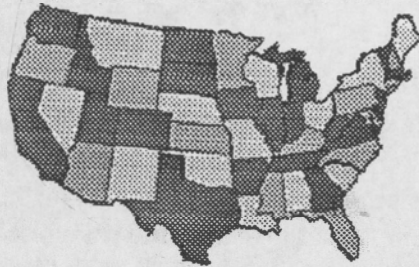


TurfComms

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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.

Turf Managers' Handbook for GOLF COURSE CONSTRUCTION, RENOVATION and GROW-IN by Charles B. White: I served on the USGA Green Section Staff at the same time Bud (C.B. White) was an agronomist with the Southeastern office. In fact he is the only person I have ever hit with a golf ball; that all, I'm sure makes me biased when reviewing his book.

It is a book that should have been written years ago and should be read immediately by all involved in the construction or major renovation of a golf course. Best read before you even begin. Superintendents generally understand much of what is written here although I have seen too many not understand how much more nitrogen they need to bring in new greens. Almost all owners, developers, and greens committee people desperately need to read this book before they fire some competent superintendent for not being able to grow bermudagrass fairways between November and May, etc.

One of Bud's objectives was: "Promote a better understanding of the critical phase of finish construction and grow-in from the turf manager's and the owner's or developer's perspective." He has succeeded and I therefore urge you to purchase a copy if you're in those lines of work.

No, the first edition isn't perfect but, the errors and areas where improvements are needed do not distract from the value of the book. The book has a lot of black and white pictures that don't add much. I also felt there were too many abbreviations, acronyms, and slang (i.e. asbuilt, and

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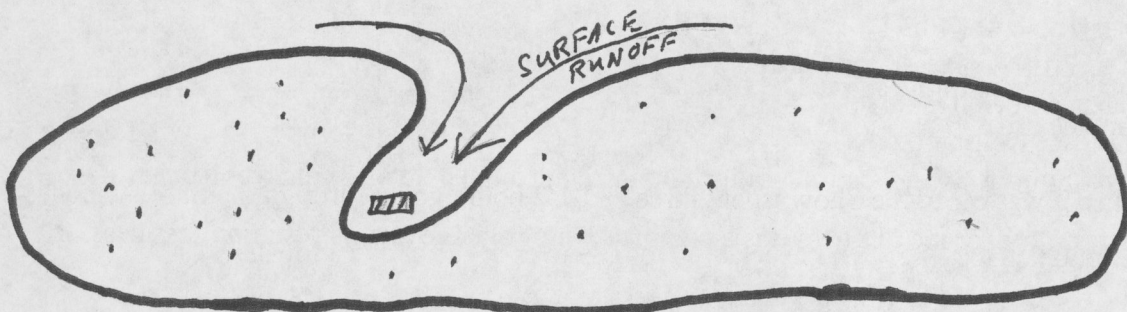
speeded). But, considering he got hit on the back by a line drive about 20 years ago he did a good job. The Green Section Staff was playing one of the old East Coast resort golf courses back then (the first time for all in my foursome) and he was in the foursome ahead of mine. On one hole we watched everybody in Bud's foursome hit their second shots and decided it was safe to hit. Well it happened that none of them had a decent drive on that hole and mine was.

The Headline Read: PESTICIDE TIED TO PARKINSON'S DISEASE: The article in the Dec. 2nd Science News started off with the sentence, "Epidemiologists have long suspected that exposure to some pesticides promotes the development of Parkinson's disease." The Emory Univ. study found that rotenone produces symptoms comparable to Parkinson's including killing the same subgroup of brain cells. "Furthermore, brain cells of the rotenone-treated rats develop the same abnormal protein mass that mar the brain cells of people with Parkinson's." Rotenone is a plant-derived pesticide used by organic gardeners.

GCSAA CONF. AND SHOW 2001: I started the Conference with the opening educational session at 1 P.M. on the 14th, labeled The Latest and Greatest in Technology. After hearing Lonon of Toro, Bass of Point Forestry and Smith of Larry Rodger Design talk I figured it was the year GPS and GIS became something more than curiosities. GPS stands for Global Positioning Systems and GIS for Geographical Information Systems. With a GPS device you can pinpoint where every tree and irrigation head is on a very accurate map of your golf course and a lot more. Combined with good GIS software and few gigabytes of computer storage you can produce accurate up to date maps of any part of your golf course. That assumes you have kept the information in the computer up to date. The days of putting pie tins on the irrigation heads before having the course aerial photographed are coming to an end.

