The Cushman Turf-Care System saves as much as 35% on equipment, 50% on labor.

We wouldn't say it if we couldn't prove it.

This 18 hp Turf-Truckster, with optional hydraulic system and PTO, is the prime mover in the Cushman Turf Care System for personnel transportation plus spraying, spiking, hauling, hydraulic dumping and top dressing.

Compared to buying separately powered units for each of these jobs, you only buy the Turf-Truckster and the modular Cushman accessories you need. You should pay much less in total for equipment... and with only one engine, think of the savings in maintenance.

Your men will perform each chore quickly and efficiently on turf or green... and then move between jobs up to 3 times faster than self-powered units. For instance, one man can spike 18 greens by mid-morning, a job that used to take a day or longer. So you'll get much more work out of each hour of labor cost.

The Cushman Turf Care System. Transportation plus increased personnel productivity. From the company that's been building productivity into small vehicles for over a quarter of a century.

Cushman. Proven productivity.
WHAT YOU SHOULD KNOW ABOUT THE CLUBHOUSE COVERUPS

What's new in carpets? Just about everything. Proper selection and quality rank highest in getting the most out of your club investment

by PAUL H. GEBERT

CONTRACT MANAGER, PHILADELPHIA CARPET COMPANY, PHILADELPHIA, PENNSYLVANIA

The case for carpets in golf and country clubs today is so strong and well-documented that keeping up with the dynamic floor covering field is obligatory. Even if a clubhouse has no carpeting now, there is a good chance that its manager will buy one in the near future.

What are the advantages of carpet? Well-known and well-proven are its aesthetics, unequalled decorating ability and flexibility, warm and luxurious atmosphere, sound absorbency and protection against slips and falls. Inflation and the scarcity of heating oil demand that two other benefits of carpet be examined. One is the thermal or insulating qualities, which tests show effect appreciable savings in heating fuel. With the crunch on both supply and price, this factor cannot be ignored by the conscientious club manager. Another benefit is the lower cost of maintaining carpet as opposed to other types of flooring. The importance of overhead cost cannot be overemphasized. GOLFDOM reported editorially in the February issue: "Club managers achieved some significant revenue hikes in 1973, but it was a struggle all the way against spiraling costs." Carpets fight spiraling costs in club overhead, because fewer man hours and less expensive equipment are needed to maintain carpet than are needed to maintain hard surface flooring. Routine maintenance of carpet is relatively easy: no exhausting floor scrubbing and waxing are necessary; it can be done by the regular clubhouse maintenance personnel.

PREVENTIVE MAINTENANCE

Many old concepts of carpet care need updating. The "preventive medicine" approach is recognized as the soundest. This means heading off severe soiling and staining before they occur. Proper, well-scheduled and disciplined maintenance will accomplish this end, providing some precautions are taken under certain situations. Light or medium commercial vacuuming regularly done often is sufficient. Track-off areas or uncarpeted spaces that adjoin the outdoors should be vacuumed more frequently. Here, the carpet actually serves as a brush on shoes, pulling off the dirt. If the track-off soil is heavy, lay down a walk-off mat, but wash it frequently so that it doesn't become another dirt source: these mats are specially treated to hold soil.

All-over "wet" cleaning or shampooing can be a potential source of problems. If cleaning is not done properly, some of the detergent can remain in the pile. Rug detergents are greasy when dry, attract and hold soil, which means that the carpet will get dirtier faster after the cleaning than before. An alternative is "dry" cleaning with dirt-absorbing compounds, which can be limited to areas that need cleaning. The compound, which remains on top of the carpet, can be easily vacuumed off with the absorbed dirt. Spot cleaning without delay is a "must," especially with spilled liquor and food, to prevent these stains from becoming chemically "set."

continued on page 44
Since 1955, Par Aide's products have been serving the needs of golf course superintendents throughout the United States and abroad. Because these products have been functionally designed and are built to stand up under rugged use, it is just natural to find Par Aide equipment "wherever golf is played."
COVERUPS from page 42

