

A few weeks ago, golfers in the \$150,000 Philadelphia golf classic found the Whitemarsh Valley CC course in much better condition than they did a couple years ago. The reason: Fyking Kentucky bluegrass has all but replaced poa annua.



Whitemarsh Gives Poa Heave-Hoa

By PHIL LANCE
Philadelphia, Pa.

IT WAS A DARK DAY with a threat of rain in the air, but those were bright smiles dotting the faces of Bob Hunter, Paul Warren and Jack Tuthill.

Whitemarsh Valley CC was almost serene in contrast to what it was to be the week when the \$150,000 IVB Philadelphia Golf Classic came up.

Members were 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 August of 1968 when the trio would have crawled into a hole if they could have found one large enough on the Chestnut Hill, Pa., course.

High humidity and high temperatures had burned out WVCC's soya Poa annua then and Hunter, as the course greens supervisor, Warren as the tournament director, and Tuthill as the PGA tournament direc-

tor, were sick.

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

"It is in the best condition since the first grass back in 1963," Warren said happily. "That young man (Hunter) has done a great job, and the course is going to get better."

Hunter, in his third year at the club, wouldn't take all of the credit. "The weather plus the fact that the tournament is being played earlier in the season are the big factors," said Hunter.

"Why? It ended up so bad in 1968 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 WVCC initiated a three-year, \$30,000 tri-calcium arsenate program which eventually will kill all of the old fairway grass and build up the arsenate in the turf.

"It will be awhile before we derive the benefits of the program, but we'll never get a burn-out like

last year. Our new grass is Fyking."

Hunter and his staff have been following the specifications laid down by Tuthill and his assistants for this year's extravaganza.

"We have lowered the height of the cut on the fairways from 1 inch to $\frac{3}{8}$ of an inch, while the rough, which we normally keep at 2½ to 3 inches, has been allowed to grow to 4 inches. If we get any amount of precipitation, it could go to 6 inches.

"In essence," Hunter concluded, "what we have done is 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, Poa annua is No. 1 turf enemy! They are tired because Poa annua is fickle. It fails when needed most—when stress conditions exist. Superintendents are sitting on a "keg of dynamite"! Whether ice smothering in winter or disease wilting in summer, the Poa annua can go within hours. The uncertainty of when and how much loss creates anxiety.

Most superintendents agree that Poa annua should be replaced with desirable grasses. There is much disagreement as to the method. Earlier many superintendents temporarily have instantly removed existing Poa annua by the "scorched earth" method. For example, with sodium arsenite.

Other superintendents have 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 are more obvious and time is required before reseeding permits desirable grasses to spread. However, when the clubhouse is remodeled, portions are closed and inoperative for months.



Bob Hunter, center, at Whitemarsh shows the results of the turf program recommended to him by representatives of Chipco Turf Products. Phosphorous was eliminated from the fertilizer program, and tri-calcium arsenate was applied to build up a toxicity to poa annua.



The members expect and accept an unsightly mess until improvement is accomplished.

When the rapid method is employed, some thin open areas exist but are under play—which is still maximum service to the golfer.

Most turf experts such as Dr. Bill Daniel of Purdue, Charlie Wilson of Milwaukee Sewerage Commission and Jim Holmes, formerly of the USGA 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.

Here is the program followed by Whitmarsh Valley Country Club:

1. *Drain low areas.* Improve drainage with trenching and vertical slitting. Many superintendents have installed narrow slit trenches filled with pea gravel and capped to overflow with sand. All low pockets and wet areas must be drained. Wet soils increase arsenic toxicity and favor *Poa annua*.

2. *Correct soil acidity if needed:* Apply lime to greens or fairways if under a pH of 6. 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% tri-calcium arsenate granular applications. Most midwest soils do not need lime. Some eastern soils do. Get soil tests before using.

3. *Eliminate phosphorus in fertilizer program:* Use no phosphorus or as little as possible until *Poa annua* is under control. Use very little phosphorus after toxicity is achieved. Phosphorus will replace the arsenical and *Poa annua* will again thrive. (Less soluble phosphorus in organic sludge does not override arsenic toxicity). Use am-

ple nitrogen and potassium, for example, a 2-0-1 ratio.

4. *Aerate:* Dilute, reduce and remove thatch by deep vertical grooving. Aerify to make room for new growth. Bring up some soil, get seed against soil. Do not attempt to overseed onto a heavy thatch.

5. *Overseed often:* Any time at light rates. Repeated attempts to start new seedlings should be made until uniform survival is secured. Seed at rates from 5 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 8 pounds of 48% tri-calcium arsenate granular per 1,000 square feet.

6. *Vary application rates according to existing conditions:* Apply from 4 to 12 pounds of formulation (of 48% tri-calcium arsenate granular) per 1,000 square feet, twice a year in the spring and fall. Each application depends upon the percentage of *Poa annua*, available phosphate, soil type and pH of the soil. Apply after the frost is out of the ground and then again between Aug. 15 and Nov. 15. It is not wise to apply on frozen ground.

7. *Achieve *Poa annua* toxicity:* Adequate arsenic toxicity to *Poa annua* depends upon the soil texture, available phosphate and soil pH. This 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 toxicity.

8. *Maintain toxicity to *Poa annua*:* Toxicity may be maintained with 2 to 4 pounds per 1,000 square feet applied annually either in spring or fall.

9. *Emergency use of liquid fertilizer:* $\frac{1}{8}$ to $\frac{1}{4}$ pound of P_2O_5 per 1,000 square feet or 5 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 effect in the soil.)

10. *Arsenic toxicity:* *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.



MODEL 55110T
With special orchard gun will spray up to 50 feet vertically. Up to 600 psi . . . 7 gallons per minute capacity.



MODEL 21125B
350 psi . . . sprays up to 25 feet vertically.

DESIGNED FOR PARKS, SHADE TREES, NURSERYMEN, GOLF COURSES, SUBURBAN HOMES AND INDUSTRY. THERE'S A DOBBINS POWER SPRAYER FOR EVERY JOB. DOBBINS IS THE COMPLETE LINE IN POWER SPRAYERS. CORROSION RESISTANT TANKS IN 7, 10, 20, 30, 55 AND 110 GALLON SIZES . . . A SPRAYER TO FIT ANY NEED. BOOM ATTACHMENT AVAILABLE.

Dealer inquiries invited. Write to Department WT.

DOBBINS POWER SPRAYER

FIMCO, inc.

1st & Court Streets — Phone 712-258-0171 — Sioux City, Iowa 51101