

*Club Managers or Pros . . .*

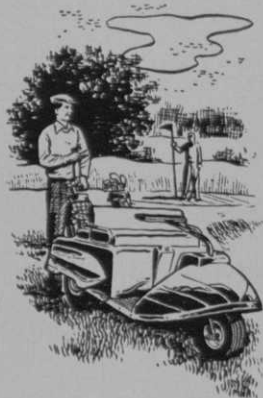
**now . . . you can profit  
from our experience!**

The most highly qualified team of design and production experts in the industry introduces a car designed with one thought in mind . . . years of profitable, dependable, trouble-free service to you! It's the beautiful, continental styled . . .



# *TeeBirdie*

The striking good looks of the TeeBirdie's rugged fiberglass body conceals a host of engineering innovations, unmatched by competitive cars at any price. With painstaking attention to detail, the Tri Powered Corporation after years of development have achieved a perfect balance of engineering and appearance and a 1 years guarantee is offered on parts and workmanship. Some of TeeBirdie's features are listed below:



● **2½ gallon fuel capacity**, enough for an entire day of golfing.

● **Muffled intake and exhaust**, plus completely insulated engine compartment, combine for **extreme quietness of operation**.

● **Automatic transmission** provides smooth powerful acceleration.

● **Power brakes** set and release with slight toe action, provide safe, positive stops.

● **Continental Styled Body** never needs paint, doesn't dent.

● **Wide Base 6½" rims** distribute weight, spare the turf.

● **Air Intake** is located on front of engine compartment, away from damaging dust . . . insures long engine life.

● **7 H.P. Kohler engine** provides margin of power for really rough going.

● **Spicer Automotive differential assembly**, the same provided on many of our finest autos.

● **4 interchangeable coil springs** plus new suspension geometry provide effortless ride, comparable to a fine automobile. And the TeeBirdie **won't tip over**, even under extreme conditions.

● **Automotive Ignition** . . . turn the key, it starts!

*If you are looking for rental profits,  
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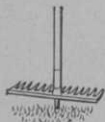


# Light-Weight MAINTENANCE EQUIPMENT

## SAND TRAP RAKE

Light weight, high carbon steel rake with spiked head and hollow aluminum handle. Fills a definite need on every golf course.

Spiked head is easily driven into the ground to eliminate a hazard.



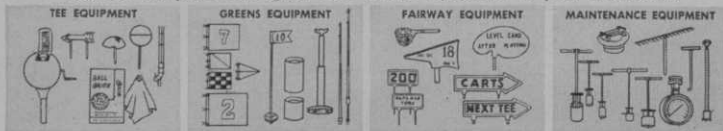
## SUPERLITE RAKE

SAVES TIME for top-dressing, removing litter and other maintaining chores.

**LIGHT WEIGHT** — Remarkably strong, magnesium rake comes in 2 ft., 3 ft. or 4 ft. widths. Has become standard equipment on many courses.



See our complete catalog of Golf Course Equipment at your distributor.



**STANDARD MANUFACTURING CO. CEDAR FALLS, IOWA**

## Few Changes in Oakland Hills Since Playing of 1951 Open

There have been few changes made in Oakland Hills CC, Birmingham, Mich., site of the 1961 Open, since the course was toughened up for the USGA event 10 years ago. Seven traps have been removed, five of them in the driving areas. There are now 113 traps on the course. Five greens have been modified to allow for additional pin placements. How far in the rough will be brought for the June 15-17 shooting remains to be decided by the USGA championship committee.

For the 1951 Open, Robert Trent Jones was brought in to give a shock treatment to the course which, prior to the event, was considered too soft a touch for the country's greatest golfers. Jones developed what he called "two target areas," one for the tee shot and the other for the green, for the tournament. This called for double accuracy on each of the par four and par five holes and didn't permit any serious mistakes. Ben Hogan, winner of the 1951 Open, expressed dislike for Oakland Hills even after he shot a final 67 and won the Championship. But upon reflection, in

later years, he agreed that it had been re-designed to bring out the best in an aspirant to the title.

This is Oakland Hills' fourth Open. Cyril Walker won the first in 1924 with a 297. Ralph Guldahl established what was a record score in the second one in 1937 with a 281 over the longest course in Open history, 7,037 yds. Hogan's winning total in 1951 was 287.

## Expert Advice from Women

*(Continued from page 40)*

ed several proposals which the greensmen said they would translate into action.