RESISTING SHOE SPIKES

Very much on club managers' minds today is the feasibility of carpeting areas in which golfers wear spike shoes. These include locker rooms, pro shops and golfers' grills. This question is being answered by clubs with fully carpeted facilities throughout the country. The majority of these carpet installations are successful, and please members, guests, management and operating personnel. The failures that have occurred, according to our observations, are due to one or both of these reasons: 1. Price became the deciding factor in selecting the carpet, and the quality to resist spikes and tracked-in mud just wasn't there; 2. Maintenance was inadequate or ill-advised and permitted the carpet's soil appearance level to sink irretrievably low.

Philadelphia Carpet Company is one of the few mills in the country that both weaves and tufts, the methods for producing about 96 percent of all carpets made today. Therefore we have nothing to gain in recommending one type of carpet over another. We have tested all textures, types of construction, fibers and fiber blends under spiked shoe wear. We have found nothing to equal a tightly-woven Wilton carpet with pile of 70 percent wool and 30 percent nylon. The wool provides resilience, cleaning ease and color clarity. The nylon provides stamina and abrasion resistance. The 70 percent/30 percent combination has proven to be the optimum balance. This type of carpet has been down in the locker room of East Lake, Atlanta, for 18 years, with hardly a sign of wear or aging, according to the club manager. It is not unusual to find this type of carpet still performing well and looking practically new after more than 12 years in locker rooms.

Most Wilton carpets are custom made, which gives the designer, architect or whoever is responsible for the interior design, full latitude in color and pattern. For example, the carpet can be woven with the club or resort crest or initials in it without ordering large yardage. What about price? The initial cost of a Wilton carpet is higher than most other carpets. But, when one considers their longer service life and their ability to retain their appearance over a protracted period of time, the amortized cost per year turns out to be a bargain. There is an additional saving with carpet that lasts longer because, with replacement less frequent, money is saved on installation, which is a sizable cost factor today.

SOLVING BUDGET PROBLEMS

Initial cost is a factor; because, if high, it can seriously distort the budget for the year in which the carpet is purchased. Some managers have learned to overcome this problem by ordering the finest and most spikeproof carpet where needed and thus practice true long-range economy, while ordering much less expensive carpet for less critical areas, such as lobbies, lounges and dining rooms. This "averaging out" lowers the total carpet expenditure.

One of the most significant advances in carpet fibers in recent years is the development of soil-hiding nylon. Through special cross-sectional shapes of the yarn filaments, light is refracted and diffused to conceal to a large extent the presence of soil and dirt in the pile. This development has made practical the use of lighter colors in soil and spillage areas where designers formerly felt restricted to neutral or "safe" colors. The leading soil-hiding carpet nylon are Antron by DuPont, Anso by Allied Chemical, Enkalure II by American Enka and Cadon by Monsanto.

CARPET STATIC CONTROL

Another important development is static control in carpets. Generally, static is not a problem in spiked shoe areas, because most locker rooms and pro shops are below grade, where humidity is higher; therefore less static is generated. However, controlling static is important for other areas. One pile fiber with built-in static control that eliminates the need for additives is olefin or polypropylene. The additive most commonly used to impart static control to other fibers is Brunson, which consists of tiny, invisible conductive wires imbedded in the pile. The newest static control system on the market is Antron III, with polymeric conductive material, which is otherwise identical to the second generation product known as Antron II.

NEW PRINTED CARPETS

No update on club carpets can be complete without reviewing printing. New printed carpet lines come in a dazzling array of patterns and color combinations. Most nonresidential types are level-loop nylon. They combine as many as eight colors to form precisely defined patterns with great clarity and detail. Colorfastness is no problem in most qualities, and the printed colors penetrate the pile all the way to the backing. During the printing process, an electromagnetic field is set up at the printing screens or rollers, depending on the system utilized, which attracts and seals in the dyestuffs for full penetration. To our knowledge, no printed carpets available are recommended for spiked shoe areas; however, they are often a sound choice for other locations because of their great decorative value without customization. Styling latitude is wide: our own printed collections range from Early American to Oriental to contemporary.

