

# ATTACK ON BURNOUT

Whitemarsh has begun a three-year \$30,000 program to kill off the unpredictable *Poa annua* and establish a dependable turfgrass. In charge of the program is young Bob Hunter, greens supervisor

By PHIL LANCE

The dark day threatened rain, but bright smiles dotted the faces of Bob Hunter, Paul Warren and Jack Tuthill.

Whitemarsh Valley CC was almost serene in contrast to what it was the week the \$150,000 IVB Philadelphia Golf Classic came up. Members were playing out on the course, workers were busy putting the finishing touches on the 6,670-yard layout and Hunter, Warren and Tuthill were smiling.

Quite a contrast to last August when the trio would have crawled into a hole if they could have found one large enough on the Chestnut Hill course.

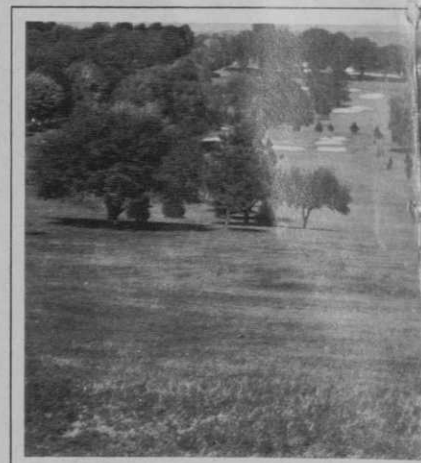
High humidity and high temperatures had burned out Whitemarsh's soya *Poa annua* then and Hunter, the course's greens supervisor, Warren as the tournament director and Tuthill as the Professional Golfers' Assn. tournament director, were sick.

However, it is different this year. Whitemarsh fairways are lush, its greens green and its rough rough.

"It is in the best condition since the first class back in 1963," Warren says happily. "That young

man (Hunter) has done a great job and the course will get better."

Hunter, in his second year at the club, wouldn't take all the credit. "The weather plus the fact that the tournament is being played five weeks earlier in the season are the big factors," says Hunter. "Why? It ended up so bad last year that we ended up scalping the fairways. However, it did do one thing. It got us to thinking and doing something about it. The result is that the club has initiated a



three-year \$30,000 tri-calcium arsenate program which eventually will kill all of the old fairway grass and build up arsenate in the turf.

"At the outset we didn't decide what kind of grass we were going to plant," says Hunter with a smile, "but we started working on it. And naturally we know that it has to take time in order to derive the benefits of the program, but we'll never get a burnout like last year. Anyhow, we did decide on Fylking Kentucky bluegrass because it is easier to maintain, needs less water and is more resistant to disease." Hunter and his staff then began following the specifications laid down by Tuthill and his assistants.

"We have lowered the height of



Frank Fisher of Fisher & Son, Inc., Bob Hunter, the greens supervisor, and Don Klein, representative for Rhodia, Inc. (left to right), check the greens periodically during the program to remove *Poa annua* from the Whitemarsh course.



The burnout problem under control, the Whitmarsh Valley grounds looked like this during the IVB Philadelphia Golf Classic.

the cut on the fairways from one inch to five-eighths of an inch while the rough, which we normally keep at 2½ to three inches, has been allowed to grow to four inches. If we get any amount of precipitation, it could go to six inches.

"In essence," Hunter concludes, "what we have done is to make it easier for the player on the fairway and penalize further the player in the rough."

Superintendents of golf courses throughout the nation are tired of *Poa annua* and now to most it is the number one turf enemy. They are tired because *Poa annua* is fickle. It fails when needed most—when stress conditions exist. Whether ice smothering in winter or disease wilting in summer, the *Poa annua* can go within hours. Thus, the uncertainty—when and how much loss—creates a lot of apprehension.

Most superintendents agree that *Poa annua* should be replaced with desirable grasses. Disagreement, however, centers on the method. Earlier, many superintendents temporarily and instantly removed existing *Poa annua* by the "scorched earth" method, for example, with sodium arsenite. When the rapid method is employed, some thin open areas exist but the course still can be played.

Other superintendents more

slowly reduced and removed *Poa annua* in one calendar year with either powder or granular tri-calcium arsenate. As *Poa annua* fails, the bare areas became obvious, but time is required before reseeding permits desirable grasses to spread, which may prove unsightly to members.

Turf experts such as Dr. Bill Daniel of Purdue, Charlie Wilson of Milwaukee Sewerage Commission and Jim Holmes, formerly of the United States Golf Assn. Green Section, believe in a slow, graceful program that gradually eliminates *Poa annua*. Develop a model, start a program on one or more fairways, then expand.

### Whitmarsh's program

- Low areas were drained. Drainage was improved with trenching and vertical slitting. Hunter installed narrow slit trenches filled with pea gravel and capped to overflow with sand. Low pockets and wet areas had to be drained; wet soils increase arsenic toxicity and favor *Poa annua*.

- Soil acidity was corrected as needed. This was done by applying lime to greens or fairways under a pH of six. Arsenicals are less available at low pH or at pH above 7.8. Excess calcium carbonate tends to reduce water soluble phase of arsenate. Allow two to four weeks between lime and 48 per cent tricalcium arsenate granular applications. Most midwestern soils do not need lime. Some Eastern soils do. Therefore, soil tests are essential.

- No phosphorus or as little as possible was used until *Poa annua* was under control and very little phosphorus was used after toxicity was achieved. Phosphorus will replace the arsenical and *Poa annua* will again thrive. (Less soluble phosphorus in organic sludge does not override arsenic toxicity.) Use ample nitrogen and potassium, for example, a 2-0-1 ratio.

- Deep vertical grooving diluted, reduced and removed thatch and

made room for the new growth.

- Overseeding was attempted repeatedly until uniform survival was secured. Rates ranged from five to 20 pounds of seed per acre. Seed any time, treat at light rates of arsenic any time. Seedlings will usually survive if rates are not more than eight pounds of 48 per cent tricalcium arsenate granular per 1,000 square feet.

- Whitmarsh varied application rates according to existing conditions. From four to 12 pounds of formulation (of 48 per cent tricalcium arsenate granular) per 1,000 square feet was applied twice a year, after the frost was out of the ground and then again between August 15 and November 15. Each application depended upon the percentage of *Poa annua*, available phosphate, soil type and pH of the soil.

- Adequate arsenic toxicity to *Poa annua* it was found depends upon the soil texture, available phosphate and soil pH and varies from 16 pounds to 30 pounds of formulation per 1,000 square feet. Light sandy soils low in phosphorus with little "buffer capacity" require less arsenical to reach a toxic state.

- Whitmarsh maintained toxicity with two to four pounds per 1,000 square feet applied annually either in spring or fall.

- One-eighth to one-fourth of P<sub>2</sub>O<sub>5</sub> per 1,000 square feet or five to 10 pounds per acre may be used to improve *Poa annua* for emergency cover if needed. This is a check valve if *Poa annua* is dying too rapidly. (Do not use regular granular phosphates because of residual effects in the soil.)

- *Poa annua* sensitivity to arsenic is favored by short days, cloudy days with low-light intensity and cool weather. Target applications to provide arsenic toxicity for early fall and early spring benefits. □

Phil Lance is a free-lance writer and former editor with experience in merchandising, management and industrial relations.