### The Feminine Wrist

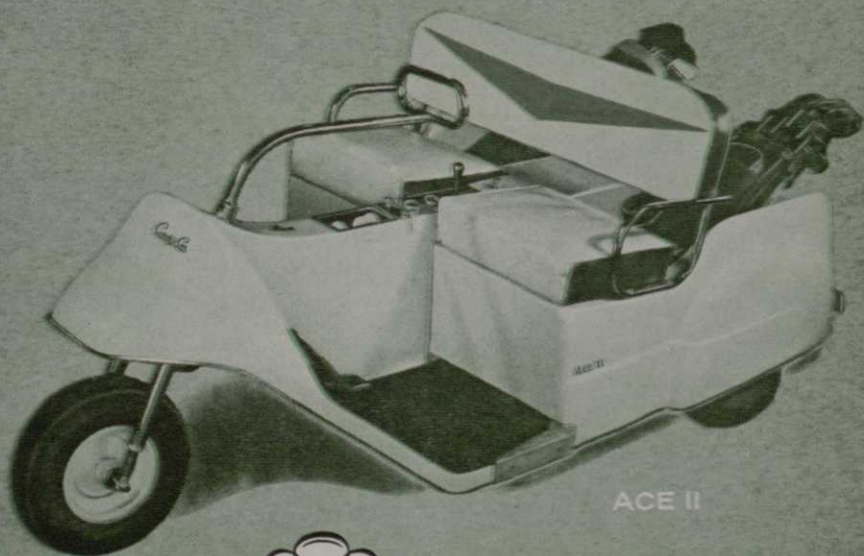
One thing the women's association officials concentrated on was the feminine wrist. Their wrists, the ladies said, are so much weaker than men's that some thought should be taken for thinning rough for women's tournaments.

For the same reason they besought the use of sand of reasonable texture in traps. Sperandio assured them that most clubs in the New England area used concrete No. 3 which comes as close to filling their requirements as any.

# "what is a WARRANTY?"

A warranty is not just a piece of paper or a promise spoken or written. To us of Caddy Car, it is a corporate philosophy built through 35 years of the parent company's engineering excellence, manufacturing skills, and the finest service record. Your Caddy Car is *yours* but we go with it — because we *keep* its PROMISED PERFORMANCE STANDARDS, your warranty, with a . . .

## Caddy Car\*



\*T.M. REG.



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PARiner II

AMERICA'S NEW STANDARD IN GOLF CARS

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WHOLLY OWNED SUBSIDIARIES OF **KYSOR** KYSOR HEATER CO., CADILLAC, MICHIGAN

Dick Wilson, Architect

O. J. Noer, Agronomist

Joe Lee, Associate

Shelley Mayfield, Public Relations

Bob Simmons, Construction

# DICK WILSON, INC.

## Golf Architects

1100 S. Federal Highway

Boynton Beach, Florida

Also introduced by the visiting feminine panelists were suggestions about the placing of stakes. Out of bounds stakes, they said, should be placed so that they can be seen from the tee. They also recommended that more attention be paid to placing red markers to define lateral hazards.

### What's A Pro Job Worth

(Continued from page 24)

ures on paper.

A case in my own section involved lining up a professional for a club whose officials estimated the man could earn at least \$15,000 a year. But when figures were put on paper they showed:

Pro salary	\$ 2400
Club storage and cleaning (300 sets at \$15)	4500
Bag cart rentals	720
Lessons	600
Miscellaneous income	450
Shop sales (\$21,000)	
Generous estimate of gross profit	6300

Estimated annual income \$14,970  
Expenses were estimated this way:

Wages to assistants	\$4,200
Insurance, taxes	750
Auto, postage, telephone	680
Supplies, tools, etc.	410
Caddies, entertainment, adver- tising, tournament expense	320
Shop equipment, furnishings, etc.	500

Estimated operating cost \$6,860

This gives an \$8,110 estimated net, about half of what the committee thought the job was worth. There was no salary figured in for the pro's wife who often helped in the shop. No thought was given to the money (cash or borrowed) the pro would have tied up in stock. Gross profit of 30 percent, used in estimating shop income, was plenty high as noted above; 25 percent would have been nearer the actual figure.

Undoubtedly the estimated income from the job was higher than a pro actually would realize even by putting on a good, strong Christmas gift sales campaign.