In closing, here are several timely words of advice as old as the carpet industry itself: 1) Buy quality carpeting that you know will be equal to the task you are assigning it in your club. You will find it least expensive in the long run; 2) Buy where you will get expert and unbiased advice. The world of carpet fibers, constructions, textures and specifications is far too complex to wade into yourself with the hope of finding intelligent answers in a hurry. It's a job for professionals who have the integrity to keep you out of the low price trap, which will result in a quick sale for them, but a keen disappointment in performance for you.
The budget is not sacred; it can be amended to include new purchases—provided the request is justified and the committee is willing to listen.

by PAUL N. VOYKIN
Superintendent Briarwood CC Deerfield, Illinois

The budget has created a better-groomed and more efficient course; consequently, trust was an integral element in the working relationship I had established with the chairman of the green committee, the committee, the board and the membership. In fact, three of the past chairmen still serve on the committee, including the one who originally hired me. I knew that I would be listened to. Secondly, the green chairman is mechanically inclined and has an excellent rapport with my experienced and wonderful mechanic. Thirdly, my mechanic has loyally and expertly been repairing the club's grounds equipment for 13 years. The club officials and members respect his ability to keep the equipment in top repair. In addition, my crew is known for their consideration of the equipment entrusted to their care. They, too, are loyal, well-like and trusted. These considerations I hoped would create an open climate in which the subject of amending the budget could be thoroughly broached.

I called the local dealer and asked if the triplex mower was available for a demonstration on a day I knew the green chairman would be at the club. Then I called the chairman and asked if he was available to attend the demonstration, emphasizing how important the demonstration would be to the club. He kindly consented to attend, even offered to call a few committee members to find out if they could also attend.

On the designated day, the green chairman and one of the past green chairmen showed up to watch the demonstration. Both were significantly impressed by it and by the way the mower passed their own tests. They timed it and requested the operator to mow our most difficult green—one that has traps up very close and narrow at both ends. They were both pleasantly surprised that two of the crew on such short notice could operate the mower with such skill and ease.

They were particularly impressed by the machine's smoothness and consistency, the same characteristics that had attracted me, plus the efficiency with which it operated as compared to the walking greensmowers.

After the dealer left, leaving the demonstration model with us for 10 days' use, my green chairman asked how we could amortize the mower if it were purchased now. That was the only realistic method, said the chairman, by which arrangements could be made to buy the mower before the next budget period.

That evening I phoned the sales representative and asked him to send me a bid as soon as possible.

A few days later my chairman surprised me by asking if I could submit the bid by the next board meeting, only 10 days away. He requested that I submit with the bid a letter to him justifying the purchase, showing how the mower could be amortized. He wanted a picture of the mower included with the report for the board committee's viewing. I was elated, sat down to write the letter and decided to ask for two mowers instead of one!

The letter detailed the present daily practice of sending out five, sometimes six, walking greensmowers, a job which takes half the grounds crew. The time consumed in mowing the greens, a putting green and nursery, runs about a total of 15 hours or three hours per man, sometimes longer.

The new riding mower rolls the dew down, then rakes up the creeping bent in front of the cutting blades, eliminating the dew, and helping to eliminate thatch and grain.

Considerable time is saved due to faster and easier transportation from the grounds maintenance building. Operator fatigue also is minimized by the riding mower.

On days when there is no play, usually on Monday mornings, the mower can mow all putting surfaces in...
UNBUDGETED continued

about 4 1/2 hours. (This time was
clocked on an inexperienced driver
and would be reduced as he gained ex-
perience with the machine.)

The letter went on to cite specific in-
stances of time- and labor-saving ex-
amples with which we had experi-
enced. These in turn were broken
down into total hours per week saved
and then translated into dollar figures.
I went on to add to the regular jobs the
mower performed, a list of other main-
tenance jobs that are time-consuming
but essential that the men would be
free to perform.

