



Better Turf for Better Golf

TURF MANAGEMENT

from the USGA Green Section

BUSINESS APPROACH TO GOLF COURSE MAINTENANCE

The USGA Green Section conducted its sixth annual Educational Program at the Biltmore Hotel, New York City, on January 26. Excerpts from two of the papers were printed in the April issue and four more are on the following pages.

Simple Accounting Methods And Budget Preparation

ALEXANDER M. RADKO

Eastern Director, USGA Green Section, Highland Park, N. J.

Records, like paintings and poetry, can mean different things to different people. To some the task of keeping records is a breeze, to others it is a bore, but to the golf course operation records are a necessity! This is true because those charged with responsibilities of management are dealing with other people's money. In the normal course of events, the matter of budgeting is a joint committee-superintendent responsibility with the brunt of it falling on the shoulders of the latter. Basically, it is their joint responsibility to provide the very best golf course possible for a given amount of the membership's money. Like paintings and poetry, different people will interpret differently as to what can, or what should, be expected with this money.

Over the years there have been a number of fine surveys published on golf course expenditures. The undeniable fact is that costs are rising steadily due to several factors but primarily—

(1) The desire for the best playing conditions at all times.

(2) More golfers, therefore more play; golf will never be just a week-end sport again.

(3) Longer playing span; in the Northeastern area Labor Day used to signal the slow down of play, now Thanksgiving is more nearly the date most aim for.

(4) Rising costs of labor, materials, and equipment.

Each survey points up the fact that labor consumes 60 to 70 per cent of the annual budget. In industry since the production line techniques have been perfected, an individual worker may perform only one specific operation day-in and day-out during his entire work-life. However, in the golf operation, crews are necessarily small, and each man must perform numerous tasks daily. Because of this, and because every single job performed no matter how simple is important to the management record, a worker's time and duties should each be carefully recorded each day. The simple fact is that good records tell the management story for a golf course operation. These records can be as simple or as complicated as the individual cares to make them.

As a matter of reference to an uncomplicated system the following records of two veteran golf course superintendents

were provided the writer independently and these were then set together on one sheet for quick comparison purposes. The 18 hole summary was provided by Superintendent Riley of the Essex Fells Country Club in Essex Fells, New Jersey, while Superintendent Elmer Michael of Oak Hill Country Club in Rochester, New York provided the data for the 36 hole course. While slight discrepancies exist, in the main, the agreement in their figures is truly remarkable. At a glance it reveals what it takes in man hours to maintain a well managed course, what percentage of the total this is, and where the emphasis, if any, is placed in the management program in any given year. From this record, if further information is sought, any of these categories could be individually broken down to show every detailed operation that went into

making the total. If members wish to place more emphasis on any individual area this can easily be adjusted to their requirement. (See Chart)

The advantages of this simplified system are many but some of the main ones are:

(1) It deals in man hours and percentages for each category and so is easy for the committees to work with.

(2) Though the budget may fluctuate from year to year—the percentages should remain somewhat stable. Therefore the level of maintenance is placed up to the committee . . . no matter what the budget, these percentages will persist.

(3) It is easy to understand each general category—they are not complicated by detailed information. At budget time committees want primarily to talk

Labor Distribution of Two Major Clubs

	18 Hole Course in New Jersey		36 Hole Course in New York	
	Hours	% of Total	Hours	% of Total
Greens and Approaches	2703	23	5170	22
Tees	660	6	1860	8
Fairways	881	8	(3290	14
Rough	492	4	(
Banks at Tees, Greens & Traps	348	3	(2370	10
Bunkers	839	7	(
Shop (Equipment repairs)	930	9	2300	9.5
Club Grounds	605	5.5	2140	9
Parking Area	108	1	325	1.4
Off Course (trees, hedges, pruning, spraying, planting)	682	6	1620	7
Pool	641	6	450	1.9
Misc. (green & tee nurseries, painting, bridges, roads)	453	4	1665	7.2
Drainage	44	.50		
Unproductive time (holidays, vacation, sick leave)	429	3.00		
Capital improvements	1653	14		
(Installed water lines in 4 fair- ways, constructed new bridges, new tee, and renovated 1 apron area)				
Tournaments			1120	4.8
Preparing compost			295	1.2
Tennis courts (3)			440	1.9
Hauling rubbish			160	.5
Maintenance of Water System			360	1.6
Total	11,468	100.0	23,565	100.0

Ed. Note: Hours expended will vary with regions, depending upon length of growing season, and upon the level of maintenance performed.

money—not management programs.