Buyers' Service ● P. 135  
Classified Ads ● P. 133

*You've read about them...*  
*Now see the*  
**FIRST TRUE CONTOUR  
AERATION UNITS!**

**NEW RYAN TRACAIRE**  
**TWO NEW RYAN RENOVAIRES**

*— now on display at all Ryan Distributors*

True contour aeration is a major advance in turf maintenance — and here's why: with these new Ryan units you can thoroughly aerate, or slice, or renovate every square foot of turf including the low spots, slopes . . . all the places that will get an extra benefit from it! And they operate efficiently at speeds of 10 m.p.h., thus cover big areas fast.

The RENOVAIRE is offered in two models, the 8' Monarch and 4½' Chief. Each wheel in these new Ryan units carries a set of sharp steel coring tines or blades; each pair of wheels has its own individual weighting tray, so that no matter what the soil density or surface contour, you get *maximum penetration from each blade or tine!*

The TRACAIRE is designed for use with tractors having a 3-point hydraulic hitch. The TRACAIRE also features Ryan's new, longer sharp steel slicing or renovating blades, or coring tines. The slicing blades are recommended for an all-season turf aeration program because they make invisible penetrations, do *not* throw up soil plugs, and are an excellent aid for thatch control.

**SPECIAL TO  
RENOVAIRE OWNERS:**  
results from true contour aeration tests have been so impressive that Ryan has also developed adapter kits for 1960 and earlier models — full details at your Ryan Distributor.

Get better-than-ever turf with true contour aeration — see the new Renovaires and Tracaire today, ask for free demonstration!

**Ryan**

**LANDSCAPING EQUIPMENT**

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*Company*



# O. J. Noer's Turf Tips



At Detroit's Maple Lane, weights on 3-gang spiker are old railroad rails.



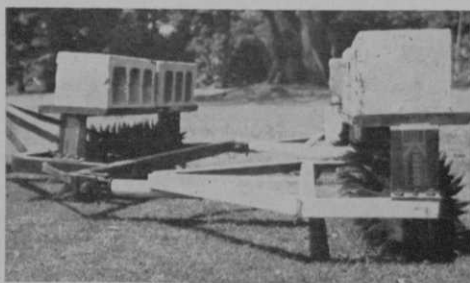
Clarence Wolfrom demonstrates 3-gang spiker on green at Detroit field day.

## Use of Multiple Disk Spiker on Greens

Disc spikers are regaining popularity for use on greens. Their chief function in the North is to relieve compaction in the top inch of soil caused by player traffic and by mechanized mowing. The power driven single unit is used by many but Clarence Wolfrom at Maple Lane in Detroit, and others, use the three-gang fairway type unit drawn by a tractor.

In South Florida, clubs have turned to spike discing of fine textured Bermuda greens to prepare the seed bed before overseeding with cool season grasses for winter play. Besides preparing a better seed bed some think the shearing action of the long sharp spikes on the underground Bermuda stems is an added benefit.

In practice, the three-gang spiker is operated in a figure 8 pattern. This is done in two directions so the final pattern resembles the leaves of a four leaf clover. Greens are disked in both directions enough times to prepare a good seed bed. This is the secret of quick growth



Closeup showing sharp, long teeth on Wolfrom spiker. Weights are cast concrete.

and a fair stand of cool season grass. Good seed bed preparation is very important when bent grass, red top or blue grass is used.

Most supts. attach the spiker to a golf type tractor. Spiking is done when greens are a trifle on the dry side. The pneumatic tires are not inflated to full rated pressure. At a few clubs the wide tire, gas propelled, golf cart serves as the power unit.

*The fastest, gentlest way  
to pick up golf balls...*



## **The FONKEN picker - upper**

*The ORIGINAL Range Ball Retriever!*

With the new, improved FONKEN Picker-Upper you can retrieve golf balls faster . . . more efficiently . . . at lower cost than by any other means.

Designed with built-in flexibility to meet every change in ground contour, the Picker-Upper retrieves balls under all conditions — even in heavy grass or weeds. Fool-proof 'comb' guides balls into pick-up discs without chafing, bruising or cutting.

**THREE SIZES — 3, 9, 15 foot spans**

Choose the Singletriever, Standard or the Supertriever to fit your needs . . . or add quick-attach Supertriever kit to increase span of present Singletriever or Supertriever units.