My reasoning for purchasing two
mowers was that two men, instead of
five or six, could mow in five hours or
less. In case of breakdown, one ma-
chine would provide backup. Buying
two machines would save the club
$500: one would be purchased out-
right, the other billed in October.

The letter further detailed the
method by which the club would save
money by hiring one man to replace
two crew members who left in August.
By eliminating the higher salary of one
man, in eight weeks, from August to
October, the club would save $1,248
(a little less than half the cost of the
mower). I mentioned also that both
walking greensmowers were six years
old, and the board already had ap-
proved a purchase of a new ($600)
one.

I assured the board that both
mowers could be amortized in two
years. They would allow the mainte-
nance department to perform better
and more efficiently and would be
some insurance in the event of a labor
crisis.

I listed the names of the six sur-
rounding clubs that had greensmowers
and the names of the superintendents
who swore by them.

My chairman saw me a few days
after receiving my letter. Without
blinking an eye at my new request for
two mowers, he asked me to send the
letter to the other members of the
grounds and green committee.

A few days before the scheduled
meeting, he informed me that he had
talked with all of the committee, who,
by now, had read the letter. Everyone
was positive, except some wanted one
mower, some two. "Okay, let's try for
two," he said, "and see what happens."

I was invited to the meeting but was
required only to stay a short time. My
wise chairman had talked personally
with all of the board (especially the
treasurer) the day before meeting.
Consequently, the board took only a
short time to reach its decision: two
machines, one of which would be paid
for in July and the other at the start of
the fiscal year, but with the understand-
that we use both now.

Neither I nor the board has regretted
buying the two machines. Both riding
greensmowers have performed far
better than I expected. The members, I
think, have noticed the difference in
the putting quality. They, too, are
happy about the purchase.

In reviewing the whole problem of
purchasing before the start of the new
fiscal year, two elements contributed
to the successful conclusion of the
problem: one, a sympathetic and
aware membership who is sensitive to
the needs and advancement of the
grounds and green committees; and the
other, more obvious, one, a certain
boldness, tenacity and courage of con-
viction by the superintendent.

Dedoes Aerator

SAVE ON A COMPLETE TURF MAINTENANCE SYSTEM BECAUSE YOU GET THE
USE OF FOUR ATTACHMENTS. DEMONSTRATION ON REQUEST. WRITE TO US.

AERATOR • ROLLER • SLICER • SPIKER

NEW POA-ANNUA STRIPPER UNIT

New tool for Dedoes Aerator permits aeration of Poa-Annua and other shal-
low root grass without danger of “carpet roll-up” or loss of aerating speed.

FOR FAIRWAYS
COVERS THE FAIRWAY OF AN 18-HOLE GOLF COURSE IN LESS THAN
8 HOURS. Fits any full size tractor — can be raised and lowered by means
of tractor's hydraulic system — transfers tractor's weight to aerator.
Large pluggers 3/4" dia. 3" long. 6 ft wide. No addi-
tional accessories needed.

FOR TEES AND GREENS
COVERS A TEE OR GREEN IN LESS THAN 15 MINUTES. Smaller
pluggers ideal for tees and greens, takes swath 42 inches wide and pulls
180 plugs per revolution. Easy to hook up in minutes, it can be raised and
lowered by its own self contained
hydraulic system. Needs no
additional accessories. Can
be converted to a roller,
slicer, or spiker.

DEDOES INDUSTRIES, INC.
1060 W. WEST MAPLE
WALLED LAKE, MICHIGAN 48088
PHONE: (313) 624-7710

Circle No. 177 on Reader Service Card
OTHER CITIES from page 29

been with the Department of Parks since 1945, and Harold Burkhardt, who handles the Metropolitan System, continue to provide the best of all possible facilities for Cleveland’s municipal golfers.

ST. LOUIS

Dwight Davis envisioned finer things than now exist in St. Louis, when he first suggested municipal golf for the city in 1918. At that time he was the city’s recreation director. He’s the same Davis for whom the tennis cup matches were named. Today the city operates three courses that range from bad to worse, according to local complainants.

