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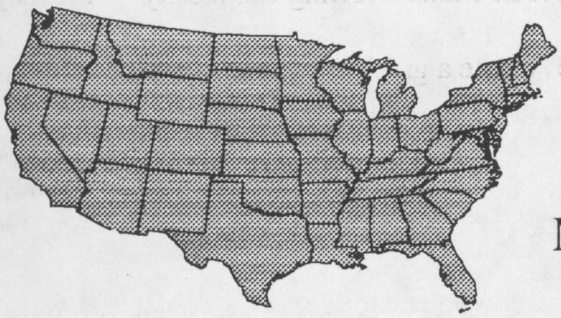

Vol. 9, I. 4 **Mar. 4, '96**

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

CORRECTION CONCERNING PRIMO USE: In the last issue I spoke of superintendents in Florida spraying Primo on greens at reduced rates. I put the rates being used were one to two pounds/acre. **The correct rate is one to two ounces/acre.** Thank you Gary.

TEXAS TURF CONF. (continued)

MOLE CRICKETS were discussed by Dr. James Reinert, formerly Director of Research, Texas A&M at Dallas. He has now gone back to being an research entomologist. His talk on the various species of *Scapteriscus* was very informative. He noted the latest correct names for the species are: *S. vicinus* for Tawny, *S. acletus* for Southern, and *S. abbreviatus* for Short-winged. He noted that the female Short-winged does not fly therefore this species spreads very slowly. The Northern mole cricket has four digits on the digging claw where the Southern and Tawny have only two. The Northern is found all over the Southeast. The Southern has two strains a 'four dot' and a 'mottled'.

He pointed out that mole crickets are not just a pest of turf. They bother many agricultural crops and will enter the drain holes in potted nursery stock to do damage there. Although the Tawny and Short-wing are mostly plant feeders the Southern has been found to diet on mostly small soil inhabiting animals.

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Douglas T. Hawes, Ph.D.
Certified Professional Agronomist
Specializing in Golf Course
Maintenance Consulting

2408 Roundrock Trail
Plano, Texas 75075
(214) 867-0176
Fax (214 867-0176

Subscription cost is $15. Send checks to Doug Hawes at the above address

Knowing what species is present becomes important in the control of these pesky little tunnelers. The Tawny for instance flies one month earlier than the Southern. As with the control of all soil insects with today's short life insecticides timing of application is very critical therefore one wants to know when the population of the small instars is at its peak.

He pointed out that the White Ibis and the Armadillo are natural predators. From what I've observed in Florida the White Ibis does very little turf damage. We need to encourage this large bird species on our mole cricket overrun golf courses.

He also pointed out that the coarser the grass the less damage the mole crickets do to it. Thus Tifdwarf is very susceptible.

For natural controls there are two nematode species available, a wasp, and the Brazilian Red Fly. The wasp needs the heat of Southern Florida or Texas to survive. The Brazilian Red Fly looks very promising for more northern regions. It should also be noted that the fire ant is mole cricket predator.

Dr. Reinert is planning to do a study of mole crickets in Texas to find out what species are present and to what extent. He would like you Texans to pickle what you find in alcohol (rubbing will do) and send them to him. I assume we will be hearing more on this in the early Spring.

Dr. Reinert feels that mole cricket is going to become a much more important pest in Texas turf. I tend to believe he may be right where soils are sandy and thus bunkers and sand base greens are susceptible. But, don't expect to find them digging up bermudagrass fairways on our typical black land gumbo soils.

THE NEW BENTGRASSES IN THE SOUTHEAST was a topic very adequately covered by Chris Hartwiger, USGA agronomist from the Georgia office. After listening to him I came away assured that he was convinced that Crenshaw and a whole lot of other new bentgrass cultivars were a big improvement over Penncross and also superior to Pennlinks. It would seem that last summer was stressful enough to result in dramatic differences by the end of September.

Hartwiger noted that the new cultivars are clearly denser (2 to 3 times more tillers per given area than Penncross.) They require mowing below 3/16 of an inch for high quality. They need less nitrogen, fungicides and frequency of irrigation. But required more surface grooming and topdressing; an observations we will see later that George Thompson concurs with.

