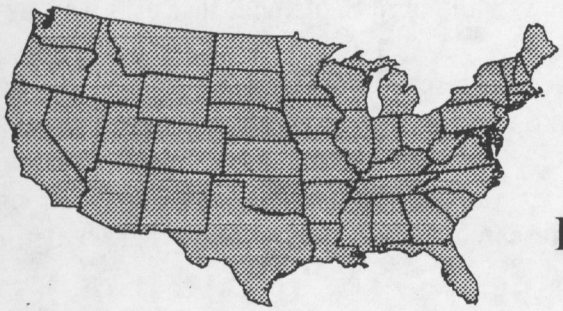
TurfComms



Vol. 8, I. 5 **Feb. 15, '95**

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

TURFGRASS BENEFITS: The USGA has published two papers summarizing the turfgrass benefits as published originally by Dr. Beard in the Jcurnal of Environmental Quality (May-June, 1994). Mike Kenna writes that "These documents were written to summarize the information in more easy-to-read formats." If you or your organization would like to make these available to your members/golfers the USGA would like you to contact Dr. Kimberly Erusha, USGA, Golf House, P.O. Box 708, Far Hills, NJ 07931-0708 or ph. (908) 234-2300 x5498. "The cost for the technical summary is $2.00 each and the topical summary (4 pages) is $1.00 each."

ZOYSIA OVERSEEDING - MORE: Dr. Tony Koski wrote me after V.8,I.3 concerning my zoysia overseeding article. He said that Dr. Gibeault had been doing successful overseeding of zoysia with tall fescue "for a few years now" in California. So I sent Dr. Gibeault a letter full of questions and got a prompt call back. He has not yet published this information but in the late '80s he overseeded a large piece of El Toro zoysia with two turf tall fescues and one dwarf tall fescue. The one time seeding rate was 15 pounds per thousand. The turf is maintained to favor the zoysia yet the tall fescue is holding its own.

Dr. Gibeault (12/20/94) say that tall fescue does very well in the Riverside area of California (L.A.area). What occurs yearly so far has been a gradual increase of tall fescue during the winter months to about 80% than with warmer summer weather the percentage of tall fescue declines to around 15%. In this very low humidity and very sunny area he feels there is just a physical competition. The cutting height has varied during this research between 5/8 to 1&1/2 inches.

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Davis in 1958 reported Merion Kentucky bluegrass survived much better in Meyer zoysia than in U-3 bermudagrass in Wooster, Ohio. The amount of Merion increased at the two inch height of cut but not at the 3/4 inch height on the third September that data was taken.

I heard Grau had overseeded tall fescue into zoysia with some success at USGA/USDA plots in the good old days, but Al Radko says (12/21/94) not as far as he is aware. Only Merion Kentucky blue was ever seeded into Meyer on research plots. "That did well for a number of years but the Meyer eventually crowded it out.", says Al. I used Zoysia, bermuda, creeping bent and Ky. blue combinations when doing research at the Univ. of Md. What the bermudagrass didn't overrun the bentgrass did.

"Almost Spring" Meeting

PEAKS and PRAIRIES CONF. West Yellowstone, Mont. 2/95: I was invited up to give a couple of talks to this superintendents association two day meeting and so can report on what the other speakers said. West Yellowstone, MT has got to be one the U.S.'s prime snow mobile resort towns. They had plenty of snow mobiles and snow . They were even shoveling off the roofs on some buildings to avoid collapse.

LOCALIZED DRY SPOTS: Dr. Keith Karnok, Univ. of GA turf specialist, spoke well on this subject. First, he pointed out that the phenomenon had been also observed in pastures, orchards and forests. Secondly, that coarse textured "sandy" soils were always the common denominator. He stated that USGA Greens type greens were essentially guaranteed of getting localized dry spots (LDS) within eight to 18 months after construction. He discussed the sand grain organic coating that had been found by him and others, noting that it was solubilized at high pHs; and that hydrogen peroxide dissolved it He also noted that it was composed of various humic and fulvic acid compounds; and that these are natural products of organic matter decay. He noted that this phenomenon appears to be mostly in the upper two inches of the soil and made worse by severe wetting and drying cycles.

He said LDS was less a problem where soils are kept constantly moist; but that the coating of sand grains will still exist. He also said that excessive rainfall but not irrigation will alleviate LDS for several weeks. He also noted that there must be vegetation on the soil surface for the condition to develop. His research has found that it develops faster under bentgrass than bermudagrass than tall fescue than zoysia. When trying various amendments he had the fastest development in a 85/15 sand/peat mix; and that introducing silt and clay in topdressing was a good cure for the LDS. Such topdressing might well led to increased algae, disease, and decreased infiltration rates.

He has found one wetting agent that appears to give longer reduction of the problem than others. Tilwa[tn], a wetting agent from Europe, provided more than a year of significant difference at the 16 ounce/M rate --- one application. Tilwa does not dissolve the coating.

BIOSTIMULANTS: Dr. Karnok next discussed this subject of recent great interest. If he had been a salesman I might have bought some Banner for my summer fungicide program with the hopes of obtaining both fungicidal action and biostimulation from the compound. But, in summary he wasn't very enthusiastic about the chances of biostimulants making much impact in turf management at this point in time.

