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- **NUTRO CRYSTALS**—high analysis, completely soluble. Can be combined with fungicides for application to greens.
- **NUTRO PELLETS with DIELDRIN**—kills grubs and lawn insects while feeding your turf.



OLD TIMERS

CARL BRETZLAFF

Superintendent
Meridian Hills C.C.
Indianapolis, Ind.

"Aqua-GRO has paid off. We don't have near as much worry about the greens drying out—I mean the water and the time it takes to syringe them. You don't have to syringe as often, and it doesn't take as much time.

"I started using Aqua-GRO three years ago because of the heavy clay soil. You'd get a rain and the water wouldn't penetrate. Especially on the #18, where there is just a little bit of a sway. Aqua-GRO seemed to open it up . . . the water is gone . . . it's wonderful on wet areas."



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set up this large a project.

A new target date for official opening is set for no earlier than Nov. 1, or no later than Dec. 1, 1963.

Expect Many Visitors

Economically, the announcement means that many thousands of new visitors and golf pros will visit the Palm Beaches annually to play the courses. There are 5,000 PGA members. More than 125,000 pieces of mail from the PGA will emanate annually from Palm Beach Gardens. Thirty staff members, and approximately 100 associates will be employed year-around to administer the total operation of the PGA.

Home sites are planned, surrounding the courses, and it is expected that a large number of the home sales will go to the pros and golf enthusiasts. Royal American Industries is in charge of these Sales.

The club and courses will be operated by the PGA for professional golf members. Membership will be private. Residents of Palm Beach Gardens will be permitted to play the courses on a daily fee basis.

Virginia Active in New Course Development

By HARRY C. ECKHOFF
Director, Eastern Region
National Golf Foundation

With the opening of ten new golf courses and additions in the last year, Virginia has a total of 150 courses of which 137 are regulation length and 13 are Par-3 layouts. A further study of the Old Dominion's golfing setup reveals that there are 84 9-hole facilities and 66 18-hole operations in the following categories: 102 private clubs; 41 semi-private and 7 municipal.

Among the new courses opened in Virginia in recent months were the following 9-hole layouts: Hanover CC in Ashland Nottoway River CC, Blackstone; Alleghany CC, Covington; Natural Bridge GC, Natural Bridge; Gordon Trent CC, Stuart; and Carpers Valley in Winchester.

River Bend CC at Great Falls, Va., and Aero Pines GC, a Navy facility at Oceana, each have opened a second nine for play. Bow Creek CC, 18 holes — a



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golf-real estate development at Norfolk also recently came into play. International Town and CC, Falls Church, Va., opened a second nine at its country facility near Chantilly, giving it 27 holes — 9 at its town club in Falls Church and 18 at its country layout.

More Under Construction

The following 9-hole courses are under construction in Virginia: Botetourt CC, Fincastle; Gay Hills CC, Galax; Bushfield CC at Mount Holley; and South Hill CC in South Hill. Tuscarora CC in Danville has a second nine under construction. Hot Springs and Colonial Williamsburg each has extensive golf expansion programs underway. Colonial Williamsburg is adding 18 holes to its existing 9 and has plans for a 9-hole, par 60 layout. On completion of the Lower Cascades course, Hot Springs will have a total of 54 holes in play at its popular golfing resort. Reston, a planned community of 75,000 people in Fairfax County, Va., is constructing an 18-hole golf course. At least two 18-hole facilities are planned for this development.

Three new 9-hole par-3 layouts opened for play in Virginia in 1962. They are

Par Three CC of the South at Richmond; Par Three CC of the South at Petersburg; and Brookside CC in Roanoke. There are now 13 Par-3 courses in operation in Virginia. Sterling Park, a real estate development near Falls Church, Va. (Dulles International Airport area), has an 18-hole Par-3 course under construction.

One for 24,446 Persons

According to National Golf Foundation statistics, Virginia now has one golf course for every 26,446 persons. Total golfing facilities in the nation now run over 7,000 courses. The national average is one course for each 25,376 persons.

Virginia has shown a consistent growth in new golf facilities since 1960. Ten new courses were opened in 1960 (six 9-hole layouts and four eighteens); 15 new courses in 1961 (twelve 9-hole facilities and three eighteens); in 1962 Virginia with ten new courses was among the first ten states in the nation with new golf facilities opened for play.

Classified Ads — P 141

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Michigan Club Claims Longest Lighted Hole

A 420-yard, par-4 golf hole at Brandywine CC, Niles, Mich. is now staking claim to "world's longest illuminated golf hole." Due to the success of the installation, Brandywine officials feel that their entire course, or most any other regulation layout, could be lighted for night play.

To assess the feasibility of the new idea of night golf, Brandywine decided to "test light" one hole. The second hole was selected because it posed the greatest engineering challenge due to its length, rolling terrain, stream, sand traps, extensive rough and many trees.