Foresight may not have been the city government’s forte when it came to golf, but they did manage to create one of the world’s better known zoos. Ironically, Forest Park, home of renowned St. Louis Zoo, also houses the City of St. Louis Municipal Golf Course. One nine and an 18, both of dubious quality, comprise this layout.

“Their’s almost unplayable,” bemoaned an embattled local golfer recently.

The third course operated by the city is called Triple A after an organization that donated the property to the city in 1904. By comparison with Forest Park, it might be called a showplace.

Attempts to upgrade conditions at these inadequate facilities have been made from time to time, but they have usually run aground. A loosely knit group of wealthy public course players tried to form a golf advisory council around 10 years ago, but momentum lagged and it floundered.

Like other cities, St. Louis has run out of space even if expansion were economically feasible. The County of St. Louis, however, has an excellent plan on the drawing boards for the development of three large tracts, each to contain a public golf course. A bond issue to finance the project was passed, but most local golfers feel it could easily develop into a 10 year plan even before any serious action is taken.

CINCINNATI: GOLF’S MODEL CITY

CINCINNATI from page 26

Cincinnati’s golf school program that has been a feature in Cincinnati for many years, while helping youngsters get a good start in the game, is a good thing financially as well, according to Strauss. Each May a series of lessons are given by professionals at three “schools” for groups that sometimes number as many as 60 hopefuls. Ten dollars buys a series of six lessons, which are not limited to juniors. Strauss once said of the classes, “The school wraps up in a nutshell all the basic techniques and information needed for a good start in the game.”

Total realism is a necessity in dealing with the financial and logistical problems of running a municipal golf program. That’s the impression one gets when talking with Bob Strauss. Earlier we mentioned the acquisition of Hillcrest from potential builders. Its ultimate loss to the city, which is probably the only setback of any consequence the entire program has had, was taken in stride by Strauss. “We ran Hillcrest for two years and then the commercial developers took over. There was no way we could have sal- vaged it and we knew that. They just let us use it without cost until they had all their plans made.” Strauss added the realistic note when he said, “Of course, we made money with Hillcrest.”

Making money, while providing Cincinnati with the finest public golf facilities available in a financially sound way, is in the forefront of Strauss’ thinking. There are times, however, when one gets the feeling there is more to it than that.

When Strauss talks about Blue Ash, for instance, you begin to understand the depth of thinking that must be part of a city recreation movement. Particularly in terms of golf.

“The city owns 273 acres of property adjoining an airport, and we’ve asked that they transfer it over to us for our future development as a 27 hole layout,” he said. When it was suggested it might be a simple matter since the big stumbling block, finances, would forestall such a move in most cities, which under Cincinnati’s plan, apparently was not so, Strauss responded, “The financing, yes, but it’s surprising how much city-owned land is wasting in every community. Maybe it adjoins the water works, an airport or another public facility that is unused. Some city department may be jealously holding onto it. You always run into that sort of thing. Another department not wanting to turn it loose. We have managed to get land turned over to us, but it hasn’t been easy. You need the support of a body like our golf advisory council, and sometimes the newspapers, behind you. The need has to be brought forth. You have to do a little maneuvering.”

Robert “Red” Strauss and company forged ahead boldly five years ago with their unique “Municipal Golf Activities Fund.” An enlightened city council gave them full support and has continued to provide additional funding based on the knowledge that golf revenues properly handled could fully support the activities of the recreation commission.

The Ten Year Development Plan is vital, alive and, at the halfway mark, right on schedule. Creative plans continue to put Cincinnati among the leaders of this country’s municipalities that care about their public course golfers.

Truly, Ohio’s Queen City has shown the way. It only remains for others to follow.
Automatic irrigation is quickly becoming the norm in golf course maintenance. The latest controversy is over the probable use of effluent with these systems.

by GEORGE KERR

NATIONAL GOLF FOUNDATION CONSULTANT SOUTHWEST REGION

According to a survey on golf course irrigation published in 1969 by the National Golf Foundation, 17 per cent of the golf facilities in operation then were equipped with automatic watering systems from tee to green. Another 36 per cent utilized a semi-automatic system to water tees or greens or both. Together, the total percentage of 53 reveals that a little more than half of the watering systems in 1969 were automated to some degree.