I next went to The Scoop on Bunkers session at 3 P.M. Jon Scott of the PGA Tour gave a talk similar to the one I reported by Tom Brown at the Texas Turf Conf. Three notes I took that are probably in the Brown report are: They (Jon, Tom and others) are setting up the courses the way their members want it. Their members are the PGA Tour Players. Sand in the bunkers should drain at least 20 inches/hr. Be sure to put either no or very small gravel around drain lines. Coarse gravel creates a perched water table and comes up to haunt you latter.

Stephan Kay, a golf course architect, talked about avoiding washouts and the resulting shoveling of sand back up on bunker faces. The key he pointed out is to not let water drain into the bunkers. Easily said, to bad architects and builders didn't get them done that way. One of the interesting things he suggested is drain inlets at the bottom of capes see drawing below.



Richard Lemmel, Supt. Woodlands C.C., FL. talked about using the Siphon Solution System to drain bunkers on flat terrain rather than a sump pump.

2/15/01 6 A.M. Innovative Supt. Breakfast and Session: Victor Wassner, supt. of Shadow Valley G. C. did an excellent job of telling us how he was able to run an 18 hole course with a budget under \$300,000.

1. He mowed less grass, and the grass less often!
2. He used 5 inch deep crushed rock for cart paths and got added absorption of excess water.
3. He went to 50 gallon trash containers so that he only had to empty them twice a week.
4. He went to a 2 or 3 foot Roundup treated radius around each tree so that equipment stayed easily away from them and less rotary work was needed.
5. He reduced the number of bunkers and had each employee rake his two bunkers twice a week.
6. He only mowed fairways twice a week.
7. He used golf carts for his main utility vehicles.

Next was Rhys Arthur, Indian Springs C.C., MD, with a digital telephone answering machine that he updated daily as the Course Condition Hotline. The course is a 36 hole with in my opinion an "aggressive" membership.

Each day he puts the following information on the answering machine at 7 A.M.: open at what time. cart availability. tournament or organizational play scheduled for that day. pin positions. scheduled maintenance practices. Then any items he might wish. To make this work he needs to publicize it. But now the superintendent becomes the source of information.

I think it has merit. Suggest you call 1 (301) 871-0365 a few times and see for yourself.

Lee Anderson, Sumner Meadows G. Club, discussed his success working with high school FFA students the idea being that they would be potential future help. I was sitting beside one former FFA student who got started that way. From my own experience as a substitute teacher I will confirm that these students do prefer outside work. Just you try to keep them inside on a warm spring day.

David Fleming, CGCS, El Tamarindo G.C., discussed using golf cart paths for surface drains. He used V shaped paths and some with a curb on one side for this purpose. He strongly urged a 2% slope or you'll have water standing on the path.

Robert Murtaugh, CGCS, Perry Park G.C., CO, got rid of earthworms in his greens by putting 80 gallons of water with 1 lb. of dry mustard and 1 pint of wetting agent to each 400 sq. ft. Actually this brought them to the surface he then had to scrape them off. They do come back in from surrounding areas.

Well then it was off to the Show, spent three and 1/2 hours going through the Show which is a record fast time for me. I guess it is a combination of old age and its resulting fussiness. I

typically look for new products and seldom look at equipment. Towards the end of this speedy tour I stopped at a range mat booth hoping to break the monotony by hitting a few balls. I came away very impressed. The Softee mat sold by Range King really didn't bother my old and somewhat arthritic hands and wrists even when I deliberately hit into the mat. Phone 1-800-468-2346 for more information.

While on the subject of golf course equipment I've always been a fan of wide wheel golf pull carts so when I saw The Riksha it was love at first site. 20" diameter wheels, 2 or 3 "wide (buy the 3"). One model comes apart in seconds to easily fit in your car trunk. For info try toll free 1-877-774-5142

Innovative Supt. Session on the 16th. This session started with Bruce Cadenelli, discussing his late fall aerification program. David Hicks supt. at Cornell Univ. golf course discussing balancing the fear factor vs. the excitement factor of trying out new ideas on "your" golf course. He broke superintendents into four groups: Cowardly Lions (those overcome by the fear factor) Lazy Lions, Young Lions (just loved the excitement factor and had no fear), and The Wise Lions who used some small number of trials as a PR tool and a chance to test a few needed products or ideas in a sane manner.

Michael Lee of Kohler's Wisconsin resort had a nice approach to doing fairway aerification for those golf courses where it is more important to keep the course free of the mess of aerification then it is to save a few dollars.

He removes all the cores, dries the soil, grinds it, and then returns it to the fairways as a topdressing in the off season. Because he is removing the cores the weather is not much of a factor in his decision to aerify. He can get out early almost any morning and aerify a few holes.