Bill Orr, owner-developer of the new par-72, 6,700-yard course, says, "Players testing the second hole at night have no great difficulty following or locating any ball. They like the idea of night golf immensely and would look forward to playing a full nine or 18 at night — the only weekday time usually available for recreation."

Most of the members live in Orr's adjoining 350-lot Gold Medallion Gateway Home community where, included with the price of a home, is a reduced membership fee for the country club. Orr said that if the present sales rate for the homes continues, he will answer members' enthusiasm for night golf by

lighting the entire front nine immediately and then following with illumination for the back side late this summer.

Illuminating the 420-yard hole are 19 General Electric 1,500-watt incandescent floodlights. They are mounted on 40-foot poles located behind the tee and green and alongside the fairway. The resultant light levels are 10 footcandles on the tee and green and five footcandles on the fairway. Most main downtown streets boast less than one footcandle.

Since the 380-yard third hole borders the second, Orr decided to utilize the poles on the right side of number two for mounting additional floodlights which could be aimed at the third fairway. Other poles and luminaires behind the third's tee and green and on the opposite side of the fairway complete the lighting of this hole, thereby actually giving Brandywine two fully-lighted holes.

Lighting engineers report that while special engineering layouts and consultation is necessary, the basic principles for lighting long holes are the same as those applied in lighting Par-3 layouts.

Successful lighting, player enjoyment and good profits at these shorter courses have led to the new, but next logical step of considering illumination for the regulation-length course. This move is motivated by industry statistics which show that during the past five years the already-overcrowded game of golf has experienced a 30 percent increase in number of players. During the same period there's been only a 15 percent rise in number of facilities — probably due to the rising expense of purchasing additional land (if available) to build new layouts.

Up the Hills at Westwood

Rolling Course Calls for Rugged Cars



Golf car garage, located in a wing of the clubhouse, is expandable. It now houses 20 vehicles.



View of the clubhouse at Westwood, one of Ohio's oldest clubs. It is located west of Cleveland, a few miles from Lake Erie.



Russ Davidson, about to start a round, has been at Westwood for 34 years, and is starting his 30th year as head pro. He is rated one of the best merchandisers in the golf business.

"We are absolutely pleased with our Cushman Golfsters," says Russ Davidson, pro at Westwood CC in Rocky River, near Cleveland, O. Davidson adds that the membership also is happy with the way the cars perform.

Westwood's use of cars has increased steadily since 1956 when the club began with eight vehicles. The next year, it added four more and then it kept adding units until the present 20 were accounted for. Fifteen of the cars are electric-powered and the remaining five are gas-powered.

Go Out Twice A Day

Regarding use of the vehicles, Davidson says that each unit is rented an average of about two times each day during the regular season. Many people like the get-up-and-go and power of the gas-powered Golfster, he adds. This is particularly important at Westwood since it is a rolling course with various steep inclines.

Westwood has an extremely attractive garage in which to store all its cars. If more are added, the garage won't have to be greatly altered to accommodate them.

Born in Scotland, Russ Davidson served his apprenticeship in that country. Then he worked for a few years as a private golf instructor. In 1929, he came to the U. S. and Westwood. He became head pro at Westwood in 1933, and has been there ever since.



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Sewer Rodding Takes Debris Out of Lines at Oak Park Club

By WES UPDEGRAF

Supt., Oak Park (Ill.) CC

When you're responsible for maintaining a golf course, clogged sewers are not just a temporary nuisance, but a serious problem. The longer you let them go, the worse they get. Unfortunately, however, most of us are not sewer experts and when we have sewer problems, we don't know how to take care of them. And, so, we tend to put them off until tomorrow or next week, and eventually wind up replacing several hundred feet of sewer line.



Updegraf

This is foolish, as we found at Oak Park. There are firms which specialize in contract sewer cleaning. They do an expert job for surprisingly little money.

Pockets Build Up

For several years, we had a drainage problem on the fairways between what are now our 6th and 7th holes. They were each rain and water pockets began to dot the course.

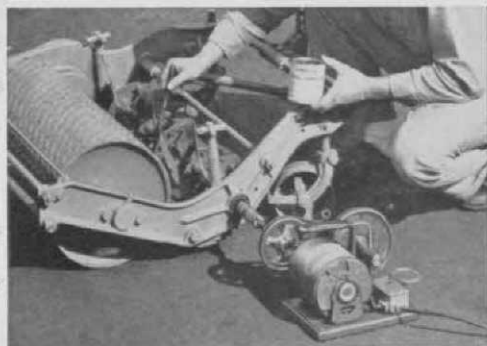
At first this flooding would shut down our course for only 24 hours or so. The members accepted this without too much grumbling. But when these shutdown periods stretched to two, three and four days after each rain, the complaints increased. Since we normally accommodate about 75 golfers on a typical week day, and about 150 on Saturday and Sundays, we had to do something.