In comparison to 1969, 90 per cent of the golf facilities built between 1972 to 1974 in the Southwest incorporated completely automatic irrigation systems.

Twenty-five per cent of the automatic systems installed by irrigation contractors in the Southwest were remodeled or replacement systems for older, established golf facilities.

The reasons offered by superintendents justifying the shift from a reliance on manual systems to automatic systems are many and varied. Nonetheless, they form a pattern and indicate an attempt by superintendents to solve their most pressing and immediate problem, that of the high cost and low quality of labor.

That attracting and keeping qualified workers has long been the nemesis of the superintendent is common knowledge. The golf course industry competes for its share of the available labor market with business and industry. Ill-equipped to offer course workers little more than the minimum wage, the embattled golf course often comes in second in the labor competition. The superintendent settles for what workers he can get, thus beginning a vicious cycle. The superintendent must pay increasingly higher wages to workers he is loath to hire. Not only do their irresponsibility and carelessness cripple his maintenance programs, but by budgeting more money for labor, the superintendent drains cash away from other, equally essential, budget categories.

From the point of view of the superintendent, the case for the automatic irrigation system is more than justified: by relying more on automated equipment, he eliminates specific jobs and the men who perform them.

Not even the initial high cost of installing an automatic system deters the superintendent. He believes that in the long run the cost will be offset through cutbacks in wage expenditures. Added to the attractive prospect of at least partially solving his labor problems, are the advantages inherent in the automatic system itself: flexibility and strict control.

THE NEW CONTROVERSY

If the question of the feasibility of the automatic irrigation system has been settled, the subject of using effluent water has not. It is currently one of the most talked about subjects in the irrigation industry.

The idea of recycling has its roots in the national movements toward a cleaner, pollution-free environment. Dumping human waste into nearby rivers, streams or oceans no longer can be sanctioned. Alternative methods of waste disposal, such as recycling, must be developed and accepted by communities nationwide.

Commonly-believed notions about water suitability must be reexamined. Why does all water have to be fresh? For drinking, yes, but what about water used to irrigate recreational areas? Why does that water have to be fresh?

Effluent water can be used to irrigate golf courses, and has for many years in areas such as the Southwest where fresh water is both costly and scarce. A study from Colorado shows that the cost of irrigating a golf course...
Green is the name of the game

Your investment in those greens is literally the heaviest you have to bear anywhere on your course. And the one on which your members and other golfing traffic judge the overall merits of your operation. So the maintenance of turf on and around greens, is of prime importance. This is where BEAN® sprayers come in. Consider the many advantages of an air sprayer for example. Your crew can spray an entire fairway from the rough; cover greens from twenty feet away, without tire tread damage and at twice the speed of conventional sprayers. Circle No. 161 on Reader Service Card.

Or, for true economy, consider the Turfkeeper®. Either self-contained or packaged to drop into the rear of most golf course vehicles, with both boom attachment and spray gun for maximum versatility. Whatever your golf course spray program needs, you'll find them best served with a BEAN sprayer. See your dealer or write:

FMC Corporation,
Agricultural Machinery Division,
Jonesboro, Arkansas 72401

FMC Environmental Equipment

6/74 GOLFDOM MAGAZINE 49
with city water would run $411 a day, whereas watering the same course with filtered effluent costs about $97 a day—a considerable savings, even though construction of a filtration plant would cost the club $280,000. Considering the scarcity of potable water in that region, the cost of a sewage treatment plant is a small price to pay to recycle water for recreational use.