He has a 36 hole resort layout and had to add the following to go this route: 50' x 140' building, 6 Cushmans, 6 Core harvesters, 1 material handler, 1 soil processor for a total cost of \$303,000. Doing this operation this way is more critical for northern golf courses than southern courses. Southern courses are aerifying fairways in what would generally be considered an off season.

Rob Kloska, Jupiter Island, FL, discussed his clubs move to reverse osmosis. They get one gallon of waste water for each 3 gallons of irrigation water. The waste water must be injected into a deep well or the ocean.

I left the above session early to get to the Golf Course Architects session. I didn't get there till 9:15, in time to hear Jones tell what wonderful things he has done and what fun he had doing it. Jeff Brauer, client of mine, gave a lot less self oriented talk with an interesting approach and a good sense of humor. He noted that developers are becoming aware that the cost of sodding even for fairways is effective in that it helps get the course open a lot quicker.

Then at 12:30 it was the Golf & The Environment session, nothing to report on the actual meeting. I did pick up their "A Collaboration Guide". If in anyway your golf course is going to be making any changes in the environment it would be wise to have a copy of this in hand and

well read before you begin. Much of what is in there is just good common sense and good PR. But, most of us are not born with a couple hundred years of of good sense and a life time of perfect PR. Even at 65 my PR is not so hot, although my common sense usually works reasonably well.

I also picked up their Environmental Principles Checklist after writing comments all over it I gave it back as part of the evaluation the Center for Resource Management (1104 East Ashton Ave. #210, Salt Lake City, UT 84106) asked for. They also had an Environmental Siting Guide for Golf Course Development, an 8 page booklet for those who showed up. This has some good information for anyone in the process of selecting a site for a golf course.

Left the above session a little early to go over to the Zoysia Forum. Got there a little late, end of Whitbeck's talk, but in time for Dr. Mike Richardson's, U. of Arkansas, Dept. of Hort. He has been doing research on Zoysia establishment looking at Z net and nitrogen rates. Using 0, 1/4, 1/2, 3/4, and 1 lb.N/M/Mo he got no response, or very little. He also used a product called GroWin and obtained a slight benefit, also found a slight benefit to foliar applied N vs. granular. He feels there may be various hormone treatments that effect rooting that may be useful at establishment.

Z net's high sprig survival rate could be matched by lightly topdressing zoysia sprigs.

David Stone, supt., was next. He noted that low cut zoysia greened up much faster than taller mowed zoysia but, urged growers not to scalp down zoysia in the spring as this severely weaken it. For timing of late winter Roundup applications he suggested you look at willow buds. If these have started to open you will get damage on the zoysia from your application. He also strongly urged that you not spot spray weeds in zoysia. (Ed. Spot spraying herbicides is always dangerous as there is a tendency to apply too much.)

Brownpatch of zoysia easily identified says Stone, as brown leaves pull off easily. Stone claims ProStar sprayed about Sept. 25th works best for him. Mike Larsen, Woodmont C. C., MD, claimed Eagle works better. David Stone said, not for him. El Toro very sensitive to Brown Patch reports Stone.

After leaving there I went back to the Show to get some answers on sulfur burners. There were three producers of these devices (Aqua SO₂, SweetWater International, and Rainwater H₂SO₃, Inc.) that I talked with at the show. Did you know that superintendents are making these portable so they can set them up on their other ponds and kill the algae in them? It seems the H₂SO₃ which is first produced when the burned sulfur (SO₂) hits the water is a great algae killer. Also fish killer? Other superintendents, if salesman can be believed, are putting the water in spray rigs and spraying it on greens for algae control.

H₂SO₃ is sulfurous acid while, H₂SO₄ is sulfuric acid. Sulfurous is touted as being very easy to handle/safe? While sulfuric is mean and nasty. But, what is the whole story? Can you legally use sulfurous acid as an algacide? I still have some unanswered questions but one thing is clear in my mind, conversion of sulfur to SO₂, then to H₂SO₃, and then to H₂SO₄ with a sulfur burner is

the way to go. Forget the sulfuric acid and urea combination currently being sold to correct water pH. The burning of sulfur is a much more economical way to go.

Feb. 17th Research Breakfast and talks: Crystal Fricker of Pure Seed Testing, Inc. talked on Public fear of genetically modified organisms. She noted that biotechnology is a bigger concern to Europeans than in U.S. That a fair percentage of people answer as true that only genetically modified plants have genes. And a fair % feel one can change ones genetic makeup by eating a genetically modified fruit. Yet Americans have made little effort to avoid genetically modified food.