(4) From this record, it is a simple matter to prepare budget.

(5) There are no problems in fitting this system into any bookkeeping system.

All other records are relatively easy to categorize. These are primarily a matter of proper entry into the record book.

These include—

(1) Purchases

(2) Equipment—Inventory and Depreciation

(3) Basic data record showing course description—property boundaries, irrigation and drainage lines, acres of rough and fairway, size of greens and tees.

Records of this type are described fully in several articles published—and those particularly of our Pilot Study of Maintenance Costs—and subsequent articles on the topic, written by the Green Section's Dr. Marvin H. Ferguson, which appeared in the *USGA JOURNAL AND TURF MANAGEMENT*.

Complete records and budget information are necessary for several reasons—and I believe it is best summed up in the statement of one housewife keen in the way of budgeting who once said "records are necessary so that you don't wind up with too much year at the end of your money!"

Keeping Up with Research is Good Business

By **DR. MARVIN H. FERGUSON**

Mid-Continent Director and National Research Coordinator, USGA Green Section

Research continues to grow in size and in importance. In 1962, 16.5 billion dollars are to be spent in the United States. This is five times the \$3 billion spent for research in 1950. If research were considered an industry it would rank in the top 12. It employs 350,000 people. Government will pay two-thirds of the cost of the research done in 1962, but 75% of the work will be done by industry under government contract.

Type of Research

Much of the government sponsored research is of a basic nature. It deals with all aspects of physical and biological science. Ultra-high temperatures, cryogenics (extremely low temperatures), direct energy conversion systems, light qualities, etc., are some of the areas where much effort is being expended.

Discoveries made in basic research may have no preconceived application, but as facts become available they can be pieced together to improve our knowledge and technology. Such discoveries can be applied in many areas of biological science, and so while the nation's space effort may be the prime reason for research of this magnitude, the bonus values that result from it may even provide us with additional knowledge for growing better turf.

Where Does Turfgrass Fit In?

This background will indicate that our concern with turfgrasses represents an infinitely small effort when compared

with the total research expenditure. However, our opportunity to learn new facts is not limited by our own small efforts because of the fact that we can borrow from the large reservoir of basic information.

We are going to need all the new information that we can acquire. We shall be faced with new problems. An example is the new stadium to be built in Houston for use of the Houston Colt .45 baseball team. The stadium is to be dome-covered and air conditioned. It appears that light will limit the growth of grass. Supplemental light can be supplied artificially, but such light generates heat, thus increasing the refrigeration load.

Even though our part in the total research effort is comparatively small, it may be considered big in absolute terms, and the job of keeping up with progress is a big one. Presently \$550 million a year is being spent for agricultural research. Fifty-two per cent of this is by industry, with the remainder being done by federal and state governments and by non-profit organizations. There are more than 9,000 pesticides on the market today for controlling insects, diseases, weeds, nematodes, and rodents. Two years ago there were only about three pre-emergence crabgrass controls on the market. Today there are more than 20 and this is just the beginning.

Basic research on the activity of

enzyme systems within a plant has provided the knowledge that has permitted the development of material which will interrupt or alter this enzymatic activity. This is the basis for an unusual degree of selectivity in weed control. The triazine compounds which work on this principle appear to be the forerunners of a long series of such materials.

Thus, the products of basic research are all potentially capable of being fitted into our particular discipline to provide more effective and more efficient tools.

