TurfComms

V. 13, I.7

Nov. 17, 2001

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 INFORMATION CENTER: Enclosed are brochures for TIC's Endowment Campaign. Hope some of you will contribute time, money, or old turfgrass reference texts, journals, or newsletters. Call Peter Cookingham before sending any publications. (517)353-7209.

MICHIGAN TURFGRASS FIELD DAY: August 22, 2001 my first time at this annual event and it rained. I got there a little late so I didn't even get to hear the first speaker at my stop. Did hear him later and had at least three interesting conversations but the plot viewing portion of the Field Day was rained out. Wow, what a crowd; wow, what a turfgrass research facility. TX A&M combined facilities may equal the Hancock Turfgrass Research Center but that is about all. If they started with 001 on the luncheon ticket numbering there was just under 1000 there, and I have no reason to believe that was not the case.

I was curious why Beard left; but it didn't take long to realize Beard didn't have this when he left. What he left behind was two acres and a shack. His leaving served as a wakeup call to the Michigan turfgrass industry which went to work and slowly built up the present facility. Of course they did this with leadership including but not limited to the likes of Jerry Faubel, 1990 GCSAA President, Dr. Joe Vargas, turf pathologist, and Dr. Paul Reike, turf agronomist.

TURFCOMMS is published at unpredictable intervals by the editor and publisher:

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One of the researchers I talked with was Brian Leach, a masters degree candidate, who is working on the Reike Construction Method. The USGA Green Section has funded a large project comparing it with the USGA Method of green construction. I discussed this new approach to green construction briefly and positively in the Vol.13,I.1 issue. Essentially what it boils down to is less soil mix on the high spots and more soil mix on the low spots. The data so far shows that the Reike Method produces more uniform soil moisture across the putting surface. Imagine a green that you didn't have to worry about the high spots developing localized dry spots (LDS) and the low spots developing black layer. Well, that is what the Reike Method is going to give you. **DON'T BUILD A NEW GREEN WITHOUT IT.**

Another thing that stood out in that research project is the importance of organic matter if you wish to avoid LDS(localized dry spots) on new greens. One of the variables in the research was soil mixes and in one they deliberately left out the O.M. Therefore you had long strips loaded with LDS where the soil mix did not contain any O.M.

In the afternoon while others were in classes I wondered the research plots. Saw the GreenTech ITM Modules, a putting green and a field done in them. This is Dr. John N. Rogers III's project. It looks like athletic fields of the future will stand a good chance of being built with this or a similar system. The advantage of being able to renovate a field via a forklift and a few days of moving modules is a real plus. The biggest drawback I see is available space to have spare modules near the field, it will probably mean trucking these in like sod. The advantage though is these 1000 lb. modules won't be torn up by that 300 lb. lineman the day after they are laid the way sod is.

GREEN CREEP: There was an article on this problem by the golf course architect Ronald W. Fream in the Peaks and Prairie's May issue of The Perfect Lie that caught my attention. If I may use my own phrasing, this is Fream's name for the changes that occur after the architect has left the course and it primarily deals with shape of greens, bunkers and fairways.

As many have written, greens tend to get rounder and smaller, while bunkers in the north surrounded by Kentucky bluegrass if edged several times a season seem to get larger. The worse case I saw of this was a Robert Trent Jones design with bunkers often on both sides of the greens and 25 years after construction often only 5 to 10 feet between bunker and green. The bunkers were each now at about 3000 square feet this is the same size as the greens had shrunk to. An old aerial of the golf course showed nicely what had happened. Reversing it was going to need a major rebuild, something this course could not afford.

In the South with bermudagrass greens, tees, and fairways the bunkers can grow smaller. It is hard to edge enough to keep up with the growth of the bermudagrass. Putting green surfaces are often larger in the winter than the summer. The superintendent overseeds out into the encroaching common or 419. So that 'green creep' in the South often becomes the relentless creep of the more vigorous bermudagrass. Overall the golf course changes.

Many superintendents work hard at preventing this and or overcoming what has occurred. But, if dollars are not there for maintenance with renovation than somewhere down the road an architect must be called in to redesign and rebuild the greens and green side bunkers. **Pay now or pay later**.

FATE AND MANAGEMENT OF TURFGRASS CHEMICALS edited by J. Marshall Clark and Michael P. Kenna. This textbook is number 743 of the American Chemical Society Symposium Series. Books in this series tend to be very well edited, expensive, technical books that make excellent reference texts. This one is not that different from the rest except it is the first I've run into with turf as the major subject area. This one is essentially a publication of USGA sponsored research "that examined the degradation and fate of turfgrass chemicals, the evaluation of best management strategies for the environmentally sound use of turfgrass chemicals, and the development of alternative pest control strategies using biological and biotechnological approaches." (from the Preface)

Condensed versions and simplified versions of the 26 chapters have been published in various professional and trade journals. If those articles didn't excite you when you read them over the last 4 or 5 years or make you want to have more such pertinent information in your office book shelf you probably do not need to consider buying it. If a member of the green committee wishes more information on some of the above ask your agronomic consultant to loan you the text for a week or so.