*Write for new descriptive literature today:*

**FONKEN MANUFACTURING CO.**

433 WEST MAGNOLIA AVENUE, GLENDALE 4, CALIFORNIA

**"I treated this green with TERRA-LITE... had turf four days after seeding," says Connell Gubser:**

GREENS SUPERINTENDENT  
OLENTANGY COUNTRY CLUB  
COLUMBUS, OHIO

## How Big Savings Can Be Made in Course Maintenance

By Bob Dunning

THE statement, "nearly every golf course could reduce maintenance costs by 30 to 40 per cent" (Golfdom, Jan. 1961, p. 66) provoked a good deal of comment.

This was in the article, "Full Package Deal for Improved Maintenance." Frankly, in discussing this we generally use the figures 20 to 30 per cent, but in this case we took a more liberal viewpoint.

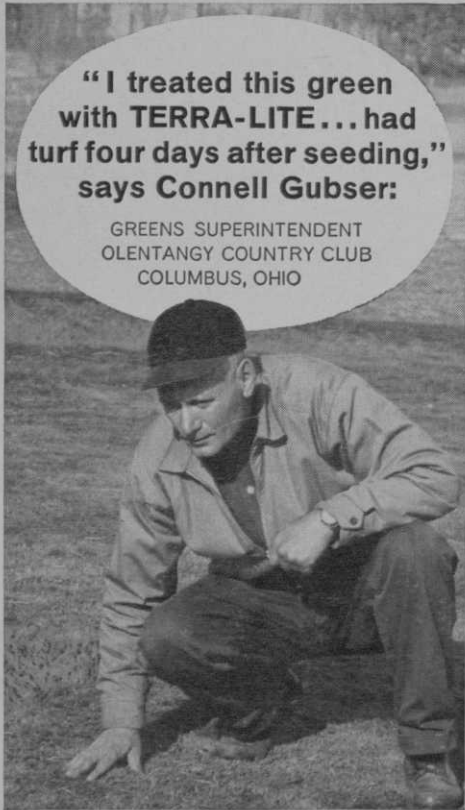
When we refer to a 30 to 40 per cent reduction in maintenance costs, it is not our intent to recommend that operational budgets be reduced by this amount. Rather, we feel that courses can be operated and maintained 30 to 40 per cent more economically and efficiently than at present if currently available agronomic information is fully utilized. This saving will allow courses to make improvements, purchase other labor saving devices and have the refinements that really make them a pleasure to play.

There is no place for negative thinking in construction and maintenance today. If there is, courses are going to find themselves in serious trouble, as many already have. Increased play, rising labor costs, less time to accomplish operations because of player traffic and small, inadequately constructed greens have complicated problems to the extent that many courses are finding it increasingly difficult to operate and even maintain turf on greens. It is negative thinking to try to find a scapegoat who is responsible for this condition. Certainly it is not the golf course architects.

### Positive Approach

The positive approach is to analyze the problem and prepare to make the adjustments that will have to be made. Use available technical information to assist you in drawing up your plan of attack. Golf courses must look forward and build for the future.

Twenty-five years ago good technical information was not available. Today, with the scientific findings of proved re-



Experienced "supers" like Connell Gubser know they can depend on Terra-Lite, the all-mineral soil conditioner to bring them speedy and effective turf growing results.

Terra-Lite conditions clay soil and keeps it loose, provides necessary percolation . . . gives body and water retention to sandy soil, but releases moisture as the soil requires it . . . promotes springy turf and sturdy deep-rooted grass.

On-the-ball superintendents everywhere are going for Terra-Lite because it helps them cut maintenance and watering costs.

If you'd like more information, just mail the coupon for FREE data file on turf conditioning.

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**TERRA-LITE DIV., ZONOLITE COMPANY**

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Send me FREE data on turf conditioning.

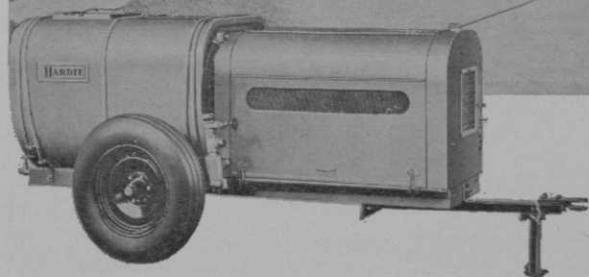
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# HARDIE SPECIALIZED GOLF COURSE SPRAYERS



## THE FINEST IN SPRAYING EQUIPMENT

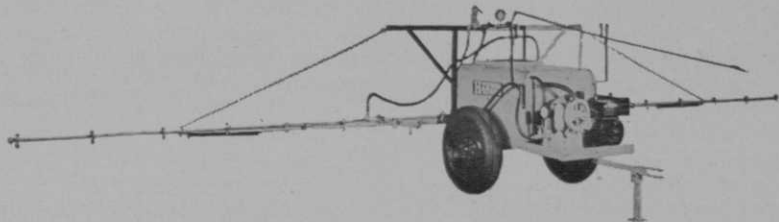
Preserve the beauty of your fairways, greens, and club house grounds with a dependable HARDIE Sprayer.