She then went over the data she presented at the ASA meetings, see earlier TurfComms reporting on ASA meeting. She then noted that her company, realizing that genes could easily be picked up by closely related plants adjacent to the seed fields, decided that the genetically modified plants released should be male sterile.

Next Dr. Paul Vincelli, U. of KY. pathologist, reported on **Gray Leaf Spot**. He gave various fungicide treatments found beneficial but the emphasis was on early application (preventative); July 20th at his location. He also noted that there is already a Heritage resistant strain out and about. Potassium nitrate applications may reduce incidence or severity. Some added notes picked up on the 17th at the Transition Zone Session from the same speaker: as N levels increased the disease level increased he had found. Raising the height of cut resulted in more disease incidence in one study but not in another. Removing clippings was of some help.

He recommended avoiding spring and summer nitrogen applications. Don't irrigate as dusk approaches. Maintain standard mowing height. Remove clippings. Delay overseeding until mid or late Sept.

Under high disease pressure: all cultivars are susceptible; and cultural practices alone will not suppress the disease. On the positive side there are four different fungicide groups that supply control. So rotate. Researchers now have the gene for resistance in P. rye. Now need to get it into the proper cultivar and multiply it.

Kevin Morris of NTEP noted that the top creeping bentgrasses at 13 sites were: A 2, A 1, A 4, and L 93 at low N, moderate N and high N levels of maintenance.

Dr. Rick Brandenburg, N.C. State U., Discussed how FQPA (Food Quality Protection Act) was reducing the number of available pesticides and also reducing label rates of others. It will be difficult to obtain grub control with Dursban because the rate is now down to 1lb./A.

Then Dr. Nick Christians, Iowa State U., gave a quick review of the use of growth regulators in the turf industry and added some new uses currently being tried. 1) Mixing Primo with paint. Great in that the paint job lasts longer if you get the rate correct. Too much Primo and you end up with dead turf. Primo has been a big help in the Orient and on the East Coast when applied before tropical storms that often make it difficult to mow for a while. Also with some compatible fungicide obtain a longer and better control period.

I then ran over to the Transition Zone Grasses Session. Where I heard my old office mate (Dr. A.J. Powell) give first a good review of the transition zone grass situation and then go into some of his own findings as to cultivars best adapted to this zone. For Tall Fescue I got Rembrandt written down but not the others he gave.

For the best of the **fine fescues** he gave Victory II, Shadow II, Banner III, and Jasper. And the best of the Kentucky bluegrasses: Total Eclipse, Quantum Leap, Odyssey, Jefferson, NuGlade, Midnight, and America.

For fairway grasses he favors zoysia and for best cold tolerance it is Meyer. He is quick to point out that bermudagrass is the cheapest but has severe winter kill and SDS. However, one can tolerate a lot if you realize in the short run zoysia will cost you three times more than the cost of bermudagrass. He noted that perennial ryegrass has become a high maintenance grass with gray leaf spot susceptibility. And bentgrass always should be consider such.

While were on the subject of transition zone grasses Dr. Martin of OK told me that the cold tolerant seeded bermudagrass I've been mentioning from that fair state will be released by the seed company that now owns the rights to it as **Yukon**.

Although David S. Downing II was scheduled to talk on Subsurface Air: What in the World? A Mark Langner actually gave the talk. He had two units he moved around his golf course. He used them to remove excess CO₂ from the rootzone and replace with oxygen rich air. He used them to remove free moisture from the profile of his greens, and to cool or heat the roots. By blowing air up through the profile of his greens he was able to remove frost.

And then finally it was hurry off to the last program I would attend the USGA Green Section Session. I will not report on this session as it has been reported in full in the Spring issue of the USGA Record and anybody in the industry that is interested in the maintenance end of the business should be subscribing to that journal.

MARRIAGE: I apologize for being so late with this issue. As many of you are aware I married the woman I had been courting last month (April 14). Well that has kept me busy but the killer has been trying to squeeze two old folk's accumulations into one house. It can't be done, thus there are hundreds of little decisions that must be made to somewhat accomplish this.

Well my old house is up for sale and many of those decisions have been made. But it sure ain't been easy and I'm not looking forward to garage cleaning at both ends and other decision **opportunities**. Especially now that hot weather is fast approaching. But I do look forward to the day I don't have to maintain two houses and yards.

TRAVEL: I currently plan to be in the Michigan area for July and much of August. I will go to Toronto in July for the International Turf Conf., and home to Massachusetts in August to be best man in my brother's wedding and visit my mother.

Hope to visit clients in northern states during those two months.

