



Better Turf for Better Golf

TURF MANAGEMENT

from the USGA Green Section

REPORT OF COMMITTEE ON UNIFORM ACCOUNTING AND TERMINOLOGY

In 1957, a sub-committee of the USGA Green Section Committee was formed for the purpose of studying the matters of uniform terminology with respect to parts of the golf course and uniform accounting procedures for use by golf clubs. Mr. Allan Brown originally stated the need for such a study and was subsequently asked to serve as chairman of the sub-committee. Membership of the committee is composed of: Allan Brown, Chairman, Charles N. Eckstein, Dr. Marvin H. Ferguson, Edwin Hoyt, M. K. Jeffords, Jr. (deceased), Rear Adm. John S. Phillips, J. W. Richardson, L. A. Stemmons, Jr.

BUSINESS APPROACH TO GOLF COURSE MAINTENANCE

DEFINITIONS

It was agreed that the first task was to determine the units by which maintenance practices could be measured, and to define the parts of a golf course.

On July 27, 1958, a report of the committee defined the parts of a golf course and established the units of measurements to be recommended. These definitions and recommended units of measurements are reproduced here:

GOLF COURSE: The whole area on which the game of golf is played, including practice area and all club property, except the grounds immediately around the club house and that used for private residences or for other recreational purposes.

TEE: The tee is the starting place for the hole, consisting of a flat area maintained at short height of cut. It may be elevated or level with the ground. The exact position of the teeing area should be indicated by two markers. These

should be movable so as to vary the position of the front of the teeing area. The following color code is recommended for the tee markers.

TEES	COLOR
Back	Blue Course
Middle	White Course
Front	Red Course
Women's	Yellow Course

TEE SLOPES: If the tee is elevated, the banks around the tee shall be known as the tee slopes and shall be considered a separate part of the course.

FAIRWAY: The fairway is that part of a golf hole between the tee and green on which the turf is groomed to provide an improved lie; other than the rough, hazards, roads, paths, etc.

ROUGH: The rough is that part of a golf hole between the tee and green other than fairway, hazards, roads, paths, etc., not including woodland or swampland, practice area, nursery area, and all other areas not regularly maintained within the boundaries of the course. The rough

is generally maintained by cutting or mowing at heights in excess of the height of the fairway.

WOODLAND: Any area occupied by trees, saplings, bushes, etc., which requires hand labor and cannot be maintained by gang mowers.

SWAMPLAND OR BOG: Any low area containing an excessive amount of water, which cannot be maintained by the customary golf course equipment.

NURSERY AREA: Any area which has been set aside specifically for nursery purposes such as the cultivation of sod, trees, flowers, bushes, etc.

PUTTING GREEN: The putting green is all the ground of the golf hole which is especially prepared for putting or otherwise defined, not including collars or aprons.

COLLAR: The area immediately adjacent to the putting surface that is maintained at an intermediate height of cut between the putting green and the fairway.

APRON: The approach or area immediately in front of the putting surface, between the collar and the fairway, which is usually maintained at an intermediate height of cut between the collar and the fairway.

HAZARDS: **Water**—a water hazard is any lake, pond, river, ditch, surface drainage ditch or other open water course (regardless of whether or not it contains water), and anything of a similar nature.

All ground or water within the margin of a water hazard, whether or not it be covered with any growing substance, is part of the water hazard.

Bunker (Sand)—A Bunker is an area of bare ground, often a depression which is covered with sand, but not including the banks or slopes immediately surrounding the Bunker. These should be considered part of the fairway.

Bunker (Grass)—Same as sand Bunker, except the area is covered with grass instead of sand.

Standard Units of Measurement

The following units of measurements are recommended:

1. MAN HOURS: To provide a common denominator, it is suggested that "man hours" of labor be used to determine the amount of work on any part of the course. This can then be related to dollars according to the hourly rate prevailing in any given area, or on any course.

