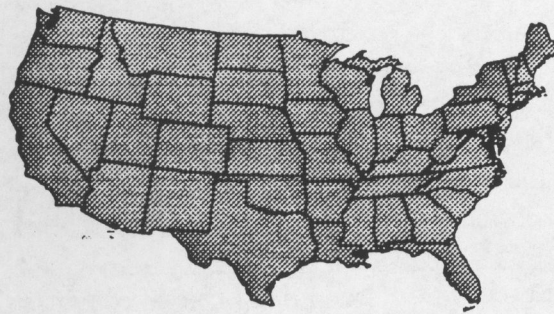


# TurfComms



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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.

**THE ANATOMY OF A GOLF COURSE** A book by Tom Doak, published by Lyons & Burford in 1992, Publishers, 31 West 21 Street, N.Y., NY 10010 It is a good basic text on golf course design, well worth the \$22.95 cover price if you don't have a good book on this subject. Not a lot of fancy pictures, a few good explanatory drawings and some good rules of thumb to follow. What is refreshing from one so young is an open admittance that there is more than one correct way to do golf course design. But, what I liked best perhaps was the thoughts so strongly expressed that in the U.S. golf has gone too far towards producing the perfect playing surfaces at too great an expense; witness The Augusta National, not a blade out of place for the Masters.

**INSURANCE:** Just read a good little article by David A. Oatis, Director, Northeast Region, USGA Green Section that first appeared in Hole Notes, Dec-Jan., 1994-95. I read it in The Perfect Lie. I've usually tried a combination of approaches to try and convince golf courses to have a putting green nursery but never tried to convince them directly that it was insurance. But it definitely is.

It is, if as Mr. Oatis points out, you maintain it just like you do the other greens on the golf course. All too frequently I see putting green nurseries that are very satisfactory for replacement of collars but not of putting green turf. You can't mow it twice a week and never topdress it and expect it to be ready when you need it.

**BUT WE AIN'T GROWING ORCHIDS:** I was having a discussion of how to grow humidity sensitive house plants like orchids with a friend when I thought of the following comparison. As you

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may know one of the tricks to growing plants like orchids that require a relatively high humidity is to put the pots on a tray filled with pebbles and water. Ideally the pots sit on the pebbles and are not touching the water. The water evaporates continuously and helps to keep the plants above in a more humid atmosphere than the normal low humidity household heated air of winter or air conditioned summer.

Suddenly, a picture of a putting green came to mind that I had consulted on for the last two summer. It is one of those island greens pretty much surrounded by water. It grows better algae and disease in the summer months than it does bentgrass. There is no doubt that the water surrounding this green acts exactly like the water in the tray of pebbles. It does an excellent job of keeping the green at a much higher humidity than is normal for the rest of the golf course, **but we ain't growing orchids.**

That same green was the first green in Colorado that I helped convince the board of a club that fans were needed around the green. In the rebuilding process the architect, Hurdzan, suggested blowing or pulling air through the mix using a sunken fan and the drainage system. I told him that I thought that was a great idea. I was very surprised to see the advertisement in GCSAA's April issue of Golf Course Management for just such a system, SubAir™. It is a full page ad. on pg. 39. I suggest that course tries it and I'm going to try to convince a few others to give it a try on one green this summer.

**"MOWING PRACTICES FOR CONSERVING WATER"**: Thought Dr. Beard had flipped his lid when I started reading this article in the January issue of Grounds Maintenance. Yes, the research data shows us that at closer mowing heights the evapotranspiration (ET) losses of a stand of turf will be significantly less than at a higher height. That, as Dr. Beard explains is true when staying within the general guideline recommendation for that species.

However as you lower the height of cut the root system typically deteriorates a greater percentage than the reduction in the ET rate. So you end up with a turf that has a lower ET rate but needs to be irrigated more frequently because its roots are drawing from a shallower soil profile. Dr. Beard does a good job of explaining this for those who take the time to carefully read the whole article but for a while there I was a bit concerned that the turf world was about to be misled.

**"OVERSEEDING BENTGRASS GREENS"**: This is the title for a second article that gave me concern when I started reading it and as expected on this one I stayed concerned even after having read it. Beware of those in the seed industry who think overseeding of bentgrass greens is a great idea. One of my USGA Green Section bosses had this philosophy and I never was able to buy it from him. When somebody in the business of selling us seed starts to spout such philosophy I really get turned off. I think every golf course in the U.S. should use my consulting service. So what, that's expected, and not worth publishing!

From what I have seen of the lack of success in overseeding greens I strongly think that you can spend your precious maintenance dollars on other tools with greater chance of success. I think of two golf courses I visited that overseeded Cohansey greens for years with Penncross. They did establish a little Penncross and thus ended up with **polka dotted** greens --- hardly an improvement. I also think of an Arizona desert golf course with old Seaside greens. Yes, the greens were full of large patches of different strains of creeping bentgrass and thus at certain times of the year looked a little mottled. Those strains that had survived for 17 years on those greens when I first visited were

very well adapted for Carefree, AZ conditions. Why try to change them by overseeding? If you must change - fumigate and then seed.