Hartwiger also noted that the DMI group of fungicides were resulting in more algae on greens. DMI is an abbreviation for Demethylation inhibitors. This is a group of systemics consisting of: Rubigan, Banner, Bayleton and Sentinel. Combination fungicides containing one of this group are : HD Fertilizer Plus Fungicide VII, Fungicide VII, Fluid Fungicide II & III, and Broadway. The DMI group tends to retard growth of grass as well as the fungus. Stan Zontek and then Jim Moore later in the program also suggested not using DMI fungicides when the grass was under stress. Moore went further to note that if stress is high enough fungicides may not help at all. Moore did note that he found the Aleitte/Fore combination worked well, as did 2787 this summer. Koban worked well for root pythium.

Hartwiger gave rankings from observations at Stone's Honors Course both from sunny and shady plots **(1sun), (1shade)** as well as **1ball** mark recovery rankings from that course. There was data from the Atlantic Athletic Club **(2a)** (avg. of nine 1995 ratings), **(2b) Atlantic** Athletic Club (August data), and **(3a) Clemson** August data, **(3b)** Clemson mean of 1994 data, 12 readings. He went kind of fast so don't take the material from the Honors Course for gospel. I did call and get copies of the Atlantic Athletic Club and Clemson data but not that from the Honors Course..

He also mentioned that George Thompson had plots at the C.C. of North Carolina; so I called George Thompson and obtained his input. **(4)** This is an arbitrary ranking put together by the author after listening to George Thompson express his observations. George has been observing plots of various new cultivars for several years now. He has them where they receive very little play but do have poor air circulation., for more information see GEORGE THOMPSON REPORTS: on the next page.

Cultivar	**Ranking at various Locations (see above paragraphs for locations)**							
	1sun	**1shade**	**1ball**	**2a***	**2b**	**3*a**	**3*b**	**4#**
Crenshaw	**1 (best)**	**1**	**1**	**6.8**	**6.4**	**5.3**	**5.0**	**2**
PSU-A1	**2**		**4**	**7.0**	**5.9**	**6.0**	**5.6**	**4**
PSU-A4	**4**			**7.2**	**5.0**	**5.0**	**5.2**	
Southshore	**5**	**5**		**6.6**	**5.4**	**4.7**	**5.1**	**4**
SR1020	**5**	**3**	**6**	**6.6**	**5.3**	**4.3**	**4.6**	**6**
Cato	**8**		**7**		**4.3**	**5.0**	**6**	
PSU-G2		**2**	**9**	**6.8**		**4.7**	**5.1**	**2**
Providence			**3**	**6.3**	**5.1**	**4.0**	**4.3**	**3**
Pennlinks	**17**	**bottom**	**8**	**5.8**	**4.1**	**4.3**	**4.7**	**6**
Penncross	**27**	**bottom (poorest)**		**5.5**	**4.0**	**3.0**	**3.5**	**6**
Putter					**6.1**	**4.8**		**3** (6 previous 2 years)

***Quality ratings where 9 is the best, 1 dead.**
2*a - is average of nine ratings made from Jan. to Sept. 1995
3*a - Quality in August 1994
3*b - is average of 12 monthly ratings for 1994
4# - an arbitrary ranking where 1 is best and those rated below 5 were unacceptable.

Hartwiger concluded that Penncross was no longer considered satisfactory for the Southeast.

Jim Moore gave a talk labeled "Bentgrass Greens: A Survival Kit for Texas" which was good advice for anyone maintaining bentgrass greens south of Kansas City and New York City. He recommended early preventative applications of nematicides for nematode suppression. He also urged superintendents to start traffic control early before turf was loss. Ed. I assume he meant being sure the wear is spread as evenly as possible. He also noted that fans were not very effective on a curative basis they needed to be used early (May) before turf started to thin. Also, more aerification in the spring helps to get greens through the summer, including the Hydroject and spiking.

When topdressing in the stress of summer don't drag it in. Ed. Hand watering can work quite well for this. Moore also noted that hand mowing does pay especially on troublesome greens and definitely on the cleanup pass. Don't us groomers in the summer time, keep mowers sharp, take off the Wiehle rollers and go to solid rollers.

On the other hand Jim said, one must be aggressive managing bentgrass in the spring when it is growing rapidly.

