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## 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.

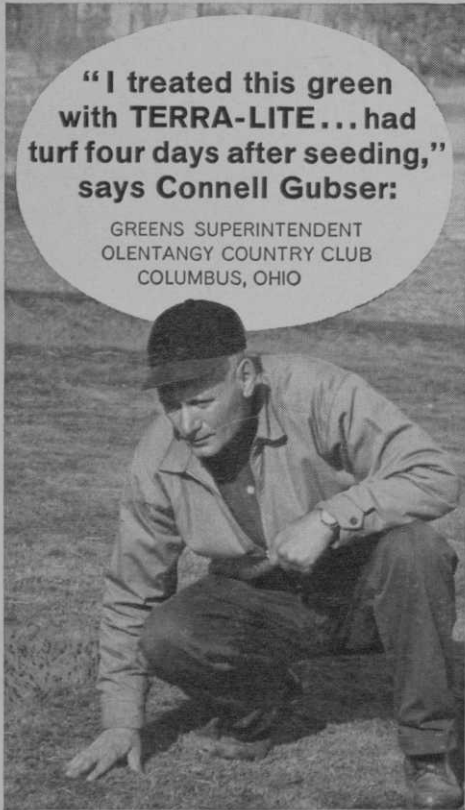
When we refer to a 30 to 40 per cent reduction in maintenance costs, it is not our intent to recommend that operational budgets be reduced by this amount. Rather, we feel that courses can be operated and maintained 30 to 40 per cent more economically and efficiently than at present if currently available 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-



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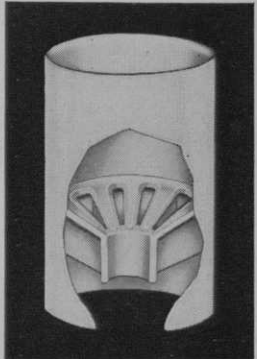


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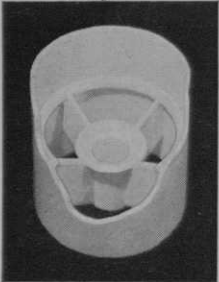
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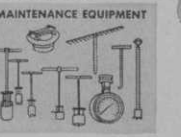
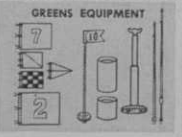


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search, agronomic mistakes don't have to be tolerated. Check the sources of technical information carefully, then be sure that your supervisory help and the construction firm are in full agreement and will follow specifications without deviation.

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

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- 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.

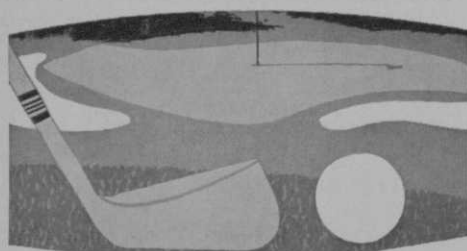
Where there is a properly constructed green with an approved sandy topsoil mixture, to compare with an improperly built green on the same course, these benefits and comparisons have been observed:

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

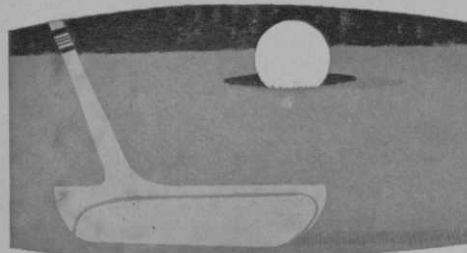
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lasts...



and lasts...



and lasts...



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6. Better playing conditions in general;
7. Less poa annua to contend with;
8. Weeds don't come in because turf isn't lost;
9. Little resodding or reseeding is necessary.

But when greens are poorly built you have:

1. Loss of revenue;
2. Every operation of club is affected when the course is in poor playing condition;
3. Interference with play;
4. Play interfering with labor;
5. Whole groups of golf courses have often been closed because of poor playing conditions. Cause — mostly poor drainage.

Not only will day-to-day maintenance costs be reduced as a result of increased automation, and by following sound construction methods, but the necessity of rebuilding areas of the course such as greens and tees will be eliminated. Obviously, this will reduce what generally is considered maintenance costs.

#### Constant Vigilance

The difference is comparable to keeping a relatively carefree green to one that is chronically subject to different degrees of trouble. On some of the latter it is occasional, but others require almost constant vigilance and extra attention. What does this cost at your course? Only you can answer this.

The national average shows that 70 per cent or more of money spent in course maintenance goes for labor. Approximately 60 to 70 per cent of this cost is charged to greens. With automatic sprinkling, water is applied when and where it is needed — a saving on the water bill. There is less daytime showering of properly constructed greens and when it is necessary it can be done with practically no labor cost. Your accounting dept. can tell you how much showering is costing.

#### Back up with Cost Analysis

The answer to the whole problem is a positive approach substantiated by a cost analysis of your present operations. The tendency of people connected with golf is to be conservative, which is good, but in the case of sandy mixtures for greens for example, these are potentially dangerous and can cause serious trouble. Unless specifications are followed closely and the recommended amount of sand is used, a soil approaching the consistency of concrete will be produced.