

## Distribution of Maintenance Costs

ADOLPH F. SEUBERT, INVERNESS CLUB, TOLEDO, OHIO

*With comments by Messrs. Alan D. Wilson, Hugh I. Wilson,  
and W. C. Ferguson.*

I have had no experience in the practical work of greenkeeping. My business life has been devoted to the employment and handling of labor in factory management. I believe I was put on the Green Committee at Inverness in the hope that I might contribute something out of my experience to the problem of regulating and controlling expense and ascertaining the proper cost of doing the work. This article, therefore, is submitted more to "start something" than to state definitely what should or should not be done, and my feelings will not be hurt in the least if some practical greenkeeper or someone else takes issue with my conclusions.

Heretofore, as I understand it, labor costs on golf courses have been kept in a very crude way under general heads, such as *labor, maintenance, new work*, and the like, which mean very little. No attempt has been made to break up maintenance costs in any way so as to get the facts as to the costs of the different kinds of work. It is obvious that there can be no comparison of the maintenance costs on different courses until the figures are kept on a common basis.

The first step to be taken in the ascertainment of any costs is to divide the work into natural divisions, just as factory costs are broken up into the operations. This division must be based upon the method of doing the work and must be natural and not too complicated, so that accurate records can be kept without much trouble.

In order to keep our costs during the coming year, we propose to use a separate time-card or time-sheet for each employee, so as to show the kind of work done each day, the number of hours, the rate of pay, and the totals in dollars. It should be easy enough at the end of each week to combine the totals from these individual time-cards and put them on a summary or résumé sheet to show the totals for each week for each of the different kinds of work. On page 125 is shown the time-distribution sheet we expect to use, and on page 126 the résumé or weekly sheet. Considering the way in which our work is to be done, it is believed that our classification is reasonably natural and not too elaborate, and it may be well to explain the various items.

*Routine work on putting-greens.*—This includes all the work ordinarily done as routine work on the greens. We expect to employ six men to cut, roll, weed, and care for the greens, and to trim and take care of the traps around and about the greens. An extra man will cut and trim approaches and edges of the greens with a power mower. All this will be the daily routine, and all this labor will be put under this heading.

*Mowing fairways, mowing rough, and mowing tees.*—These need no explanation. We shall have one man running tractor mowing machines practically all the time during the cutting season. A man will be used where necessary in the rough, and one man will take care of the tees.

*Care of bunkers.*—This will include the work on the bunkers and traps other than those around and about the putting-greens.

*Fertilizing, seeding and top-dressing greens.*—We expect to top-dress our greens very frequently. Last year this was done about once a month and it is planned to do it oftener this year. This item includes the

CHECK NO..... WEEK ENDING.....192....

NAME.....

**Inverness Club—Time Distribution Record**

MAINTENANCE		Sun.	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.	Total Hours	Total Amt.
1	Routine Work on Putting Greens									
2	Mowing Fairways									
3	Mowing Rough									
4	Mowing Tees									
5	Care of Bunkers									
6	Fertilizing Seeding and Top Dressing Greens									
7	Fertilizing Seeding and Top Dressing Fairway									
8	Special Weeding Greens									
9	Worm Eradication Greens									
10	Watering Labor									
11	Labor on Compost									
12	Barn Work									
13	Repairs to Water Lines									
14	Attention to Tee Boxes, Moving Holes, etc.									
15	Repairs to and Upkeep of Equipment									
16										
17										
18										
19										
NON MAINTENANCE										
20	New Work									
21	House Grounds									
22	Cutting Wood									
23	Trucking for Club									
24	Outside Buildings									
25										
26										
Totals.....										

TOTAL HOURS.....RATE PER HOUR.....AMOUNT DUE.....

APPROVED.....SUPT.

RECEIVED PAYMENT.....

# RESUME OF TIME DISTRIBUTION

INVERNESS CLUB (Green Committee)

MAINTENANCE	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending	TOTAL
1 Routine Work on Putting Greens																
2 Mowing Fairways																
3 Mowing Rough																
4 Mowing Tees																
5 Care of Bunkers																
6 Fertilizing Seeding and Top Dressing Greens																
7 Fertilizing Seeding and Top Dressing Fairways																
8 Special Weeding Greens																
9 Worm Eradication Greens																
10 Watering Labor																
11 Labor on Compost																
12 Barn Work																
13 Repairs to Water Lines																
14 Attention to Tee Boxes, Moving Holes, etc.																
15 Repairs to and Upkeep of Equipment																
16																
17																
18																
19																
NON MAINTENANCE																
20 New Work																
21 House Grounds																
22 Cutting Wood																
23 Trucking for Club																
24 Outside Buildings																
25																
26 Totals.....																

FROM.....192... TO.....192...

