### **Dr. Daniel's Purr-wick System**

This month's newsletter features two articles concerning turf renovation using Dr. Daniels Purr-wick System.

The first article, by Glenn Shields, discusses the field renovation taking place at D.C. Stadium while the second article by Bill Black at Fountainhead Country Club in Hagerstown, Maryland discusses living with the system. Bill wrote a good article on his reconstruction of this No. 1 tee for the U.S.G.A. Greens Section Record, May 1974.

## D.C. Stadium

#### by Glenn Shields

As you may have read recently in the newspapers, there is much happening at the Robert Kennedy Memorial Stadium in Washington, D.C. I heard that a major reconstruction of the playing field was underway and took an afternoon in March to visit and look around. I was guided on this tour by Mr. Lawrence J. McKiernan, who is the Prescription Athletic Turf, Inc. the company which is reconstructing the field. Mr. McKiernan is superintendent in charge of installation and provided this explanation of how this new system will work.

Basically a means is being provided to totally control the amount of water held by the soil of the playing field and to draw off or add water to the soil beneath the turf as needed. The playing surface, an area 180' by 360' was excavated to a depth of 16". A vinyl plastic sheet was then spread over this area which will prevent the movement of water between the soil below and the special soil mix of the 16" depth playing surface. Agriflow drainage pipe was installed on top of the plastic sheet in a grid fashion of 2", 4" and 6" pipe which leads to a pumping station. Mason washed sand was then spread to a depth of 9" over the plastic sheet and drain pipes. Heating cables were then installed on one foot centers to prevent the playing field from freezing. These heat cables provide 5 watts of heat per square foot. Five additional inches of sand was placed on the heating cables to give a total depth of 15 inches of sand; graded to provide only a two inch crown. A 1/2xinch mixture of calcite clay, vermiculite and peat was placed on top of the sand. After raking in this mixture, the field was sodded to Warrens A-34 bluegrass.

The heart of the system lies in the pumping station. Through this elaborate network of pipes, valves and pumps, water may be pumped out of the field; or by reversing the flow, water may be forced back through the drainage pipes for irrigation. A glass sight tube allows visual inspection of the actual water level in the playing field. With this system there should be few problems with a soggy playing surface of infiltration of water through the soil profile.

This concept for athletic field construction was developed by Dr. Daniel at Purdue University. It reminds me of

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the USGA specifications for gold course greens, except for the modification of being able to pump water back into the system by way of the drainage pipes. This is a welcome trend away from artificial turf and should be interesting to watch in the years to come.

# A Season with a Purr-wick Tee

#### by C. William Black, Certified Golf Course Superintendent Fountain Head Country Club, Hagerstown, Maryland

There is quite a difference between maintaining a PURR-wick tee than a synthetic grass tee. Synthetic grass requires no mowing, only occasional sweeping, hosing and removal of broken tees. However, synthetic grass just looks out of place on a golf course and the golfers at Fountain Head Country Club complained about their feet slipping and difficulties inserting their tees into the surface. PURRwick is more difficult to maintain than synthetic grass, but an entirely different management program is not necessary in order to maintain PURR-wick versus other natural grass surfaces. Insfact our tee is maintained very nearly the same as our other natural grass tees, maybe even with a little less maintenance.

After having difficulties maintaining an acceptable No. 1 teeing area, the Green Committee decided to experiment with a carpet of synthetic grass. This tee was installed following the manufacturer's instructions, using a wooden box frame, underlaid with crushed stone, fiber pad with sand impregnated into the pad. The carpet was than thightly stretched by a local carpet installer and nailed to the box frame. The synthetic grass held up very well, however, after four years, numerous complaints and an area of worn out sod adjacent to the carpet, we decided that synthetic grass was not for us.

The location of this tee was confined to a small, sloping area. We decided to construct a tee inside a railroad tie enclosure, thereby eliminating step banks and continual



hand trimming. After consulting with Holman Griffin and Dr. Bill Daniel, a PURR-wick tee was tried.

This tee was completed in October, 1973. I have found after a Summer of use that I am still very much impressed with the performance of this PURR-wick system.

During construction, 50 pounds of sewage sludge and 10 pounds of 30-3-10 were incorporated into the top two inches of a sand and peat mixture, before sodding. We now fertilize this tee the same as we do our others, applying 4 to 5 pounds of N/M ft.2. The tee is mowed at a height of just under 1", two to three times per week, with a walking mower.

A few days after the installation of the sod, we aerified the surface and top dressed heavily with the same sand used to construct the tee. After the sand had disappeared, another top dressing was applied. The tee was top dressed a total of four times during the season and one time this Spring.

Being constructed almost entirely of sand, it was surprising to us that we experienced spots that would remain rather dry and have difficulties getting water to penetrate, while the balance of the tee would be moist.

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