The Green Section Role

At this point, we might pause to justify the existence of the Green Section. The duties of the Green Section staff are largely those of keeping up with research activities, being aware of new discoveries and new products, and attempting to relate these advances to golf course problems. We cannot hope to keep up—but we can devote our full time to the effort. You ask much of your superintendent, who, with a course to maintain, a crew to supervise, and myriad miscellaneous duties, also obliged to try to keep up with what's new. Here is an area where the Green Section Visiting Service can help you.

In addition to following the progress of other research, the Green Section, through the USGA Green Section Research & Education Fund, Inc., sponsors and supports research through grants to state institutions. Many of these grants support projects designed to solve problems peculiar to golf. We may cite Penn State's efforts with Colonial bent, V.P.I.'s overseeding study, and Texas A. & M.'s physical studies on soils. Yet all these projects will yield benefits that carry beyond the immediate problems.

In the 41 years of its existence the Green Section has contributed much to the knowledge of golf course maintenance through its research effort. It has developed fungicides, herbicides, and insecticides. Examples are the testing and subsequent recommendation for use of mercury fungicides in the middle 1920s; thiram in 1942; sodium arsenite in the early 1930s; and 2,4-D during and just after World War II. Chlordane was tested by the Green Section long before it was named. Harrington & Ferguson applied some to turf on a nursery at Rolling Road in Baltimore at 100 times the rate later

recommended. Through such painful experiences has the knowledge been gained which permits members of the Green Section staff to recommend safe rates of use with confidence.

Among the grasses selected, tested and released as superior strains are Arlington, Congressional, Collins and Cohansey bents, and Merion bluegrass. Since establishment of the visiting service, grants have supported work from which came Tiffine, Tifgreen and Tifway bermuda. Soils information which permitted publication of specifications for putting green construction has been gained from Green Section sponsored research.

Present research efforts deal with grass improvement; soils studies; disease control studies; controlled environment studies; and with general support of turf-grass research at a number of experiment stations.

Research In The Future

Some problems face all of us with respect to the future of research. This does not apply to our specific interests, but to research in general. Government is likely to continue to sponsor basic research because of the pressure of our space program. National Aeronautics and Space Administration alone will spend \$20 billion before the first astronaut arrives on the surface of the moon. While this work will be done by industry under contract, government will pay the bills. This creates a problem in connection with patents. A company which makes discoveries under such contract research cannot expect to control the patent rights to such discoveries. Yet, if the company does not receive such rights, its incentive to do research is impaired, if not destroyed.

To do research, competitively, in such a fast-moving area is almost beyond the capabilities of many companies without the help of government contracts. The combined efforts of the interaction of these facts may constitute a threat to our patent system which has served us so well.

There is a possibility that government may find it necessary to establish a research organization of its own. Thus many of the basic patents would come to be government property and companies would be licensed to manufacture the

products covered by such patents. We make no attempt to editorialize on this matter, but it is a matter of importance to all. Our national welfare and our progress have been linked to research efforts. If we are to continue to advance, we must continue our research efforts.

In the last decade, technical progress has been amazing. Perhaps the surprising thing is that costs have increased **only** five-fold. We, in turn, have come a long way in turf management. Management is more efficient because of new tools, new chemicals, new grasses, and

new techniques. There is even now a mass of basic information which has not yet been translated into practice. As long as researchers are busy, this will ever be so. DDT was discovered in 1874, but it was not put to use as an insecticide until the early 1940's.

Our business is to see that this backlog does not get too big. With ever increasing research the task will become more difficult, but we must try. The thought I would like to leave with you is that "keeping up with research is good business."

Don't Overlook Public Relations

By ALLEN M. OAKLEY

Member, USGA Green Section Committee, Quincy, Ill.

Public relations, whose development since the turn of the century parallels the growth of golf, today has been refined into a science that can be applied to our problems in golf course maintenance.

We must consider a foursome—the player, the green superintendent and his association, the green chairman, the club directorate.

If we have been overlooking public relations, let's find out what it means. To paraphrase one definition: "Public relations in golf is essential today because we have found that information, understanding and good will are necessary for the well being of that fortunate member of the foursome to whom we accord the honor on the tee—the player."