SIGNED BY.....

preparation, hauling, and spreading of the top-dressing, and it will also include special fertilization, such as an occasional application of sulfate of ammonia, and will also include the seeding. There seems to be no occasion to separate the costs of fertilizing, top-dressing, and seeding the greens. Seeding, for instance, is done only twice a year and the labor cost is trivial.

*Fertilizing, seeding and top-dressing fairways.*—This will cover about the same class of work on the fairways as is described above in respect to the putting-greens.

*Special weeding on greens.*—This means just what it says; that is to say, the weeding not done by the regular greensmen.

*Labor on compost* is intended to cover all the work in hauling materials and taking care of the compost piles, but will not include the screening of compost or the mixing of compost with other materials prior to application.

*Attention to tee boxes, moving holes, etc.*—This will cover the items mentioned, such as changing the tee markers, changing the position of tee boxes, moving locations of holes, changing flags, picking up grass cuttings, and the like.

The other items in our schedule seem to require no explanation.

Only experience will tell whether this classification is right or wrong. We have left spaces for other kinds of work as the items of classification will develop. Only experience will evolve a classification that can be used on all golf courses, and there seems to be no doubt of the desirability of the strongest kind of cooperation among golf clubs, looking to standardization of accounts, standardization of methods, and the acceptance of a common classification, so that there can be a comparison of costs.

It is more than likely that experience will show that golf courses will have to be divided into groups in order to get to a fair comparison of costs. It would hardly seem reasonable to keep the costs of a small nine-hole golf course on the same basis and with the same detail as the costs on a fine, beautifully maintained, eighteen-hole course. There are a great many courses in small towns that are maintained at a cost of from \$1,500 to \$2,500 a year. It would not be reasonable to keep the costs on such a course on the same basis as on a course that is maintained at a cost of from \$20,000 to \$25,000 a year; so I anticipate that experience will show certain natural groupings; but the principle will be the same and the necessity for standardization of accounts will be just the same.

In making up our time-sheet we started with a tentative sheet proposed by Mr. A. J. Hood, of the Detroit District Green Committee, and we have only added detail and have changed the arrangement. The classification proposed by the Detroit Green Committee included items such as cutting greens, cutting tees, cutting fairways, cutting rough, bunkers, ditches, roads, and miscellaneous, and it does not strike us that this method is either natural or in sufficient detail.

We have also examined a time-card used on the Maketewah Country Club, Cincinnati, which carries the following items: Watering greens and tees, cutting greens and tees, weeding greens, rolling and cleaning greens, preparing top-dressing, seeding greens and top-dressing, cutting greens, seeding fairways, care of traps, cutting slopes and long grass, repairing bridges and fences, repairs to equipment and odd jobs. Our objection to this classification is that it does not conform to our method of doing the work. It seems to us that the cost of work on the greens should not

be mixed up with the costs on the tees, unless of course the work is done by the same men and is not naturally capable of division. Seeding greens, unless it is special weeding, should come under care of greens, and so should the rolling and cleaning. Preparing top-dressing is as much a part of the cost of application as the spreading. Seeding fairways occurs but once or twice a year and does not amount to enough to bother with, and should be included in the general treatment of fairways.

A great many systems of factory accounting have broken down because the division of costs was too fine for practical use, and we have this objection to a cost-sheet which appears to have been used in Chicago, and which classified the items as follows:

Mowing fairways	Power-house labor
Seeding fairways	Barn expense
Disking and top-dressing fairways	Mowing putting-greens
Rolling fairways	Worm eradication putting-greens
Mowing rough grass	Fertilizing putting-greens
Mowing mounds	Seeding putting-greens
Mowing and top-dressing tees	Weeding putting-greens
Sanding bunkers	Labor on drain-tile
Raking bunkers	Repairs to mowers
Labor sprinkling	Repairs to sprinkler system and sprinklers

It might be possible to keep the costs on the golf course in great detail if a competent cost-clerk were employed, but the object to be obtained is a simple, easy, workable form that can be handled as a matter of routine, day by day, by the ordinary greenkeeper.

The salary of the greenkeeper is, of course, a part of maintenance costs, but the purpose of the time-distribution record now under discussion is to classify and record only direct labor. The manner of handling a greenkeeper's salary must depend upon the nature of his work. If he does nothing but give the work general supervision, then his salary is part of the overhead and should not be entered on the daily cards. If he devotes a part of his time to direct labor, then so much of his time should be entered on the daily cards and the balance which is devoted to general supervision should be treated as overhead.

To determine true maintenance costs the direct labor costs should be loaded with the overhead. The loading of overhead charges is strictly a matter of accounting and should be taken care of by the books rather than the greenkeeper; and there would seem to be no difficulty in keeping proper records if a daily record is made of the greenkeeper's direct labor in such form that the bookkeeper can understand how much of the greenkeeper's salary is to be treated as overhead.