HARDIE Hi-Pressure sprayers are available in all sizes, from 3 to 60 gallons per minute. Pressure is adjustable from 50 lbs for weed spraying to 800 lbs for hand spraying of greens, shrubs, etc.

HARDIE also manufactures a complete line of single and multi-nozzle spray guns for exacting green or shade tree work. The

Hi-Lo pressure regulated weed boom is considered by many golf course Superintendents as the ultimate in boom design and performance.

There is a HARDIE Sprayer, with either the famous long-lasting Hardie wood tank or conventional steel tank, to meet your exact requirements. See your HARDIE Dealer soon, or write for illustrated literature. DEALER TERRITORIES AVAILABLE. WRITE TODAY.



Send Coupon Now for Information

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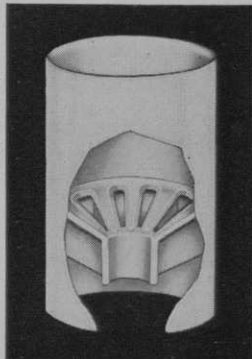


*Birdie Says:*

**"You can't miss with these two  
STANDARD favorites"**

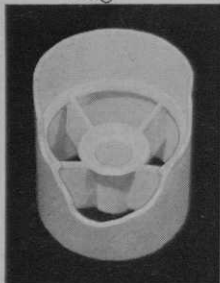
## RIJI-CUP

**CORROSION PROOF** — Highly visible, white, high-impact plastic. Cut-away view shows interior construction. Precision made and practically indestructible. Slightly tapered for easy removal.



## PRACTICE GREEN CUP

Standard's new practice green cup fills the need for a low cost cup that does not require a deep cut hole. Same high standards of material and workmanship as the famous RiJi-Cup.



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**STANDARD MANUFACTURING CO. CEDAR FALLS, IOWA**

search, agronomic mistakes don't have to be tolerated. Check the sources of technical information carefully, then be sure that your supervisory help and the construction firm are in full agreement and will follow specifications without deviation.

There are many instances that will substantiate the 30 to 40 per cent savings we have mentioned, but even more than this we are suggesting how golf can stay in business and be able to take care of future increased play at decreased cost.

Many have made the mistake of trying to reduce costs by rigorous economy not based on reliable figures. We realize the cost of maintenance is a small percentage of the overall expenses of operating country clubs. But every principle of good business management can be applied to maintaining a golf course.

### Follow New Principles

Many of our established course architects have been among the leaders in following new principles of construction developed by research workers and themselves, and have adopted contouring and design that fit this principle. Closer liaison is needed between these two groups to

further incorporate the agronomic phase with design.

Manufacturers are constantly developing labor saving machinery and devices. Many supts. are using this equipment and even adding to it, but wider acceptance is needed. Automation is a necessity. There has been developed automatic sprinkling systems that engineers and architects have adopted and which promise so much. These, it is certain, will cut the cost of maintenance when combined with proper soils for putting greens, adequate construction, and when sound agronomic information is used.

The requirements to realize the savings mentioned are:

1. Proper Soil for Putting Greens
  - a. Use methods suggested by USGA Green Section Specifications, Sept., 1960 issue USGA Journal & Turf Management.
  - b. Soil testing by approved laboratories.
  - c. Follow specifications closely.
2. Approved Green Construction Methods
  - a. Drainage — 5 phases
  - b. Disposal of excess water over field