AUGUSTA NATIONAL: I had just finished talking to Pete Cookingham about doing an article or something concerning this golf course when less than a week later I came across an article in one of the magazines I had with me to read during my summer trip. The article was *Augusta National is Hyper Green; Others Are Green With Envy: That leads to lots of Copycats, but is that good for golf? A target for the Eco-crowd.* By James P. Sterba, Staff Reporter of The Wall Street Journal, April 5, 2001 as published in Turfgrass Management in the Pacific Northwest Vol. IV Issue 2.

You need to get a copy and save it for next April. Augusta National leads by example. Many golf courses try to follow and fail miserably. Fail because they seldom see Augusta at any time other than that one week in April when it is at its prime. They certainly in following her lead are not going to close the course each summer to spend hundreds of thousands making small improvements. They often are not going to restrict their membership to 300 by-invitation-only members from around the world. Nor are they going to get 60 professional maintenance people to volunteer to work there during their week or month of glory. Perhaps if we knew what it really took to make Augusta what it is for one week it would then serve as a good example. However, by keeping the cost of this monument sealed, it continues to serve in my opinion as a bad example of golf course maintenance in the extreme.

AMPHIBIANS: Another senerio has been proposed for the loss of amphibians in our ponds and streams, a deadly fungus, *Saprolegnia ferax*. Apparently this organism is a common problem in fish hatcheries. And the fish can transmit the fungus to the embryos

of amphibians. Thus the stocking of ponds and streams from fish hatcheries may be the cause of amphibian loss. Sci. News. Aug. 4, 2001.

SALT TOLERANCE: Researchers have recently inserted a gene from a weed into tomatoes that make the plant salt tolerant. The gene produces an enzyme that helps shuttle sodium into the cell vacuoles where it remains harmless. Can turf be more than 20 years behind?

ISOLITE AND ZEOLITE UNDER SALINE CONDITIONS: The abstract of a recent Am. Soc. for Hort Sci. article reporting on Arizonia greenhouse study of amending sand with these two amendments was not all positive. Both seemed to result in an increase in SAR values over time. With zeolite being the worst offender. It in addition to increasing sodium retention; it also resulted in increased leaching of calcium and magnesium ions.

ARSENIC: A great *Poa annua* control material. Great in that arsenic was reasonable in price, tended to be long acting, controlled other weeds and insect pests, and was very effective on earthworms. It wasn't perfect and I found myself often warning others of the danger of its use. One major problem was that under cold wet conditions chemical changes took place in the soil and it became more toxic. When that happened both Kentucky bluegrass and creeping bentgrass could die quickly as many found out the hard way.

One of the reasons we don't have arsenic available anymore for control purposes is that the EPA shut the plant down because the arsenic dust in the manufacturing plant was way too high and arsenic dust is carcinogenic. Well, now the dust from Owens Lake, Calif. often exceeds the Federal 24 hour exposure limit for arsenic and when the wind really blows the arsenic in the dust exceeds the one hour exposure limit.

The problem is that Owens Lake is no longer a lake. The City of Los Angles pumped it dry "to slake the thirst" for a while, of its population. Now L.A. is faced with the job of covering with vegetation this dry lake of 70 thousand acres, **Sci. News, V.160, pg. 220**.

ASA Annual Meeting: This year it was in Charlotte, NC; which made it a good time to visit my daughter and family in nearby Concord. There were turf related sessions for three days, a ½ day field trip, and several dozen posters presentations. There was some overlap with papers presented at the Int. Turfgr. Research Conf. reported on in recent issues. We'll try to avoid that here. A total of 163 papers were presented in the turf division (C-5), this includes 96 posters, 67 oral, and 21 invited syposia papers.

The most enjoyable thing I did while at the Meeting was spend a couple of hours talking with Dr. Coleman Ward, retired Alabama professor and part-time turf consultant. We compared experiences such as: the superintendent who could not read and write and hid it well; to many other turf advisory visits that turned out to be very memorable events.

Some of the more interesting papers and posters presented were: **Tolerance of Four Cool-Season Turfgrasses to Ethofumesate (PrograssTM), by J.W. Meyer, and B.E. Branham of the Univ. of Illinois.** They found a. wide variation in KY bluegrass tolerance from highly tolerant (SR2109, America, Liberator, and Odeysey to susceptible Eclipse and Limousine. Creeping bentgrass was generally more tolerant than Ky. Blue, which was more tolerant than Annual blue, which was more tolerant than Roughstalk blue. They found increasing spray volume increased spray damage. Ed. Sounds like you get more for your dollar if you thoroughly wet the turf.

Dazomet Blended with Greensmix as a Replacement for Methyl Bromide Fumigation of Golf Greens. By J.M. Unruh, and B.J. Brecke of Univ. of Fl. They had it mixed with the greens mix and then added crabgrass and pigweed seed to test its ability to control weed seeds. On these it did an excellent job. But, they were quick to admit it will not control bermudagrass. Ed. This maybe the best fumigant you will have available in a few more years.