Another consideration to be taken into account when deciding to use effluent or not is the presence of nutrients in effluent water. It is possible that in the next few years, a shortage of nitrogen fertilizer may occur. Effluent, according to a group of California researchers who analyzed effluents from 15 cities, contains 60 to 100 pounds of nitrogen in one acre foot, 60 to 100 pounds of phosphorus and 20 to 40 pounds of potassium. Many minor elements, including sulphur, magnesium, calcium, iron, manganese, boron, zinc and copper are also present to some degree in sewage effluents. The fertilizer value of sewage has been estimated by some researchers to be somewhat greater than its value as water.

This viewpoint is not shared by men who used effluent on bermudagrass at Llano and Fredericksburg, Tex. At Llano, sewage effluent was considered to have very little more fertilizer value than well water. There was a marked difference in greenness between fertilized and unfertilized plots at Fredericksburg where the effluent was used.

Properly treated sewage effluent has no objectionable odors or other undesirable characteristics. Many cities in Texas, such as Corpus Christi, Midland and Lubbock, use sewage effluent in irrigating municipal golf facilities. Many of the Planned Unit Developments springing up around the state are also utilizing effluent for the golf courses.

Information about the cost of effluent to the user is scanty. The most common arrangement is the one in which the effluent is donated to the user if he will defray the costs of removing it from the disposal plant or some area of deposit. In other arrangements, the user pays a stipulated sum for the use of the effluent. Others are charged by quantity, so much per 1,000 gallons. Costs from nine different cities ranged from $.01 per 1,000 gallons to $.25 per 1,000 gallons. As water resources become more acute, it is probable that higher charges will be instituted. Engineers in San Antonio, Tex., calculated the cost of producing a million gallons of effluent at $35, including chlorination. A million gallons equals 3.07 acre feet.

The use of treated effluent water in automatic irrigation systems is a desirable means of utilizing water that heretofore has been thought impractical. At present, western, southwestern and Rocky Mountain states have a greater need for effluent. These states have the fastest-growing populations and the least amount of natural water sources. With pollution becoming a greater public issue, certainly other areas of the country will need to evaluate their present sewerage systems. In time, modern technology will reduce the cost of filtration and purification systems; then effluent water will be an inexpensive source of irrigation water for golf courses.

GOLF BAG STORAGE RACKS

RAC / ME

IMPROVE BAG STORAGE
BEST BY TEST

WE DESIGN YOUR LAYOUT—
ECONOMICAL—EASY TO
ASSEMBLE HEAVY DUTY
FURNITURE STEEL—
NO OTHER PARTS TO BUY—

IN BUSINESS SINCE 1933
Call Collect 301-322-3900
Or Write For Free Literature

INSTALLATIONS INCLUDE:
Chevy Chase C.C., Chevy Chase, Md.
Congressional C.C., Bethesda, Md.
Garden City G.C., Garden City, N.Y.
Dunbar C.C., Lake Arrowhead, Calif.
Scarsdale G.C., Hartsdale, N.Y.
Royal Poinciana G.C., Naples, Fla.
Longboat Key C.C., Sarasota, Fla.
Woodbridge C.C., Woodbridge, Conn.

ACME IRON WORKS, INC.
4900 Frolich Lane, Kenilworth Ind. Park
Tuxedo, Md. 20781

BEARD from page 18

water. The immediate, hydrophobic ring should be thoroughly cultivated by coring or forking to a depth of eight to 10 inches. Subsequently, the area should be saturated with water and maintained in this condition for a period of three to six weeks. Rewetting of the ring can be facilitated by the use of a wetting agent, whereas deeper wetting of finer textured soils is enhanced by the use of tree root feeding-probes. This water-saturation approach frequently results in disappearance of the visible ring symptoms, but there is no information to indicate that it is effective for all species.

Another approach that has been attempted involves cultivation of the ring by coring or forking followed by application of a concentrated fungicide solution of the appropriate type. It is preferably applied directly into the holes or else by a general soil drench application at a lower concentration. Results utilizing this technique have been erratic at best, with some suppression of the causal organism occasionally reported.

It is obvious from this discussion of fairy ring control that it can be a serious problem if it occurs in greens.