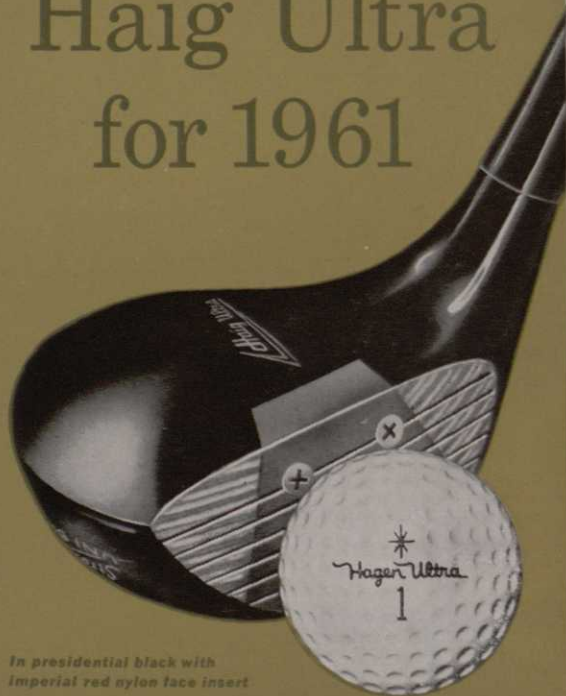
No finer touch  
in the  
history of golf



Only the incomparable Walter Hagen ever won a major tournament every year for 20 years, including 4 British Opens and 5 PGA Championships. His timing was infallible and his touch as sensitive as a jeweler's scale.

No finer balance  
in golf clubs today

# Haig Ultra for 1961



*In presidential black with  
imperial red nylon face insert*

*Available only through golf professional shops*

"The finest touch" in golf history is now translated into genuine Haig Ultra woods for 1961. Sensitive—responsive—Strata-Bloc® heads feature exclusive Uni-Bond process that seals out moisture, seals in perfect balance. Pro-Flex shaft "kicks" into ball for added distance. Grips crafted of rich calfskin add new confidence to your swing. If you have a feeling for greatness, play Haig Ultra Woods.



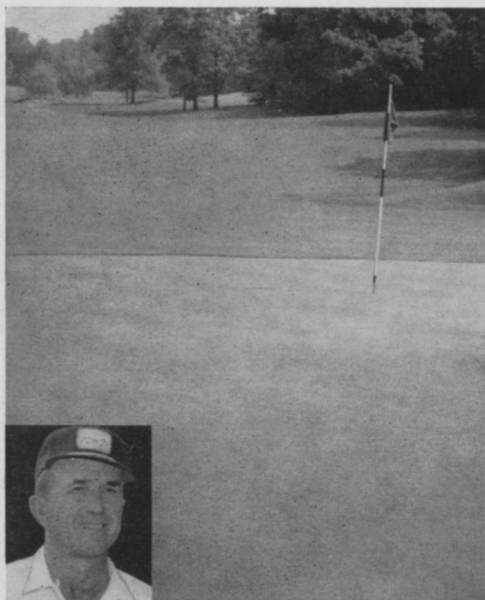
**Haig Ultra Irons.** Sensitive-ly balanced for greater power and accuracy. Precision-matched and registered.

## Haig Ultra

Walter Hagen Golf • Grand Rapids, Michigan

ALL ACROSS THE NATION... IN ALL CLIMATES:

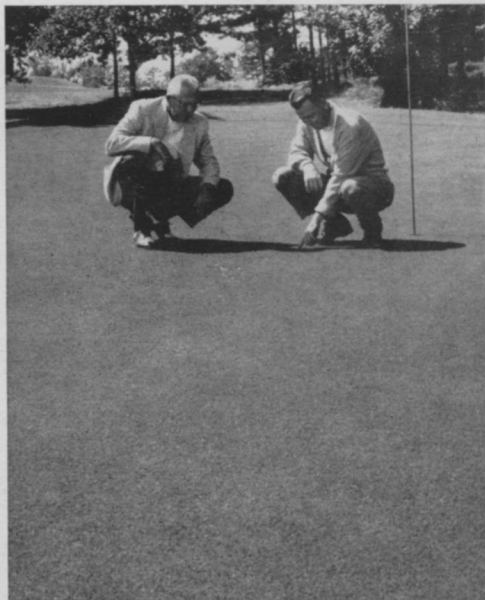
# Superintendents report you promote excellent growth



## In the hot summer and cold winter of ILLINOIS

—“I have used ‘Uramite’ for the past 6 years, spring and fall. Our Washington bent greens are slow in greening up, but ‘Uramite’ gives them a healthier appearance and helps keep them in good color all through the season. And I’ve found, over the years, that Du Pont ‘Tersan’ and ‘Semesan’ are the best fungicides to control all major turf diseases. A weekly preventive spray program keeps our turf healthy and strong.”