He urged going to spikeless shoes or soft spikes and getting rid of steel spikes. Ed. It is great to see how this attitude is catching on around the country. Jim said Southern Hills did away with steel spikes in July and August. The members then asked to have them banned in June. They felt there was a 50% improvement in putting quality.

Jim concluded by saying no one thing makes bentgrass survive, many practices are needed.

Mark Sellman of Jacklin Seed, the closing speaker, informed us that there are different races of endophytes and we can "vaccinate" plants and the female in a line will pass it on through the seed.

GEORGE THOMPSON REPORTS: He has USGA soils mix and like many superintendents he has set up a demonstration area with some of the new cultivars. In late April of 1993 he gassed 6,000 ft^2 and put in 1,000 sg. ft. plots of Crenshaw, Putter, Cato, 1019, 1020 and Pennlinks. George writes, It was in the 80's (°F) when we first planted these plots and most of them didn't establish well until late Sept. of '93, except Crenshaw which could have been played on in 6 to 7 weeks. I think it would do very well as a spring seeding in most warm climates like Pinehurst, D.C. and Atlanta. We applied fungicides to these plots a little in '93 in order to keep out pythium, but nothing for any other diseases.

Rhizoctonia and algae covered up all the plots in July and August of '93. I finally put a tank mix of fungicides on in order to save them. The Crenshaw had as much Rhizoctonia as Cato, but it sprang back immediately when I shotgunned 4 oz. ProStar, 2 oz. of Bayleton one day, then 2 oz Subdue and 8 oz of Fore the next day. The other plots didn't get to putting green quality until late Sept.

We think Prograss although currently unlabeled for greens has the best potential for eliminating Poa from bentgrass. So one of the main reasons for my plots is to see how much Prograss the new bents will tolerate. In 1993-'94 all of them took three applications at 3/4 lb. a.i./A at 30 day intervals in mid- Oct., Nov., and Dec.; except Pennlinks which thinned slightly.

In the Fall of '93 I planted four more 1,000 ft^2 plots with Penncross, Regent, Lopez and Southshore. I didn't do any formal ratings during the 1994 year, however, Crenshaw was and still is #1, Providence and Southshore were strong; B1, Cato & 1020 were poor. Again in '94 we only treated with fungicides once or twice just to keep everything from dying.

In the Fall of '94 I planted another 1,000 $ft.^2$ plot of Crenshaw since I used 1,000 ft^2 of it to plug out bad spots in my Penncross greens. Next to the Crenshaw I planted 1,000 $ft.^2$ of G-2, than Biska and A-1.

The summer of '95 was a strange one for bent. The three year old plots which had almost no fungicides in 3 years apparently were building up some antagonistic fungi. Putter and Cato showed very little thinning from Rhizoctonia and Putter was one of the better cultivars last year. Providence and Southshore still looked good while 1020 doesn't do well without fungicides; Regent, Lopez, and Pennlink thinned out. We used the Penncross plot as a nursery.

Of the '94 planted bents, Crenshaw was still #1 and G-2 was a very close second. A-1 was 3rd and Biska never came back from the summer thinning until Oct/Nov. A-1 had the most Rhizoctonia and G-2 was second in # of large Brown Patch rings. This was classic stuff with dark smoky rings. Crenshaw also was heavily infected with about eight Brown Patch rings on 1,000 ft.^{2}. A-1 had about 50 rings and G-2 possibly 40.

I never applied any fungicides and they all came back when the weather changed, none of the crowns were killed. The A-1 & G-2 plots seemed to be an apple green in the hot weather but seemed to get darker and hold a more pleasant darker green throughout the cold weather. Crenshaw gets a little more off color in Dec., Jan. & Feb. than A-1 or G-2

I have 20, 10x10 plots replicated four times which NCSU planted in Oct. of '95 for evaluation. We will mow 1/2 of each plot at 1/8 inch and not apply fungicides to 1/2 of each plot. Dr. Art Bruno's technician will do the evaluating. We will do the monitoring. Hope to see some good info. The big factor on our plots is no play.

George has observed that Lopez establishes rapidly in cold weather but does poorly in the summer at his location as it is prone to scalping. He found Southshore to be particularly susceptible to *Fusarium nivale* when not treated with fungicides. Crenshaw and 1020 get more dollarspot than any other cultivar with 1020 most susceptible.

