

# TURF COMMS



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V. 4, I. 1

JAN. 23, '88

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

## GOLF COURSE ON TOP OF EARTHQUAKE SURVIVES

Bill Martin, Golf Course Manager of Friendly Hills Country Club, had moments to ponder how "friendly" were the Friendly Hills when the 6.1 Richter Scale earthquake hit California early this last Fall. Friendly Hills Country Club is located in Whittier the earthquake's epicenter. Bill writes, "The golf course did fine but a lot of member's homes did not."

For those that think the grass is greener elsewhere read what else he writes; "Fairway maintenance is a little easier here than back East due to the bermuda (you can't kill the stuff) but greens can get testy as you can't get the pH's much below 7.0 and some of the extreme heat, 110° plus, can be tough....we work a full 12 month season."

He notes that rough maintenance is more difficult than back East also. As a former NJ resident he speaks with some authority. "Included in the course grounds are very large, steep slopes that are adjacent to most fairways that have to be maintained. Most of these slopes are mowed with weed eaters. In California, due to the severity of brush fires and the close proximity of homes, all slopes must be kept clean and cleared of debris. Needless to say a lot of man hours are used on slope maintenance."

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## COLORADO EVERY SUPERINTENDENT'S DREAM STATE

That title is I'm sure an exaggeration. But, in the last 10 years I have had an awful lot of request from superintendents wishing to move there.

Well for those that still want to go, beware, the oil glut has had a severe impact on the economy there. Denver is particularly hard hit and little money is available elsewhere in the State for new development. The good news is that housing is a lot less expensive than a few years back.

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JAMES M. LATHAM SAYS THANKS

## AND COMMENTS ABOUT WINTER COVERS

James M. Latham, USGA Great Lakes Green Section Director, thanked me for the kind words (see last issue V. 3, I. 9). Then he went on to write about winter mulches in the West. "This past winter" (winter of 86-87) "was really tough out west. Even Vern Berk's hydromulch failed (blew off). Top of the line was heavy topdressing - even pure sand - after snowmold fungicide application. This equalled the synthetics, (I assume he is referring to geofabrics here) at least when the superintendent hauled water and sprinkled during the winter. Cal Polsean recorded 400 man-hours. This also gives a good cushion against traffic where winter golf is played."

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## PERENNIAL RYEGRASS CULTIVARS A REVIEW

Dr. John Pair, researcher and turf extension worker at Kansas's Wichita Station summarized the National Perennial Ryegrass Cultivar Test Data for us. His summary included information on:

- Best Winter Color
- Dollar Spot Resistance
- White Grub Resistance (Beltsville, MD only)
- Darkest Green Color
- Highest Density
- Brown Patch Resistance
- Rust Resistance
- Pythium resistance (Calif. data)
- Drought recovery (OK data)
- Best ranked nationally 83-86 data, averages of all states reporting

Rather than give you each of these list I am going to give you four and list only cultivars presently on the market.



1. White Grub Resistance

(Beltsville, MD data)

All Star and Pennfine at top

with Manhattan, Manhattan II and Yorktown II at bottom

Pythium resistance

Calif. data)

Acclaim, Crown, Cupido, Derby, Manhattan, Manhattan II, Pennfine, Premier, Barry, Blazer, Gator, Regal Birdie II.

Drought recovery

Oklahoma data

Prelude, Citation, Yorktown II, Birdie II, Dasher, Fiesta, Palmer, Pennant.

Best Nationally

Gator, Palmer, Prelude, Tara, Repell, Citation II, Manhattan, Blazer, Premier, All Star.

Look at the above lists. Note that none of those in the "Best Nationally" make it in both the "Pythium resistance" and "Drought recovery" lists. This is typical. Irregardless of which single cultivar you chose it is not going to be superior in all desirable characteristics. Therefore, seed fairways and tees with mixtures of seed or reseed with a different cultivar each year. Do this by picking one cultivar each year that is superior for YOUR situation.

I prefer this approach of reseeding each year with a different superior cultivar. Why?

What guarantee do you have that the MIXTURE you buy is certified seed of the cultivars you desire? I've been told more than once that more seed will be sold under the labels of the "Best Nationally Cultivars" than was harvested of these same cultivars.

And now you have been told. Be careful! Buy certified, and do the mixing yourself.

My own lists, as sent to clients or included in reports, are based upon lists such as Dr. John Pair and the client's particular situation. As most clients are wanting cultivars for fairway use the ability to take a low height of cut is important. However, it is difficult information to obtain as most university experiment station tests are run at one and one-half inches or higher. Cold tolerance is very important in some of the more northern states and disease resistance is very important in Eastern states. Therefore, what is best nationally is not necessarily best for YOUR situation.

## OTHER NEWSLETTERS OF MERIT

A couple of company newsletters/magazines worth reading are Lesco News and Irrigation Today. Lesco News has been consistently interesting. Irrigation Today struck me with this Fall Issue as having made a decided move to be taken seriously. Irrigation Today is Rainbird's magazine.

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## FUNDS TIGHT

Funds are so tight in the Collins County, TX office of the Extension Service that they will not even mail out soil sample boxes. Extension Service Funds in all states have been tightened greatly over the last ten years. The only increases in budget have been in salaries.

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## PUTTING GREEN CONSTRUCTION AND MIXES: a series of letters and phone calls.