—Walter Pieper, Superintendent  
Flossmoor Country Club, Flossmoor, Illinois



## In the hot, humid climate of LOUISIANA

—“We have Tifton 328 on all our greens, and our members expect them to stay in good condition. For the last three years I’ve used Du Pont ‘Uramite’ as the basic source of nitrogen on these greens. It’s easy and safe to use and helps me maintain high-quality turf. I believe it is the most economical fertilization program I can follow.”

—C. D. Smith (on left), Superintendent  
East Ridge Country Club, Shreveport, Louisiana  
(With Golf Pro, J. B. “Cotton” Hill.)

**TERSAN® OM · TERSAN® 75 · SEMI**  
TURF FUNGICIDE                      TURF FUNGICIDE                      TURF FUNGICIDE



# You can stop turf diseases... with DuPont Turf Products



## In the severe, frigid winters of IDAHO

—“We have used ‘Uramite’ for 5 years and ‘Tersan’ almost ever since it was developed. And I’ve found that as long as we stay on a regular program of ‘Uramite’ and ‘Tersan’, we have no problem keeping our greens and tees healthy, in excellent color and free of turf disease. ‘Tersan’ is exceptionally safe and easy to use. We never have to worry about it injuring the turf or causing discoloration.”

—George Orullian, Superintendent  
Idaho Falls Municipal Golf Course,  
Idaho Falls, Idaho

**TERSAN 75**—gives excellent control of such diseases as large brown patch and snow mold. Used in the fall and early spring, “Tersan” helps protect greens from snow mold . . . they’ll be ready for early-season play.

**SEMESAN TURF FUNGICIDE**—a specially prepared mercurial composition for hard-to-control turf diseases. To get even wider-range protection, include “Semesan” with “Tersan” 75 in a combination spray.

**TERSAN OM**—combines the effectiveness of “Tersan” 75 and organic mercury in a single, easy-to-use fungicide. Eliminates tank mixing . . . saves time and labor.

**URAMITE**—contains 38% nitrogen. Clean and odorless, “Uramite” feeds slowly, keeps nitrogen at a proper level to assure healthy, vigorous growth, promotes good, deep color.

For excellent, long-range results, base your turf management program on Du Pont “Uramite” for uniform feeding of vital nitrogen and Du Pont turf fungicides for top year-round protection against disease. Order a supply from your dealer.

*On all chemicals follow labeling instructions  
and warnings carefully.*

**SEMESAN<sup>®</sup> · URAMITE<sup>®</sup>**

FUNGICIDE

FERTILIZER COMPOUND



REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY



**SAVE TIME AND MONEY**  
use **Scotts** turf program  
and a **Scotts Spreader**



**O M SCOTT & SONS**

**Marysville, Ohio**

- capacity.
- c. Construction methods available.
- 3. **Design**
  - a. Principles of contouring greens.
  - b. Putting surface and over-all green design.
  - c. Multiple pin positions or cup cutting areas.
  - d. More interesting golf through proper design.
  - e. Distinctive character affecting playability and to prevent wear.
- 4. **Irrigation Design and Engineering**
  - a. Semi- and fully-automatic multiple sprinkler systems can now be used on greens because of rapid infiltration, percolation and drainage.

One of the most concrete examples of false economy we have observed was that of a course trying to economize by purchasing gate valves for a semi-automatic sprinkling system for each green instead of angle control valves. As long as the gate valves operate two men easily can handle a 9-hole course with large greens at the peak of the season. When the gate valves fail it requires three men to water and a man and a half to take care of the other duties. Right here was an increase of

over 50 per cent.

**Two Courses Compared**

Two courses operating in difficult hot, humid climates in different states have this differential in watering greens:

One has hand watered greens, using five men approximately five hours a day in this operation, including showering. Greens are improperly constructed as to soil texture and have poor drainage.

The other course with sandy greens has good drainage, waters 18 large greens in 35 minutes (area watered 4.7 acres, 54 sprinklers operating, 3 settings with four men watering.) This, it is apparent, is a considerable saving.

Where there is a properly constructed green with an approved sandy topsoil mixture, to compare with an improperly built green on the same course, these benefits and comparisons have been observed:

1. Less water is needed — soil becomes a natural reservoir and deeper roots result;
2. Less fungicides is used;
3. Less wear is in evidence;
4. Less labor is needed;
5. There is increased play at decreased cost. The green never need be closed because it is too wet. It can be used