**NEW CREEPING BENTGRASS CULTIVARS:** California Turfgrass Culture, Vol.44, No.3&4, 1994, just arrived in the mail. In it were the Bentgrass Performance Trail Results for California's Central Coast. In summary, "Under the conditions of this study, varieties 'SR1020', 'Cobra', and 'Pro/Cup' all rate high for overall quality and least *Poa annua* invasion when grown in either sand or soil. Varieties TAMU 88-1, MSCB-8, 'Putter' and 'Regent' grown in sand, and varieties 'Pennlinks', 88.CBL, 'Carmen', and 'Providence' grown in soil, and maintained as golf greens, also ranked high for overall quality and least *P. annua* invasion." How far behind was the old standby Penncross?

In the sand base green test, a three year study at Sunnyvale, CA, Penncross had an average Quality rating of 5.7, the % Poa was 14.9, the Thatch in inches 1.36, and the Density 6.7. The average of the overall top three and the four above mentioned as also high for quality on sand were: Quality rating of 6.0, the LSD value\* was 0.5; the % Poa was 15.5, the LSD value was 16.3; Thatch in inches 1.28, the LSD value NS; Density 6.8, the LSD value was 0.7. In other words there was little if any statistical difference between Penncross and the "new improved cultivars" in a three year test. \*LSD Value: To determine statistical differences among varieties, subtract one variety's mean from another variety's mean. Statistical differences occur when the value is larger than the corresponding LSD, then the two varieties are statistically the same for that specific quality component."

On the Native Soil Green test Penncross was definitely lower in quality than many of the top seven. It was statistically higher in % Poa under these conditions than SR1020 and a clear amount higher than the other top six. Its density was lower than the top seven but not statistically even than the best of these.

In the Tee-Fairway test Penncross's quality was statistically lower than Putter but statistically higher than 88.CBL, and SR1020 of the aforementioned stars at putting green height and also higher than six other bentgrass varieties in the test. Penncross had less Poa and more thatch than most varieties although all values for these components were not statistically different. Its color, leaf texture and density values were right up with the top varieties in this test.

What I'm driving at is don't be too quick to abandon Penncross. It definitely is not a dog when compared to the new improved third generation cultivars. In the Dallas area last summer and way into the fall Cato/Crenshaw greens had lousy roots. They aren't great as I write this on April 2nd. Penncross in the area also had poor roots going into winter. Cato/Crenshaw blend does produce an excellent putting surface here but, so does Penncross under good management.

What would I recommend for the Southwest? SR1020 is my first choice, but it certainly doesn't win by a landslide, the Cato/Crenshaw blend is right behind it. For the rest of the U.S.? We can discuss that in our next turf advisory visit.

**HUMIC ACIDS:** The winter 1995, issue of Compost Science & Utilization had an interesting article comparing research results of humic acids mined from Leonardite with those from composted vegetable residues. This was a greenhouse pot research study using a sandy soil amended with the two humic acid sources at various rates. The plant species used for vegetable biomass production was chicory. The sandy soil was amended with 250, 500, 1,000, 2,000, and 4,000 mg of humic acid source /kg. of soil.

The researchers found that "humic acids stimulate, generally, heterotrophic aerobic bacteria in soil, with humates from green compost being more active." They also reported that "populations of autotrophic ammonia and nitrite oxidizers increased, surprisingly, in soil amended with humates from composted vegetable waste." This would give you an increase in leachable or available nitrates. Their last finding was that "although both humates from leonardite and compost added to the soil at rates up to 2000 mg/kg evidenced a marked beneficial influence on chicory growth in terms of vegetative biomass production" the researchers obtained even greater effects with compost-derived humates, than leonardite based humates. "Compost-derived humates continued to improve plant growth up to the rate of 4,000 mg/kg. On the other hand, humates from leonardite, at concentrations higher than 2000 mg/kg, appeared quite toxic to plants." After 120 days they had half the dry weight of the check pots, whereas veg. humic acids at 4,000 mg/kg resulted in seven times more dry weight than the check.

I'm not sure just how to relate this research results to using leonardite source humic acid materials in turf but, I would be asking a question or two about safety levels as measured on putting green turf if I was a big user. I would also give closer attention to using composted sources of humic acids such as Milorganite and Ringer products.

### **JIM MOORE, USGA GREEN SECTION DIRECTOR**

#### **Or what a top notch superintendent must know these days:**

Jim talked to North Texas golf course superintendents, managers, green chairmen and golf professionals in March. Seeing he threatened to torch my house if I wrote what he said there, I won't. I will say I was disappointed that he gave the same talk (essentially) as he gave at the Texas Turf Conf. in December.

While listening to Jim I began writing down all the things a superintendent had to be familiar with to do his job.

1. Civil engineering for greens construction, drainage projects and irrigation system management.
2. A legal aid/paper pusher for EPA, OSHA and various state agencies as well as his own bosses.
3. People manager for crew, his own bosses and the golfers.
4. Pesticide expert - really an entomologist, pathologist, nematologist, and weed control expert.
5. Agronomist and Horticulturist for soil, grass, tree, shrub and flower management.
6. Mechanical engineering to help keep a half million dollars worth of equipment running.

There may well be at present as Jim says a buyer's market for superintendents but good luck trying to find one with all those qualifications and experience to boot. That is not to say knowledgeable students aren't coming out of the various colleges, they are. However, they lack experience and they don't begin to have all that much education. The only way a superintendent can really do a professional job these days is to be able to hire a professional team that compliments his training and experience to create a management team with a very broad background. Some of this team can be made up of his assistant superintendents, mechanics and irrigation foreman. Others on the professional team will be consultants each with their area of expertise. Most importantly the superintendent must be very willing to admit he needs help. The really good ones are quick to admit it.

**END**