Over the last few years I have had numerous conversations concerning greens construction and mixes. Usually these are with individuals like the one below who know that the USGA approach is the best way but, have decided they can't afford it.

The letters, phone call and notes given here and continued on in the future issues were made to an East Coast superintendent. He like many I have met in that area are scared of greens being too droughty.

It is sometimes hard to fathom why the East Coast superintendents worry about greens being too droughty when they live where it rains all the time. While the superintendents in the Southwest worry about having enough drainage and they live where it never rains. Best we save that bit of philosophize for another issue and move on with this superintendent's concerns.

February, 1987; Dear Joe,

I do not remember your greens very well as I last visited your course prior to 1978. But, will assume that if your greens are "small, wet, poorly contoured clay" they do indeed need rebuilding.

Before discussing your proposals I will give you my modification of the USGA approach. It is an attempt to accomplish what the USGA green gives you (success) without spending all the dollars necessary for a USGA green.



First, level the old green with a small bulldozer. Thus creating the base for the new and larger green. As with a USGA green grade to match finish grade for green minus 14 to 18 inches for topsoil mix. Now if the base drains mostly to the front, and I suggest it should, then trench in a "smile" drain around the front edge. Run a line from this "smile" to a suitable outlet. A solid pipe is preferred from end of drain line to outlet.

If you are going to get fancy and have slopes to the sides or back, then a ring of tile around the green will be necessary. Drain to outlets from each low spot in this ring.

The above "smile" drain must be in a trench below the soil base. The deeper the better, but at least get the top of the drain line below soil level. You can get away without the drain lines on 10 foot centers under the whole base. But, I would not recommend doing away with the 3 to 4 inch gravel layer. This needs to be a very UNIFORMLY ROUND PEA SIZE gravel. It will be expensive. Now for the "soil mix". You need to mount an effort to find an acceptable sand. An acceptable sand should have the following properties: It should be a silica sand, neither perfectly round nor sharp. Less than 15 % should stay on a 35 mesh sieve, and less than 8 % should go thru a 140 mesh sieve. Or, put in other terms few particles should be larger than 2 mm in size and few smaller than 0.125 mm.

The coarser particles are more easily tolerated in a "mix" than when applying light topdressings. Finer particles than 0.125 mm are not desirable. They tend to rapidly lower the rate at which air and water enter the mix as their percent in the sand increases.

An ideal sand when compacted should allow water thru it at the rate of 10 to 25 inches per hour. A sand that falls near the low end of this range will more dramatically slow down with normal root activity. Yes, roots plug holes and slow percolation. A sand at the upper end (20 to 25 inches/hr.) would tend to result in undesirable layers if used in a light infrequent topdressing program.

Sands in this upper range will tend to be very round and uniform in size. Be careful with round uniform size sands, they are excellent for drainage but if present in excessive amounts will result in a "soil" that is too droughty.

Where do you obtain a set of sieves for sand analysis? My Nasco catalog has a set for \$183. "Seamless brass frame, brass cloth, 5" dia., with top cover and bottom pan, With 10, 20, 40, 80, and 100 mesh. order number C8978N" Nasco, Fort Atkinson, WI 53538, orders can be called in toll free (1-800 558-9595).

For your situation I recommend using Milorganite for the organic

matter and the nutrients needed for establishment in new sand green or tee soil mixes. That's correct no organic matter other than Milorganite.

The Milorganite also serves as the starter fertilizer. It must be amended with a potassium source. Potassium sulfate (sulfate of potash) is preferred at 4 to 8 pounds per thousand square feet.

Worse yet for a 6 year exUSGA agronomist - no off site mixing. This is a cost saving move only. I recommend 100 pounds of Milorganite per thousand square feet be rototilled into the surface 2 to 4 inches before seeding for spring or late summer seedings. Another 100 pounds should be applied in light doses over the next 6 to 12 months. For establishment in October or November in your area the full 200 pounds may be incorporated.

One needs to be careful and obtain uniform incorporation. Off site mixing is best for this. However, off site mixing is not as critically needed with Milorganite as it is with peat moss. Milorganite is a lot easier to rototill into sand than peat is.

Now I have said all the above and made little comment on your three proposed methods. First, the need for water is no greater on a properly maintained "sand" base green than your old clay greens. The deeper root system on the sand makes much more water available to the plant. Beware of nematodes though, they can be a problem in sand mixes and will ruin the root system if they get out of hand.

The gravel layer conserves moisture in the sand. It prevents, yes, prevents water from being pulled from the sand. Put a soaking wet sponge on a layer of marbles (pea gravel). Put another soaking wet sponge on a large blotting paper or cotton towel (clay base) and leave it for an hour. Check and see which lost most of its excess moisture at the end of 30 minutes.

Your Proposal #1 - "four inches of mix over base with 12 inch deep tile lines." First, if taking this approach do not worry about "blending" the 80-20 mix with the clay base. This proposal will provide you with working greens. Having the tile lines dug 18 inches would help it drain faster and for this approach they best be on 10 foot centers.

I would suggest exaggerating the slope to drain lines when grading the base. Tile lines at 10 to 20 foot intervals under the whole base are more needed with this proposal than in my procedure. I would be sure "the top of the tile lines are at least 8 inches deep" into the base, preferably 18. You could use my sand - Milorganite mix for the four inches of mix. You need at least 3 inches of round, uniform pea gravel around the tile. Remember you need an outlet down hill from this and away from the playing area.

(to be continued in the next issue)