2. ONE ACRE: It is suggested that this unit be used for measuring the amount of labor for maintaining fairways and rough. This multiple provides a convenient unit by which to measure the amount of labor and the cost of maintaining any fairway or rough area, regardless of size. Once having determined the amount of man-hours necessary to maintain an acre of fairway, this multiple can then be related to the total area of the fairway.

3. 1000 SQUARE FEET: It is suggested that this unit be used for measuring the amount of labor necessary to maintain putting greens, collars and aprons.

System for Keeping Accounts

Early in 1959, it was proposed that the committee proceed with a study of accounting practices. Dr. M. H. Ferguson was assigned the task of devising record keeping forms which could be used in a "Pilot Study of Maintenance Costs." Each Green Section staff member was assigned to distribute forms and supervise the conduct of the study in his area. It was proposed that five per cent of the USGA membership be asked to participate.

The following forms, all of which were reproduced in the November, 1961 JOURNAL were devised:

Form 1—a daily time sheet for the individual workman. Each workman should check the items on which he has worked during the day and record the hours in the appropriate column. Where the work does not fit any of the categories listed, the workman should check "Other" and make an explanatory note somewhere on the sheet. This form should be turned in daily to the superintendent.

Form 2—a summary sheet for the transfer of the information given on daily time tickets. The superintendent should use this summary sheet to make a daily record of the total hours spent on each phase of maintenance. At the end of each

month, the daily entries may be totaled to provide a monthly summary of the time consumed by every operation.

Form 2a—a weekly payroll form. On this form each workman's time for each working day is recorded (this also is transferred from the daily time sheet Form 1). Form 2a provides a record of the total hours of labor for each man, his rate of pay, his total earnings, net pay and the totals of these items for the entire crew.

Form 3—a basic data sheet which will serve as a description of the course with respect to the areas subject to various categories of maintenance. Units of maintenance will be derived from this information. We have found that aerial photos made to scale (obtainable from nearly all local Soil Conservation Service offices) are extremely useful for determining areas. A planimeter can be used to obtain fast and accurate measurements of area from these photos.

Form 4—a summary sheet showing supplies purchased. This information should be drawn from invoices or purchase orders. These data, together with year end inventories, will provide figures on supplies used and their value.

Form 5—a summary sheet of equipment and maintenance costs. If the club maintains a "repair parts" inventory, this must be considered in determining the cost of repair parts used.

Form 6—an inventory of equipment. This should show each item of equipment owned by the club, an identifying number, its estimated value, its estimated useful remaining life, and the annual rate of depreciation.

Small items, such as hand tools, should be placed on a separate inventory. A budget item usually takes care of re-

placement needs of such "expendable" items.

Form 7—an equipment operation record. This should show the item of equipment, an identifying number, and a record of its operation. This record usually is the responsibility of the superintendent, though he may pass the responsibility to the operator of the equipment. This record will have no value from the standpoint of maintenance costs, but it will be helpful in establishing "expected useful life" of equipment.

Pilot Study

Each staff member was provided with a sufficient number of packages of forms to supply fifteen clubs. With 8 staff members, the total number of clubs was 120, which approached the desired 5 per cent.

The packages were distributed during the fall and early winter of 1959 and participants were asked to keep records during 1960.

Results of Pilot Study

Approximately one-fourth of the pilot study packages were returned in response to a request for them in January, 1961. Only twenty-one cooperators followed the study through completely. Thus the returned completed sample amounts to less than 1% of the present USGA membership. However, following discussions with members of the Agricultural Economics Market Survey Department at Texas A. & M., it was concluded that such a sample is quite reliable in determining unit costs. These specialists pointed out that the drawing of broad conclusions was unwarranted but that data with respect to time required for performance of any particular unit of maintenance was quite dependable.