Comparison of Glyphosate (Roundup) Formulations in Warm Season Turf, by T. Gannon, and F. Yelverton of N.C. State Univ. They found that the diammonium formulation (Touchdown) gave better control than the imopuoplyamine sulfate formulation (Roundup). Otherwise the two formulations behaved very similar.

Irrigation Management of Dollarweed in St. Augustine, by P. Busey of the Univ. of Florida Dr. Busey found that by reducing irrigation levels and increasing nitrogen levels you could favor the St. Aug. in a mixed stand of these two plants. Atrazine, by the way will control the dollarweed in St. Augustine.

Characterization of Fluroxypyr for Broadleaf Weed Control in Turf. By J.V. Handly, J.M. Breuninger, and M. Drinkall of Dow AgroSciences. This material has been used in Europe for weed control in cereal crops for a number of years. It is usually mixed with clopyralid. The combination has only slight phytotoxicity on zoysias, centipede, and creeping bentgrass. While bermudagrass and St. Augustine show some sensitivity. St. Augustines are more tolerant than hybrid Bermudas. The combination controls clovers, Virginia buttonweed, dollarweed, and purslane. It gives fair control of spotted spurge but does not control dandelion or narrowleaf plantain the authors reported.

Management of Twenty Warm-Season Grasses Grown Under linear Gradient Irrigation. By M.B. Faust and M.C. Engelke of TX A. &M. Univ. The authors reported that Palisades had the best drought recovery of the zoysia cultivars and that TifSport was one of the better bermudagrasses.

Performance of Tufted Hairgrass Collections in a Turf Trial. By E. Watkins and W.A. Meyer, Rutgers Univ. This was a poster. Tufted Hairgrass, *Deschampsia cespitosa*, is a new potential turf species. It thrives best under dry low nitrogen situations. In this New Jersey trial it proved very susceptible to bluegrass billbug. Ed. This grass may find use in sunny, droughty, low maintenance areas.

Effects of Management on Thatch of 'Champion" and 'TifEagle' Bermudagrasses. by J.N. McCrimmon of LA State Univ. The researcher looked at high and low nitrogen levels combined with high and low amounts of vertical mowing. Mowing was at 1/8. He did report several interesting observations: Color was best at beginning of season at low vertical mowing and high nitrogen. However, at end of season the low nitrogen and low vertical mowing plots were best. He noted that consistent (high levels of) vertical mowing allowed sand to move down into thatch. He felt thatch decomposed rapidly during the summer.

Influence of Trinexapac-ethyl on Respiration of Isolated Mitochondria. By N.L. Heckman, T.E. Elthon, G.L. Horst and R.E.Gaussoin of Univ. of NE They found this growth regulator lowered sod temperature when it is on pallets.

Mower Adjustment and Primo Effects on Creeping Bentgrass Mowing Quality. By M.J. Howieson, N.E. Christians aat Iowa State Univ. They concluded adjusting the mower to cut cleanly gave the best quality.

Effect of Establishment Method on Alteration of RootZone Physical Properties. By F.S. Rossi of Cornell Univ. and N.W. Hummel of Hummel Lab. Dr. Rossi started out by saying that sand based greens fail mostly because of organic matter accumulations at the surface. To counteract that he suggests topdressing every two weeks. Ed. That made him a good guy with a white hat in my book. The testing following his research produced all sorts of unexplainable results with observed changes in soil mix texture. He did find definite increase over time with rooting in the upper 2 inches and an comparable decrease over time with deep rooting. Cultivars L-93 and G-1 accumulated more organic matter than did SR1119 and Penncross.

Modifications to an Alternate Sod Production System to Reduce Production Time. By B.A. Ruemmele, et al of Univ. of R.I. The authors in this poster presentation found GroWinTM, an organic admendment reduced time to harvest significantly (down to 12 wks.) when compared to a compost.

Alternative Methods of Establishing Zoysiagrass from Sprigs, by M.D. Richardson, et al of Univ. of Arkansas with Whitbeck of Winrock Farm. Got to speak with Dr. Richardson the major author of this poster. The secret to Z-net success is at least in part the need to lightly topdress. Therefore Z-net turns out to be a good but perhaps expensive way to apply sprigs to the soil surface uniformly.

Effect of Wetting Agents on Drainage in Turfgrass Rootzones. By B. Leinauer, et al of N.M. State Univ. In this poster the authors reported on comparisons of Primer 604, Midorich and Soaker. They found, "for loamy sands at depths of 5 and 15 cm (2 and 6 inches), Midorich treated columns retained significantly less moisture compared to columns treated with Primer or water." Ed. Whether that is good or bad depends on your perspective but as loamy sands don't hold much water anyway the use of Midorich might reduce times between wilting. On the other hand it appears to indicate that Midorich is very effective at reducing the surface tension of water in a sandy soil profile which would be helpful in treating localized dry spot.

- END -