Each of us in the foursome has something to sell, and the green chairman must bring buyer and seller together. So it is to him that I address myself.

The player has something to sell. He wants the best possible conditions for his enjoyment—and we all know he can be the most vocal of salesmen on that point.

Though we cannot heed all his demands, nor all too often his advice, he can become our best salesman if we inform him, develop understanding both in and with him, and through him spread good will. Those are the translations for us of the special language of the science of public relations. The green chairman must be the key man in putting them into practice.

There was a day when he and his

greenskeeper dealt with an inexact science. Today he lives in a new and better world, made possible by experience, research and organization.

How can he make the most of it? How apply public relations?

1. He must recognize the full importance of his job and publicize its objectives and accomplishments.
2. He must understand the nature of the advances that have been made.
3. He must take full advantage of the modern services available.
4. He must recognize and encourage the new atmosphere created by a corps of trained and dedicated superintendents.
5. He must balance desire and resources.
6. He must help prepare for the future, both in his own club by creating wider interest in the problems and science of golf course maintenance, and on the broader landscape where training and research are thriving and manpower is needed.

All this adds up to one word: "Inform." It's a formidable weapon against the old fogies of tradition, member apathy and budget restrictions.

So let's sell to the players an understanding of the superintendent's problems, to the board the value of new methods and machinery—their dollar value and satisfaction value, and to the superintendent

a goal he and his crew will be glad to shoot for.

My short experience as a green chairman convinces me you can't do without good public relations on these points.

1. Importance and Publicizing

The golf course budget exceeds that of any other phase of club operation. The golf course has strengthened its position as the core of the country club. And no golfer can be fooled today—he knows the good conditions enjoyed by his fellow and neighbor a thousand miles away.

The business approach emphasizes the importance of not overlooking public relations. A new superintendent, only 22, remarked: "I want a businessman for a chairman." He meant he wants good public relations, understanding of his job, an informed board and budget committee, and informed players. Today he keeps records, knows costs, strives for more efficient maintenance. The chairman must bring him closer to the management and closer to the players.

The superintendents are in business. So must we be.

Have you a long-range program? Full publicity to the membership is an essential. Its success may depend on the admonition: "Inform." Despite good advice, a club lost nine years in getting under way, because its long-range program was not plainly put before the membership.

2. Understanding and Advances

The literature being produced today covers the entire field of maintenance, research and new ideas. It can inform you. Let it inform your golfer too. When he walks into the locker room or pro shop, he sees golf magazines—why not golf course magazines? Put them where he can see them, and help yourself in public relations.

3. Taking Advantage of Services.

Bernays defined public relations in actual practice as "the engineering of consent." This means: "Let's listen to the experts, let's get some good advice—and let's get everybody to go along with us."

That long-range program that failed—a public relations job that sprang from using available services was its salvation. When the Green Section's visiting agronomist and the research director

were brought together with the club president and budget chairman, the goals of nine years before were re-established, the facts looked in the face, and the decision—the consent—given to proceed. The services available were used to develop full club realization of the situation and participation in the goals.

I suggest a USGA certificate that a club may display to show that it subscribes to the Visiting Service of the Green Section. The pro has his credentials on the wall, so also the superintendent. Why not the progressive club?

4. The Superintendent of Today

What should our public relations be with him? They had better be good. Our golf course is in his hands, and he means to make it the best under any given set of circumstances. He's trained, he's businesslike, he knows the value of research and of down-to-earth experience. He's a bookkeeper—and a leader. He supports the educational approach with scholarship funds—and jobs. He's more alert than we are to the value of public relations.

To this new atmosphere, what can we contribute in return?

Let's put our superintendent on the clinic level.

It would be a public relations theme—why the new mower will do a faster, better and less costly job; why the turf nursery; why a fairway was knocked down with chemicals; why maintenance can't wait for players in humid August; why the tiling under the new greens, and why their materials went to a laboratory to determine the best mix.

I see a confident new breed in the maintenance business—men who can stand up and inform, and interest, and win over the golfer's support. When he answers the players' thousand whys, they will be less likely to say: "What are THEY doing now?"