At the end of the year or any period the total amount expended for direct labor for the various items of work will be known, the amount of direct labor of the greenkeeper will be known, and the cost of supervision will be known. It will then be a simple matter for the bookkeeper to spread the supervision expense proportionately over the direct labor items. Of course, the greenkeeper's direct labor items should not be loaded a second time. The supervision expense should only be spread over the costs of the labor of others than the greenkeeper.

This may seem a little complicated at first glance, but any bookkeeper ought to understand it.

Without a doubt someone somewhere in the United States has worked out a complete, satisfactory, and entirely practical distribution of maintenance costs, and whoever has anything that he considers worth while should contribute it to the Green Section for publication so that by the exchange of views and experience a standard system can be worked up in such shape that it can be used on a great many courses.

There are many courses that have special problems and special work and any standard system will have to make provision therefor.

It goes without saying that there should be a complete separation of the work on the golf course from the work around the house and general grounds, and there should be a separation of maintenance and non-maintenance work.

It ought to be made possible by standardization to lay the accounts of two or a dozen courses side by side and see where the money went, just exactly as a group of factories with which I happen to be connected are obliged to compete with each other, and the figures are made comparable by operation on a common system. It is hoped that by this time next year the Green Committee of the United States Golf Association will be able to send out a full set of forms, with complete instructions for use, about the same as the Interstate Commerce Commission prescribes for the accounting of railroads. This can hardly be done, however, until the proper forms are evolved. The subject is an important one, and it is hoped that everyone who has any suggestions to offer will not fail to let the Green Section members benefit by them.

COMMENTS BY MESSRS. ALAN D. WILSON AND HUGH I. WILSON, PHILADELPHIA, PA.

We have carefully gone over the cards accompanying Mr. Seubert's article on *Distribution of Maintenance Costs* and we feel that the author is on the right track when he tries to reduce the number of items and so simplify the card. But it seems to us that he should go still further in this direction, having in mind the difficulties of the average club in the practical application and use of such a system. It is our opinion that items 2, 3, and 4 should be consolidated into one item, which should read, *Mowing fairways, rough, and tees*. This really is one job, especially when it can be done with a tractor or triplex mower, and where the tees are so built that they do not have to be cut by hand. In any event it is all a rough mowing job.

We do not see why item 9 should not be combined with item 6 under the heading, *Fertilizing, seeding, top-dressing, and eradicating worms from greens*.

We do not understand what item 12, *barn work*, means. If it is the care of horses, we think it should be made clear, and if it is the care of equipment we think it should be combined with item 15.

In regard to item 13, *Repairs to water lines*, these are so trivial on the average course that we think it might be well to combine this item with 15. Another reason for this is that the watering systems of various clubs are of such different character that the cost of maintenance would not be comparable and would give no valuable information.

In his discussion of the heading, *Labor on compost*, Mr. Seubert says, "but will not include the screening of compost or the mixing of compost with other materials prior to application." The question arises whether the cost of screening compost should not be charged up against this labor. If you want to compare the difference between the cost of compost and commercial fertilizer of any sort, it seems to us that you should know the cost of the compost when it is completed and ready to apply to the greens; in other words, when it is in just the same condition as commercial fertilizer would be when delivered to you ready to apply or to mix with other materials.

We think the general lay-out is exceedingly good, but we do feel strongly that for practical value we must get the plan so simple that a man of average education will be able to apply it reasonably correctly and without undue labor.

COMMENTS BY MR. W. C. FERGUSON, GLEN ECHO COUNTRY CLUB, NORMANDY, MO.

With reference to the daily time-card I would say that I have never been in favor of a daily time-sheet. I think a time-card for each man covering a period of two weeks is more satisfactory. Keep these time-cards in a loose-leaf book and have them turned in semi-monthly. This is also convenient when a man quits the work in the middle of a pay period, as his particular time-card can be taken out of the book, checked up, and vouchered. It also gets away from the necessity of writing a man's name daily on the time-card. This is merely a matter of opinion, however, as the data desired can be obtained by either method. I am submitting herewith a form, on page 131, showing the pay-sheet suggested by a committee of the St. Louis Greens Section. This is a weekly sheet, and there are a number of features which I do not like in it. I am having some prints made up for my own use which are considerably different from these sheets.

With reference to the distribution record, I would say that I do not think this is complete. There is no provision made for showing supervision, nor maintenance items on the club grounds other than on the course itself. I believe this to be of enough importance to warrant subdivision. I do not believe the daily distribution of time as shown in the Inverness Club record is of much value for comparative purposes, and the work necessary to subdivide the pay roll for each day into various items is quite considerable.

