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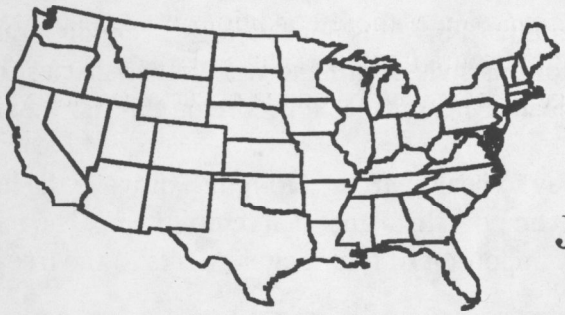

Vol. 10, I4 **June 27, '97**

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

SHIGO ON TREES: Went to an all day seminar featuring Dr. Alex Shigo, who became famous in arboriculture for his compartmentalization concept of tree recovery from damage and for pruning limbs off at the collar. This was much more than a seminar on tree maintenance. It was more a seminar on the philosophy of managing plants with the emphasis on trees. I will try to cover some of what I found to be the highlights while strongly suggesting if you get the chance to hear him take it, or at least insist your aborist goes.

He started off talking about single plant professionals vs. 'systems' people. Most of the superintendents I know well are systems people as they understand to some degree all living things and how the environment affects them. They also can made decisions and come up with treatments of plants and predict the results.

A theme he returned to every once in awhile was the customer vs. client view of the people you work for. America is too customer oriented he thinks. It needs to become client oriented. Clients are those you hope to work with for long time.

His concept on trees is different than what you will learn in the typical biology book. The wood of a tree is composed of both dead and living tissue. This living connection of tissues in the tree he calls the symplast. As he points out the heart wood is dead but all the rest of the wood in the tree has quite a bit of living tissue in it. A stain of fresh cut healthy wood for starch will show this as only living cells store starch.

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He noted the First Law of Thermodynamics, which deals with the conservation of mass and energy, applies very much to trees if the tree isn't going to use what it has been given efficiently some other organisms are going to take it away from it. Referring primarily to pathogens.

He discussed **pollarding** briefly. First, it is not topping. Secondly, trees such as the London Plane tree are well suited for this style of pruning while other species such as the elm are not. See the Feb. 1997 issue of Grounds Maintenance for more on this more typically European custom.

He strongly believes the way to healthy trees is to return or leave the leaves and twigs under tree. If you must rake them up, compost them and then return them. The microorganisms that live on this carbon source are very important to returning nutrients to the tree and creating a healthy soil for the roots.

Want to make future cavity sites for nesting wood ducks, woodpeckers and bluebirds? Use the flush cut on branches of trees rather than the collar cut normally recommended. Of course only use the flush cut if you also don't mind seeing the tree die over a ten to twenty year period,.

He returned time and again to oak wilt. He claims to have done research on the disease over 30 years ago in the Appalachian Mountains. One of the first things I read in my mail after this seminar was Turf South quoting Dr. Jerral Johnson, Texas Agricultural Experiment Station plant pathologist, as recommending "All pruning cuts and wounds from broken limbs must be treated with a protective covering," Dr. Shigo said this was most probably a waste of time. He even went further to say that the fermentation under such protective coatings has been shown in some research to attract the beetles that bring the fungus spores to the tree. Trenching around infected trees may be beneficial he said if done early enough to prevent movement through root grafts.

He said there is no data to show that sterilizing tools in any way prevents the spread of pathogens from one tree to another. Dr. Shigo appeared a bit paranoid at times but, I assume one who has bucked the general accepted theories as much as he has would have a tendency to get that way by the late 60s. Well, there was much more but, I know that most of you don't wish to read a whole issue on tree maintenance.

GREEN JUNE BEETLE: *Cotinis nitida*, I first heard of this grub being a serious turf problem from a former student and superintendent in the Washington D.C. area several years ago. Then out in Baird, TX this Spring I ran into it again so prepare yourself. Although usually a curiosity whose adult form is a nice shiny green noisy beetle about twice the size of a normal June beetle the larva can sometimes obtain population levels that are damaging to turf.

While most grubs spend their life eating roots and other organic matter in the soil under one spot of turf the larva (1 to 2 inch grub) of the Green June beetle likes to burrow to the surface and using the stiff hairs on its back "crawl" ? "walk" 100 feet or more to another spot of tasty turf. But, they are easy to kill. The control rate of Sevimol™ for surface feeders does a nice job. However that is often when your real problems take a turn for the worse.

The grubs die on the surface and the dead grubs have a terrible stink and you will definitely have to get rid of the mess.

Dr. Robert Crocker, TX A&M Entomologist, said that organic fertilizers, manure, and I'll add grass clipping piles attract them. It has a one year life cycle.

FANS FOR GREENS: I get a constant chuckle out of the good natured barbing that goes on between Engelke and Beard. Dr. Engelke will make a claim that fans around greens really don't provide cooling than Beard will come back with the importance of Dollarspot resistance if you are going IPM with bentgrasses. Of course it is Beard who did the first research showing the cooling value of fans on bentgrass greens in the 1950s and its Engelke that has released Crenshaw creeping bentgrass, a cultivar that is so sensitive to Dollarspot researchers use it as an indicator plant, or try out fungicides on it to see how well they control Dollarspot.