	GREENS				FAIRWAYS				TEES		
	Irri- gating	Culti- vating	Sprey- ing		Irri- gating	Ferti- lizing	Culti- vating		Repair	Ball	Washer
Moving	Hrs.	Hrs.	Hrs.	Hrs.	Moving	Hrs.per	Hrs.per	Hrs.per	Hrs.	1000	and
Per	Per	Per	Per	Per	Hrs.	Acres	Acres	Acres	Per	Sq.Ft.	Towels
1000	1000	1000	1000	1000	Per	Total for	Total for	Total for	1000	Total for	Total for
Sq.Ft.	Sq.Ft.	Sq.Ft.	Sq.Ft.	Sq.Ft.	Acres	Season	Season	Season	Sq.Ft.	Season	Season
High	.122	.154	.518	.214	.322	14.8	3.47	4.0	.178	12.1	278
Low	.076	.052	.082	.024	.107	.51	.25	.62	.047	.25	8
Average	.099	.094	.224	.101	.205	6.76	1.62	1.70	.096	3.97	143.6

TABLE 1 — Figures given in this table indicate the amount of variation in the time required to perform certain units of maintenance. The operations selected are representative of all those performed on the golf course.

High, low, and average unit costs for the 21 clubs are listed in Table 1.

It should be pointed out that the aim of golf course maintenance is not always toward doing a job in the least amount of time. It is usually more prudent to do a job slower and better than faster and poorer. It should be understood also that the participating clubs were quite variable in their maintenance standards, in their budget, and in geographic location; consequently, length of season.

Several questions were asked relative to the adequacy of the system. Most of those who returned completed sets of records found the system to be a workable one, but there were numerous suggestions offered.

The most common criticism was that the system was too complex. Several of those who did not follow through after agreeing to a trial of the system said that some of their workmen could not read or write and were therefore unable to fill out the daily time ticket. This ticket (Form 1) is, of course, basic to the entire procedure of distributing labor costs. Another deterrent, though expressed by only two or three superintendents, is a lack of familiarity with this system compared with one already in use. Some participants offered different systems which they felt were less complex. However, they appeared to us to be equally difficult if not more so. Thus, a system with which a superintendent is familiar has more appeal than a new system. One other objection (mostly from those who did not complete the records) was that too much time was required. One participant pointed out that

a simple diary of maintenance operations often furnished a sufficient record for the estimates of costs for budgeting purposes.

From the foregoing paragraph the conclusion may be drawn that some participants urged further simplification.

On the other hand, some collaborators thought the record forms needed expansion. They suggested a provision for recording sick time and vacation time, "waiting time" for the time workmen waited for golfers to pass. One man felt that the "Other" designation needed to be used for too many miscellaneous items and that these should be enumerated.

It was encouraging to note that about half of those who completed the records indicated that they planned to continue use of this trial system regardless of the outcome of this study. In some cases this would supplant a system already in effect.

Thus, there are three suggestions embodied in the responses of collaborators: (1) simplify, (2) expand, (3) use as it.

In response to a question about how much time was required, the collaborators estimated an average of about two hours per week. Asked if this amount of time was justified, all answered in the affirmative.

Comments Solicited

The committee invites the comments of JOURNAL readers on this report and upon the record forms presented here. Because the pilot study was limited to a small percentage of clubs, it is very likely that other superintendents and chairmen may be able to make valuable suggestions. They will be much appreciated.

Principles of Organization

By LYNN A. SMITH

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There is nothing too unique in the management of a golf course and I cannot claim to offer a panacea for all of the problems involved. In the brochure which the Southern California Golf Association sends to all golfers who pay their per capita fee, the comment is made that the Association contributes to club management because "In a 'business' where there are annual changes in officers and committees, the balance wheel

of continuing analysis of operations is tremendously valuable."

The first step in the organization of our "business" is the selection of the Green Committee Chairman. The most important attributes are a great deal of free time, a dedicated spirit, and a good enough sense of humor to take all of the abuse which is bound to come his way and still come up smiling! More technical competence is required for this