep. is the Hydroject 4000 is in the raised position and a modification will be made available for the 3000 at some future date. **I suggest you Call Toro.**

Dr. Phil Busey of Florida reported on **off types of bermudagrass.** He noted that there are many off type Tifdwarf cultivars on the market. He essentially said if you are not buying certified Tifdwarf there is an excellent chance you are not obtaining the original cultivar. After looking at the situation in some detail he does not feel that off types are caused by mutations occurring in the green. His reasoning is based primarily on the fact that some of the earliest Tifdwarf greens and

research plots installed are still pure. Thus those off types are most likely due to contamination at planting.

Dr. David Huff of Penn. State Univ. gave us the update on developing a *Poa annua* cultivar. The *Poa annua* cultivar they would like to produce is one of those perennial strains that are as much as four times denser than A-2 creeping bentgrass, have almost no seedheads, tolerate very low mowing, and have no grain. These strains are also reasonably heat tolerant. There are two problems. They don't produce a lot of seed and what seed they do produce does not grow out true to type.

Huff, et al are therefore experimenting with producing "synthetic seed" via tissue culture. Actually what they will be producing is the equivalent of tiny seedlings or embryos without the seed coating or food reserves. Don't hold your breath waiting for this to get on the market.

Dr. David Minner of Iowa State U. has just started working on several things of interest: **Sub-Air™**, heated athletic field turf and **SportGrass™**. He suggested using SportGrass for cart paths. It sure would get rid of the bad cart path bounces. I'm not sure that SportGrass would stand up to cart path traffic but this combination of artificial turf and grass is worth trying. It apparently is on trial on the 18th hole at Bay Hill Club & Lodge, Orlando, FL. Where a report I obtained at press time is that it was doing very good under heavy use.

If you would rather not have concrete or asphalt cart paths and are willing to try something else than give SportGrass a call at 1(800) 808-8800.

Dr. Joe Vargas and his graduate student, Brandon Horvath, discussed **Basal Crown Rot of *Poa annua* and bentgrass**. They are trying to develop the causal organism as a biological control for *Poa annua*. However, the disease organism appears to attack only when the plant is stressed. Therefore you must be able to first stress the *Poa* plant and than inoculate with spores of the causal organism. Not as easy as it sounds.

Dr. Ronald Duncan of the Univ. of Georgia discussed the merits of Seashore paspalum. Listening to him I began to think it must be the greatest thing since slice bread. Actually, I have felt for at least a dozen years or more that this species has merit in the southern quarter of the U.S. after having seen plots of it in California in 1984. Dr. Duncan has apparently developed some fine textured and cold tolerant strains (some ecotypes have survived -8°F) of this **very salt tolerant** species, see the article - pg 49 of the Feb. 1997, *Golf Course Management* magazine. He claims they do best between 1/8 and 1/2 inch and are finer textured and **better adapted to the U.S. than 'Adalayd'** He really got me when he said the latter. We have so many different climates in the U.S. it is hard to believe we don't have some climates Adalayd is well suited to. It sure looked good in those Los Angeles area plots. Perhaps our Australian readers can give us their thoughts on Adalayd?

Dr. Duncan claimed Seashore paspalums needed <5lb. N/M/year; and that it should be applied heavy in spring and moderately in the fall, and not in the summer. Applications of 1/3 to 1/4 lb. were suggested. The drought tolerance is similar to centipede but, it is extremely tolerant of boggy conditions. However, overwatering with high nitrogen results in poor rooting and scalping. Periodic vertical mowing is needed 2 to 4 times/year. If you overseed, you must keep N low till Paspalum is dormant.

**INNOVATIVE SUPERINTENDENT SESSIONS:** If you want a first class **maintenance building** hire J.D. Hilton to come in and supervise and assist you with the planning. This Cary, NC superintendent is impressive. I not only heard him talk I sat and listened to him answer questions at the Roundtable Discussion session on Tuesday. I'm glad I didn't have to pay for the building that took nine months, six building permits and seven contractors. But it was for a large facility.

Mike Kitchen explained how **maintaining at night** works if you don't have any houses surrounding the golf course.

On Tuesday Lee Redman from St. Louis led off with what I thought was the best talk of the Innovative Supt. Sessions. Lee is an old (30 years in GCSAA) and battle wise speaker. Who else can start a talk off with a good turkey joke including very impressive imitations of turkey talk. Lee is a hunter and fisherman through and through. He talked about **rolling greens** a practice I'm not too receptive to.

But, he had some uses for the **vibratory roller** that I thought were well worth considering. 1) He uses it on new seeded and sodded greens before mowing them. 2) He uses it prior to afternoon events to help get rid of spike marks and generally improve putting conditions for those special events. 3) He uses it to train new greens mower operators on proper handling of the triplex --- no scalping. The vibratory roller is manufactured in the St. Louis area and fits on various brands of triplex mowers replacing the mowing units.

**OTHER SESSIONS:** Dr. Rich Cooper, NC State Univ., gave a good talk on Snake Oil Evaluating. He stressed that **superintendents take data all the time** they just don't call it that. They are constantly checking the amount of clippings in the mower baskets to evaluate grass growth on greens. They constantly evaluate color, absence or presence of disease and often check with the cup cutter to see how deep the roots go on greens. Therefore, with a little planning you can be a researcher and **evaluate new products** that are coming on to the market. Just be sure to leave yourself untreated checks adjacent to or in the treated area. Dropping a large piece of plywood down before spraying is the easy way to leave a check within a treated area.

Dr. Karnok, Univ. of GA, confirmed what many had found except for Dr. Schmidt of VPI and that is **biostimulants** don't generally provide much if any benefit to well cared for turf. He concluded his talk with, "Biostimulants are not a good substitute for good agronomic practices."

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*End of Conf. review and comments until next issue.*

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*We will finish up notes with the next issue except for those sessions we will listen to on tape this summer. I will try to include a review of the new zoysia selections also in the next issue. I've been promising myself to do this for about six months now.*

**Time to sign up for a summer Turf Advisory Visit**

and I don't mean with the Green Section, even if it is an good second choice.

Doug.