Beard has some good fan data and information in V5, No. 2 of his TRUFAX including criteria to consider in selecting fans. He, I and I'm sure Engelke would like you to know that as the humidity goes up the cooling potential of fans goes down. The same goes for syringing. Fans do help move air around even under conditions of high humidity and this maybe helpful when air gets stratified over the turf on a hot, calm day. After all turf is moist and this quickly gets the air just above the turf to 100% humidity when the air is still.

ROOT ZONE MIXES, a Users Comments by Gary Grigg: "I though your last issue of TurfComms was very informative. I have several opinions on several of the subjects and will lend them to you for whatever my experience is worth." (Ed. comment, if Gary's comments aren't worth reading whose are?)

"On the subject of California root zones: over the last 3 years we have reconstructed 41 greens here at Royal Pointciana Golf Club. The first 19 were total USGA with choker layer. The next 19 were USGA without choker layer. The short course practice area greens (3) were built with, I guess what I would call modified California style. We cored out these greens 12" deep and doubled the typical amount of drain tile. We used .25" gravel around the drain tile to the level of the subgrade. We used a USGA size sand mix -- 85% sand with 15% peatmoss. Laid the rootzone mix directly on the subgrade and drain tile. After three years, these greens have a much better developed root system. The greens without the choker layer are not as good but closer than those with the choker layer. The full USGA greens have at best 1/3 the root system of the "California" greens.

The California greens never have an algae problem--which is one of our largest problems. They do tend to stay drier but we have double heads around the greens and can water greens separate from the surrounding area. I think this is a key to making them work. What will I think after 10 years?? who knows. Right now I would have to be talked out of doing them any other way in South Florida. Cost savings is around $100,000 per 18 hole course."

STIMPMETER: Bought a Speedmeter from Bayco of Canada to use as a Stimpmeter. What a gyp! It isn't straight. I'm not sure when it got the gentle bow in it but it looks like a piece of formerly straight wood that warped a little on aging, and I've had it less than a year.

NEW TOOL FOR SHARPENING MOWERS: On my East Coast trip this Spring I was told by one of my readers that I needed to talk to his mechanic about a new device he had been using that had made the mechanic extremely happy. I checked around and found a confirmation

from another golf course. The device is made by Bernhard and Co. of England. It is called the Rapid Facer RF1000. It is used to give the front face of the bedknife a sharp edge. The use of it reduces the amount of grinding of reels or back lapping needed to maintain a clean cut. Check it out. In the Washington D.C. area it is sold, I'm told, by G.L. Cornell. It is available in the Dallas area also.

TALL FESCUE ROUGHS: I recently ran across one problem with this grass as a rough that should be of interest to those courses using tall fescue for roughs where the soil pH is above 7.0. If you use seed containing Kentucky bluegrass or perennial ryegrass for the seeding/reseeding of these areas beware. Kentucky bluegrass will survive in the shade in the Dallas area and will prosper enough to create rather large patches. Which is okay if the bluegrass used doesn't turn yellow from iron deficiency at high pH. If you are going to use a blend be sure that Kentucky bluegrass is both adapted to high pH and the shade.

Now the perennial ryegrass, why bother using it. It will germinate and out compete the tall fescue seedlings hands down the first winter. Come that first summer it is out of there; and you have a nice ugly patch of dying grass in the Spring. A better choice is not to buy seed mixes at all. My choice is more expensive but should be a much better choice in the long run. Buy certified tall fescue cultivars that are heat and shade tolerant one cultivar at a time. In other words each year plant or reseed with a new and different cultivar. Some choices are: Jaguar 3, Lexus, Houndog V, Crossfire II, Tomahawk, Marksman, MB-22-92, and ISI-AFA. Oklahoma researchers rate Lexus and Hounddog V as best under their conditions.

OKLAHOMA TURFGRASS FIELD DAY: New creeping bentgrasses continue to get the crowd's attention, and they should. Remember you only have a few more years left that you can fumigate your greens with methyl bromide. Not only do these grasses look good at 5/32 of an inch they keep *Poa annua* out at that height of cut. Now one of the first articles I had sent to me in late 1995 by Tee-2-Green had in it that, the new "PSU varieties A-1, A-2, A-4, G-1, G-2 and G-6 are typically lower growing and **must be** maintained at a cutting height of 1/8" or less." Emphasis is mine. Dr. Joe Duich, the originator/breeder, is still claiming that they are at their best at 1/8" I am told.

Now I'll be quick to agree that in constructing a house 1/32nd of an inch isn't much but, when mowing greens that is quite a difference. If (and NTEP trials seem to indicated so) these new cultivars can safely be maintained at 5/32nds without a great deal of special maintenance practices than I'm all for them. At the present moment I'm only recommending them with great care. My old mind says remember **Pennlu**. Don't imagine many of you do, and Penn State would prefer you didn't. Pennlu is one of the three vegetative strains used to produce Penncross seed. It was released as a vegetative cultivar but developed thatch at an extremely rapid rate.

Oklahoma researchers are finding the A & G Penn series, L-93, Southshore and Providence look the best at the 5/32" they are maintaining these plots at in the National test. The ability of these cultivars to keep out *Poa annua* under those conditions is beginning to show on these 1993 National turfgrass Evaluation Program plots. Penn A-1, A-4, G-2, G-6, L-93, Southshore and Providence had and average percentage Poa annua cover of 0.7 in 1996 data. They looked equally as good this June 25th when I was there; whereas cultivars such as Seaside, Penncross and Mariner appeared to be much above their average 2.8% *Poa annua* shown for 1996 data.

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