The report, in my opinion, should show not only the expenditures for labor, but for material; for the weekly, fortnightly, or monthly period. It should also indicate the total expenditure on any subdivision of the work up to date of the report and may or may not show the amount expended up to that time for the previous year; but above all, it should show the total budget allowance. I am also submitting a form, on page 132, showing the record recommended by a committee of the St. Louis Greens Section, which can be used either as a fortnightly or monthly report. This shows all the items I have mentioned above. I used something of this sort, which was not subdivided in such detail, last year, and found it very helpful, the items detailed in this budget allowance being made up from the budget expenditures of last year. The advantage of having the budget allowance on each report is that one can immediately see when one is beginning to approach the end of one's "string."

As for the *Résumé of Time Distribution*, I cannot see what advantage that would have. I may not understand the purposes of this report, but at the present time I do not see how it would aid in the organization or direction of grounds work.

The St. Louis Greens Section is having printed forms which are identical with this monthly maintenance report and expect to make comparisons of costs on the subdivision basis as shown. The committee is aware of the fact that this record is not anywhere near perfect; but something must be done; and it is hoped that by the end of the year some experience will have been obtained on which to draw up an intelligent record for the succeeding year.

With reference to the article in general, I think it is very good, and believe it will bring out some interesting discussions which will be very beneficial.

#### EDITORIAL NOTE

The comments illustrate and enforce the writer's point that a standard system is a necessity, and that there must be a compromise between too much detail and too little, and that the system must be natural and workable. The clubs must work together on a standard system though it may not exactly suit everyone.

The article relates only to labor costs and leaves for future discussion other matters of accounting, such as material costs, budgets, etc. The most important item of expense is labor, and there can be no comparison of figures until the figures are made up so as to show where the labor is used and what it costs. The Green Committee of the U. S. Golf Association will value the cooperation







of member clubs in adopting some system of distributing labor costs, whether it is their own or some other club's system, so that the experience of many can be available as a basis for the construction of a standard system next year.

It is hoped that the article will induce many clubs to attempt something in the way of a cost system and that there may be a general discussion of the subject through the columns of THE BULLETIN and otherwise, so that at the end of the year we shall have the material to use in making up something in the way of forms that can be accepted as standard.

## Questions and Answers

All questions sent to the Green Committee will be answered as promptly as possible in a letter to the writer. The more interesting of these questions, with concise answers, will appear in this column each month. If your experience leads you to disagree with any answer given in this column, it is your privilege and duty to write to the Green Committee. *Please bear in mind that the recommendations given apply specifically to the locality designated at the end of the question.*

1. Economizing in seeding by use of mixtures for northern greens, fairways, and rough; wheelbarrow seeder vs. hand-sowing; rate of seeding; red fescue, bent, redtop, bluegrass, Pacey's rye-grass, orchard-grass, tall meadow-oat-grass, meadow-fescue, sheep's fescue.—You advise for fairways bluegrass, 4 parts, fancy re-cleaned redtop, 1 part; for greens, German creeping bent and fancy re-cleaned redtop in equal proportions. As you know, prices are unusually high this year, and I would like to cheapen this a bit if it can be done without great harm. Red fescue at 50 cents a pound is much cheaper than creeping bent at \$1.40. Could I use 25 per cent fescue, 25 per cent bent, and 50 per cent redtop? Our soil is a fairly rich clay-loam, not a bit sandy; I know fescues are sand-lovers. Will 5 pounds to 1,000 square feet be heavy enough? We are seeding new greens, not reseeding old ones. Is there any mechanical hand-sower that will insure sowing this seed more evenly and more economically than simply by hand-sowing? I presume a wheelbarrow seeder would be inadvisable for greens. Now, as to the fairways, can I cheapen my mixture a little by adding English rye, meadow fescue, or orchard-grass? If I use rye-grass, would the short-seeded or Pacey's rye-grass be better than the other grade? I am quoted the same price for either grade. What is the very cheapest seed I can use for new rough? I had thought of orchard-grass, meadow-fescue, and redtop. I am not striving to get a hard rough, but just grass on it so the general appearance will be good and so that should we want at any time to change fairways we could do so without much trouble. White clover is native to this section, and on old sod we find it abundant, and it will naturally creep into all our fairways.—(Pennsylvania.)

Our advice would be to effect your economy by using some redtop, but not to use fescue. In our experience it has been almost useless to seed fescue mixed with the bents, as in the end the fescues never endure in competition with the bents. You can reduce your bill therefore by seeding with a mixture of 75 per cent redtop and 25 per cent bent. The fescue will eventually disappear so that you will have pure bent. The bent seeds, including redtop, are very fine seeds, about 4,000,000 to a pound. Bear in mind that the rate we advise means about 20,000,000 seeds per 1,000 square feet, or 20,000 per square foot. Really one can get along with much less seed than this, but in our experience it is not advisable to reduce the seeding to a smaller amount, as it may take much longer to get a dense, well-knitted sod.