

grass produced practically no seed throughout the season. It would seem to depend for reproduction exclusively on its spreading habit of growth.

Our creeping red fescue at the Rivermead Club was obtained from Dr. Holy, plant breeder of Czecho-Slovakia. An endeavor is being made to have seed of this strain of creeping red fescue grown on contract, looking to future seed supply. The strain of creeping red fescue we have will produce seed sparingly.

Unless the managements of golf clubs can secure unquestioned assurance as to the genuineness of seed of creeping red fescue or creeping bent grass, they would probably meet with greater success by using in substantial part seed which is on the market under the name of Rhode Island bent grass and which is less difficult to obtain in commerce. It is much to be preferred to redtop and on most soils there ought to be much less danger of winter-killing on the putting-green where Rhode Island bent grass is used than with the ordinary redtop of commerce which may or may not have been supplied under the name of creeping bent grass.

A half-inch dressing each autumn, at the conclusion of the season, of fine compost made from peaty surface soil that is practically pure humus, will usually be found to be beneficial to the putting-green. An annual dressing of this material will maintain a surface soil for the putting-green of an inch or more of soft humus, in which the roots of the grasses will thrive notwithstanding repeated rolling and trampling. Acting on the recommendation of a golf course "mystagogue," one of our new clubs last year bought several carloads of "golf humus," paid a substantial price per ton, and freighted it more than two hundred miles, and then discovered that the surface soil of several acres of the low marshy ground on their own property was quite comparable to their imported golf humus.

Standard Cost Analysis for Golf Courses

GUY C. WEST,

Greenkeeper, Fall River Country Club, Fall River, Mass.

The recent discussion on standardizing cost analysis for golf courses has caused the writer, who has had some experience with cost analyses for park systems, to evolve the following system, whereby certain comparisons can be drawn between expenditures of different golf clubs for various lines of work.

It must be borne in mind that all expenditures must come under some heading or item. For these items the following are suggested to cover the work for the average golf course. Where other work is carried on, other items can be added.

A. NEW CONSTRUCTION.

1. Fairways.
2. Greens.
3. Rough.
4. Tees.
5. Traps.

B. MAINTENANCE.

1. Fairways.
 - a. Mowing.
 - b. Renovation (includes fertilizing, seeding, repairing divots, etc.).
2. Greens.
 - a. Care (includes mowing, rolling, sweeping, pest eradication, etc.).

- b. Renovation (includes fertilizing, seeding, etc.).
- c. Miscellaneous.
- 3. Rough.
- 4. Tees.
 - a. Care (includes mowing, watering, changing markers, etc.).
 - b. Renovation (includes composting, fertilizing, turfing, seeding, etc.).
 - c. Miscellaneous.
- 5. Traps and Bunkers.
- 6. Compost Pile.
- 7. Turf Nursery.
- 8. Tools and Equipment.
- 9. Stable (includes care of horses, etc.).

Cost cards should be kept showing the main heading and the sub-heading. For these cost cards, the writer suggests daily slips which will give information for monthly cards. From the latter very valuable and comprehensive data can be secured for a monthly report from the greenkeeper to his greens committee.

Suggested cost cards for both daily and monthly posting are appended. These are taken from some used very satisfactorily by several park systems.

It is the opinion of the writer that very satisfactory results may be obtained, where a small force of men is employed, by the use of small slips of paper, such as are sold in blocks, instead of daily time cards. On these should be written the heading, date, and man and horse hours under that heading for that day, and a new slip used for each heading.

Comparisons of the costs of mowing fairways for two different courses would be almost useless. For comparisons, a unit must be used; for the above heading a good unit would be per acre per mowing. Then if one club was spending much more for mowing an acre of fairway once than another, the difference would be easily apparent and the expensive club could well afford to investigate conditions and reasons.

Country Club

Date—Aug. 24, 1922

PLACE—Fairways Care	A. M.		P. M.	
	From	To	From	To
Greenkeeper	1 hr.			
Smith @ \$3.00	6:30	12:00	1:00	4:30
Jones @ \$3.00	6:30	12:00	1:00	4:30
Horse	6:30	12:00	1:00	4:30
Horse	6:30	12:00	1:00	4:30

COST ANALYSIS FOR FAIRWAYS MOWING

UNIT—

COST FOR UNIT FOR MONTH—

DATE—AUGUST—1922

COST FOR UNIT TO DATE—

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Rate	T'tl	Ex pen.	
Greenkeeper																		1																	
Foreman																																			
Laborers																																	39		
																																	36		
																			18													33			
Team																																			
Horse																			18																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Totals			

This article merely suggests how cost analyses could be standardized. If every club interested would keep some such system, results would no doubt show some startling disparities in costs, conditions would be ameliorated where needed, and something would be done toward that dream of a good golf course with membership at twenty dollars per year.

(Mr. West's article is particularly well considered. If golf clubs generally will adopt this or some other system, we will be able by experience to work out a classification of accounts that will be standard and comparable. It is believed that instead of keeping the daily cost cards suggested by Mr. West, less work will be involved if a daily time sheet is used, so that the costs can be taken from the time sheets weekly or monthly. In other words, every reasonable purpose should be answered and a good deal of time and work should be saved if the costs are figured once a week or once a month.

(Mr. West is correct in his statement that comparisons of costs will not be complete until they are on a unit basis. In other words, if one course has thirty acres of mowed fairway and another course has forty acres of mowed fairway, the cost should be reduced to a unit basis for purpose of comparison; but this need be done but once a year or at the time of comparison.

(The Green Committee will appreciate articles, letters, or suggestions from greenkeepers and committeemen.—EDITORS.)

A Convenient Way to Plan Hazards

DR. MAYNARD M. METCALF

The Orchard Laboratory, Oberlin, Ohio

In developing the artificial hazards (traps and bunkers) on the Country Club course in Leland, Michigan, we found it very convenient to lay them out on the grass with common white twine held in place by wire hair-pins. The white line showing the limits of the hazard could readily be seen from a distance of 300 yards and greater. We laid out every hazard in this way and then invited different sorts of players to play it with us, and did not put a spade into the ground until we had studied the hazard from the point of view of every type of player using the course. Every hazard was played for a week or more before it was built. Several different layouts of some holes were tried before the one desired was chosen and built. This method is slow, of course; but this is more than compensated for by the fact that experiment is thus possible without expense.