Grass Loses Color

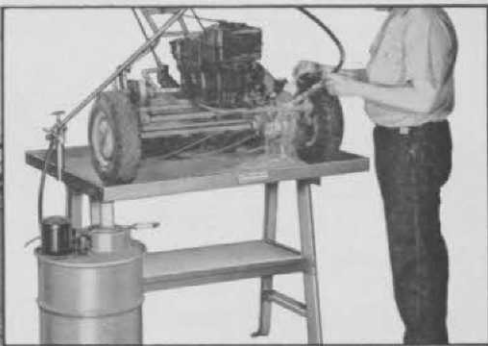
In addition, our grass was becoming discolored because of the excess water. We knew we were faced with sod spoilage if the water pools were allowed to stand for any length of time.

At first we tried to rod the sewer lines manually, but they were so packed with mud and roots that we couldn't pene-

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Dept. G-5 , Plymouth, Ohio

trate them. More powerful equipment was needed. We called on National Power Rodding Corp., a nationally-known sewer-cleaning firm which has its headquarters in Chicago.

This firm made an inspection of our sewer system and found that the lines which were causing the trouble included roughly 2,500 feet of 6- to 12-inch concrete pipe running from the fairway to an outfall in the Des Plaines River. We contracted with National Power to handle the work and it moved its equipment in a few days later.

Sewers up to 10 inches in diameter were rodded and brushed by huge rodding machines. Huge masses of tree roots and muck were removed.

Line Completely Plugged

The biggest problem, however, was the 12 inch pipe. In one 522-foot stretch, the tree roots were so thick that they had completely plugged the line. In another 505-foot section near the outfall. Large accumulations of rock, bricks and roots proved to be too much for the rodding machine to handle. Bucket machines were brought in to remove this material.

These machines, powered by 25 horsepower engines, were set in place at ad-

acent manholes. A specially-designed bucket was lowered into one manhole and drawn through the clogged line toward another. On the forward pass, the jaws of the bucket opened to scoop up the debris in the line. On the pullback, the jaws closed, carrying the debris back out of the line. With a combination of trained crews and powerful equipment, the entire job was completed in four days.

Opening up our sewers immediately improved the drainage in the fairways and water saturation no longer causes long shutdowns. In addition, the sewer cleaning netted us some unexpected gains.

Blueprint Supplied

National Power supplied us with a blueprint of the sewer lines which they cleaned, pointing out defective or potentially defective areas. As a result, we were able to plan our preventive maintenance work in advance to forestall potentially expensive emergencies.

For example, the cleaning had revealed that one section of sewer line had a reverse pitch. Water was trapped in a sort of valley, standing about a foot and a half deep in one manhole. This allowed silt to settle in the bottom of the line at that point and block it.

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At another point, the contractor located a manhole buried eight inches under a concrete roadway. To add to this, they found that two lengths of 10-inch pipe had been added to 12-inch pipe at the out-fall in order to extend it. The smaller pipe acted as a bottleneck, constricting the sewage flow and catching debris. These two lengths were removed by the contractor, and we have since replaced them with 12-inch pipe.

Wide Open Joints

Many courses, like ours, are several decades old and are increasingly plagued with drainage problems. For instance, in the old days drainage tile was often laid with open joints. This supposedly allowed for additional soil drainage. The unfortunate result was that open joints permitted roots, sand and silt to enter, followed inevitably by a blockage of the pipe. Periodic power rodding of these lines is necessary to keep them open and eliminate backup.

Finally, periodic cleaning can save a golf club money by extending the life of its sewers. With present replacement costs for new sewers running up to \$8 a foot, it makes sense to pay a sixteenth of that amount to keep the old sewers working at full capacity. This is what we have done at Oak Park. It has paid off in a better-looking course, happier players, and reduced maintenance costs.

Jones Gets Hagen Award

Presentation of the 1962 Walter Hagen Award to Bob Jones was made at the Masters tournament. The presentation was made by Dr. S. Leonard Simpson, chairman of S. Simpson Ltd., donor-sponsor of the trophy. The award is made to persons considered to have done the most for Anglo-American golf. The first award, fittingly enough, went to Hagen. Jones' Grand Slam came in 1930, the year he retired from competitive golf at the age of 28. In all, he won 13 major championships between 1923 and 1930. He was a founder of the Masters, which was first played in 1934.

Shackamaxon G & CC, Scotch Plains, N. J., which is making a "comeback," was host to N.Y. metropolitan golf writers in April as a forerunner to creating new interest in the club. Owner Philip J. Levin, who recently hired Jimmy Thomson as pro, plans to spend \$250,000 in improving the clubhouse and course.