LAND BOUNDARIES and MAPPING: Rudy Cicon, a Montana surveyor discussed this topic. He strongly suggested you not use yellow markers of any sort for aerial photography. He than left that subject and discussed -

STREAM BANK STABILIZATION. He noted that rip rap of various types tended to cause the center of the stream to pull up against the rip rap and eventually under mine the rip rap. He strongly recommended "Bank Barbs", projections of rip rap that pointed out into the stream and forced the center of the stream out away from the bank in question. I plan to investigate this idea further. Sounds a lot more economical than half million dollar gabion walls.

AQUATIC WEED CONTROL: Barbra Mullin, Montana Dept. of Agric. Weed Specialist, showed us a new handbook out titled **Lakesmarts**, it was on lake and pond management. I failed to get a look at it. It does sound like something many of us could use. She was not overly enthusiastic about pond aeration, although she said it does circulate the water and may reduce phosphorus and algae levels. She noted that Simazine was no longer legal for aquatics and that Endothall was now a restricted use pesticide at the Federal level.

RENOVATION: Mr. Joe Veal of Palmer Course Design pointed out that 45 to 60 % of renovation costs were work on the irrigation system.

MOSQUITO CONTROL: David Sullivan, an entomologist and pesticide salesman, gave many reasons why you should be interested in mosquito control other than lost revenue - Yellow Fever, Malaria, Dengue, Heartworm in pets, and **Encephalitis**. The latter is the principal health reason for controlling mosquitoes is most of the U.S. A couple of suggestions he made were to forget about garlic spray; and if misting do so in the early morning or late evening when cold air is near the ground. In addition to drainage, bats, purple martin, and mosquito fish; he suggested Bt, nematodes, oils for water surfaces and numerous pesticides.

IRRIGATION: Bill Thorton, Regional Golf Course Sales Mgr. for Toro, talked to us about all the whistles and bells now available in the automatic irrigation business. A few highlights from that talk were that 65 psi at the head is what should be sufficient with new technology. {Ed. that is open to a lot of debate but is common along with 60 to 65 ft. spacing and lots more heads per golf course in California.} Can now keep pressure at head below a certain point. Variable drive pumps systems are good. Can now build into the system diagnostics, action and alarms for: high/low flow, high/low pressure, and high/low voltage. Radio controlled valves allows upgrading without pulling in wires. All this is possible designed and installed for $600 to $750/head plus the pump station. All you need is money.

SOIL AMENDMENTS: Dr. Koski, Colo. State Univ. turf man, gave us the latest dirt on this subject. He strongly suggest that anyone thinking about putting a soil amendment into a green think out carefully what they are trying to accomplish. He said that most companies are now claiming an ability to increase the amount of available water. He suggested you ask for a moisture release curve.

He said that most of the cost in getting **Isolite** to your golf course was in shipping. He noted that this product had very little cation exchange capacity (CEC), but that the pore size was such that it

did hold a good amount of available water. However, in his research he always had more roots in the control and he could not show reduced water use with this product; nor was the presence of Isolite in the field helpful with localized dry spots or over coming the problems of compaction.

He went over Dr. Petrovic's research data on **Zeolites** next. He noted that using 5 to 10% by weight of the correct size particles does not slow down percolation or oxygen diffusion rates; and it does give increased available water. If you wish to try this material buy potassium charged Zeolite rather than sodium charged; and he noted that quality control over size distribution will be very important for use in a USGA style green.

He noted that Profile was a good quality **calcined clay**. That Rebound, the **ground rubber** tire product, has been producing good results in Michigan sport fields.

Dr. Koski also reported on his work with hydrogels (starch polymers) such as Agrosoke and Terra-sorb. He said that plant roots appear to like these materials; that the polymers did increase root growth and did make the soil more resilient. However, he could not reduce the length of time between irrigations on turf plots although he noted they do work well with single potted plants and hanging pots. He showed that at the recommended rate with one product that absorbs 40 times its weight in water when incorporated in turf only makes an increase of 0.08 inches of available water in the soil profile. In other words you would have to use it at three times the recommended rate to obtain an additional 1/4 inch of available water. He reported that the more product he put in a USGA greens mix the less roots he got. He also noted that there is some question as to the possible toxicity of breakdown products from these materials.

In closing he emphasized that there was no soil amendment around that is going to improve the efficiency of your irrigation system! Which to my way of thinking put the emphasis where it belongs.

THE GAME: Frank Thomas, Technical Director at Golf House, discussed Tradition vs. Technology, a very interesting talk on playing equipment. I'll sum it all up with "Golfers buy hope (hype?)!"

WRITING: Cheryl Roller, Professor of writing at Montana State Univ., gave us all a lot of good hints on better writing.

SELECTING TURFGRASSES: The Conference finished up with a talk by Dr. Koski selecting turfgrasses for stress tolerance. He showed us Dr. Funk's , the Rutgers, New Jersey turfgrass breeder, grouping of various Kentucky bluegrass cultivars into Northern, Bellevue, Mid-Atlantic, Shade Tolerant, Baron, Aggressive, and Midwest types. He went over each type's advantages and disadvantages and listed some of the cultivars in the type. If you would like more details on these I have typed up one set of notes on this - give me a call. He also spend some time discussing perennial ryegrass, tall fescue, fine fescues, crested wheatgrass and alkaligrass. He concluded with information on Denver's professional baseball field with its 45 miles of heating cables.

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