MORE ON NEW BENT CULTIVARS: It has been a couple of months now since the Texas Turfgrass Conference and in addition to trying to obtain all the above information on the new bentgrass cultivars I've had some time to read *Texas Turfgrass Research 95* a progress report from Texas Agricultural Experiment Station. This was handed out at the TX Turf Conf. On pages 34-47 are three different trials on experimental and new bentgrass cultivars.

The first was an establishment trial of 73 vegetative selections and five commercially available cultivars. Penncross did beat out Crenshaw and Cato in this measure of aggressive growth. The other two commercial cultivars were Seaside and Seaside II. The second trial was the performance of the above selections under heat stress conditions as imposed by a heat bench in a greenhouse. Even here Penncross was statistically in the highest performing group on three out of six persistence evaluations while Cato and Crenshaw only managed to make it in the highest performing group on the first evaluation. Numerous selections were in the highest performing group for all six evaluations.

On % color retention there were no differences among the commercially available cultivars and a top group score only once. Four of the Engelke's selections were in the highest performing group for all six evaluations. I interpret this data two ways: Penncross isn't that bad a cultivar compared to Crenshaw and Cato and secondly Dr. Engelke has found some really heat tolerant selections because some of the selections were in the highest performing group on all six dates.

The third trial reported on was the *1993 NTEP Sand-Modified Bentgrass Green Evaluations at TAES-Dallas*. 30 entries of which 16 are commercially available were evaluated. Establishment, root depths, and quality were evaluated. There were few differences in the establishment and root depth evaluations. Even the turf Quality evaluations produced significant difference only in March of 1995 out of eight evaluation dates from January of 1994 to March of 1995. Of the commercially available Cato, Pro/Cup, Crenshaw, Southshore, Penncross and Pennlinks placed in

the top group. Penn State's A-1, A-4, G2, and G-6 were in the test but did not make the top group on that date. All four made the top group for the mean of the eight dates, as did SR1020, Dominant, Regent, Seaside II, and Providence. Dallas, TX may be hotter than the Southeast sites of evaluation but it definitely is not as humid, thank goodness.

OUT OF THE EARTH: Civilization and the Life of the Soil, by Daniel J. Hillel: I wrote in June '95 (V.8, I.7) of wanting to read this text. I can now say I'm very glad I did. It is a history book which explains the role soils and soil management have played in the world in the past yet is tied very nicely to the environmental and food shortages around the world today. For the well read there is perhaps not a lot of new material here, but all the old and new horrors of soil mismanagement are together in one place with suggestions for avoidance and or correction. It is not difficult reading yet the references are there if you want to go into more depth on a particular subject found in this 1991 text.

The author starts off with 50 pages of basic soil and water science, then 75 pages of soils and water in world history, next 125 pages of present world soil and water problems with possible solutions, and ends with 20 pages of hopeful conclusion. You may want this $22.50 text in your reference library. It is published by The Free Press, a division of Macmillan, Inc. It would make an excellent college text for a course on the importance of soil and water in world environment.

Now I'll have to go read some of his other works.

TURF ADVISORY VISITS - NOW'S THE TIME TO SIGN UP

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ITINERARY: first trip, (starts in mid-May) Western States: West TX, NM, AZ, CA, ID and back through Utah and NM, then east Plano.

2nd trip: (begins end of June) Ark & Atlantic Coast(includes MA-FL), finishing up in LA.

3rd trip: (begins end of July) Central U S. OK, KS, NE, SD, ND, IA, MO, AR, and possible side trip to ??????.

BARN OWLS: In several past issues I suggested the use of owls for control of rodents, including the ones with the long fuzzy tail. The Dallas Morning News, 1/31/96 notes that they are very useful to control grackles. The City of Dallas and my City of Plano have a very high population of these birds. They love to sleep at night in the winter by the hundreds in our parks and malls preferring the ornamental pear trees and live oaks as roosts. The article claims 50,000 have been counted at the local Miller Brewing Co. facility --- my they have good tastes.

Barn owls are reputed to "create a grackle-free zone within a quarter-mile radius of the nesting box.

- END -