5. Balancing Desire and Resources.

Here we are really in the middle. The superintendent has his desires, the player has his; no club can buy beyond its means. Budget and program are the problem. When it comes to the dollar and the golf course, let's sell the superintendent to the board as an expert on costs and labor and time-saving methods and machinery. And let's present the

player's side—a summary of his complaints and, what is really the same thing, his desires.

And then you may want to duck, for public relations probably can only soften, not block, the punch. As long as clubs have dues and treasurers, budget time will be a tough time.

6. Preparing for the Future

Green chairmen come and go—or they may stay forever. Some clubs limit the possible term, others have had one-man control through the years. One may sidetrack an interested man and lose continuity. The other may develop an iron hand. What can public relations do here? Every chairman and every superintendent should spread the ideas and ideals of the business. Inform the players and make recruits. Spread the gospel of research, the business approach and results. Talk nematodes, not megatons, in the locker room. Show off the nursery and post the superintendent's bulletins and the agronomist's reports.

On the wider fairway of training and research, it's the second shot to the dis-

tant green that counts. Scholarships are not all athletic, and not every caddie who steals a swing behind the tee dreams of winning the Open. Many of them, like the traditional paper carrier, are going to be business and professional men. Some of them can and should be directed into the expanding field of turf. A bit of public relations when a boy replaces his first divot may be the starter.

Now I want to offer an idea I think would qualify as profitable public relations, for the Green Section, for a school, for superintendents and for industry.

Let a student agronomist bound for a career in turf management be placed in residence at a typical course needing, and using, the Visiting Service of the Green Section. He would observe and report factually on basic conditions that demanded correction, on the obstacles encountered, on the practices followed and the success obtained. Such a study might profit us all.

Public relations can help us make a better business out of golf course business. And we can be good at it if we try.

How To Maintain A Healthy Job Outlook

By WILLIAM H. BENGEEFIELD

Western Director, USGA Green Section, Garden Grove, Calif.

Maintaining a healthy job outlook is almost as important today as maintaining a proper and well balanced diet. And it is considerably harder to do. History proves that, under all conditions of war and peace, those people succeed best who form definite ideas of what they are going to do before they start doing it. Unfortunately, no precept is more generally neglected. In a word, man neglects the development of direction. We drift into situations and find ourselves at the mercy of circumstances.

In presenting a paper before an Executives' Training Program at the Menninger Foundation, Dr. William C. Menninger recommended several points that are essential in maintaining a healthy job outlook. He recommended that everyone set aside a little time, at least once a year, to decide where he is going, what are his priorities, what are his ambitions and what are his aspirations. Unless we

do this in quiet thought, how can anyone know where he is headed or if the path he is taking is the one that he wishes to follow? This should not only pertain to our business life, but our personal and home life. Everyone should take stock of his own feelings of status, worthwhile-ness in life and his own dignity and his own integrity.

The importance of developing an avocation as well as taking an annual vacation should not be overlooked when considering good mental health. How many times have you heard the poor fellow describe his business life by saying he hasn't had a vacation for the past five years? And he says this as if it were a virtue. This only reflects bad judgment or poor planning on his part.

Similarly, every man's life will be much richer if he develops some hobbies and a lot richer if he takes them seriously. In the back country of Louisiana

they have a bit of philosophy and express it this way: "If you are too busy to hunt or fish, then you are just too busy."

Questions for Ones Self

Dr. Menninger presented a number of questions that he would want to ask any business man when giving him an emotional checkup. The first is concerned with personal relationships. How do you get along with other people? Whom do you like and whom don't you like and why? When the going gets rough in a particular situation, do you lose your temper, become jittery or paralyzed? How do you handle reality at its more difficult moments?

In today's business world, everyone experiences anxiety and emotional uneasiness. Dr. Menninger asks how you handle yourself when you are under pressure and feel some tension. What do you do about it? If there is an emotional problem, are you willing to admit it and seek help? Many people will not do this and they attempt to bull it through, procrastinate and they help neither themselves nor their work.

Inquire About New Things

After we have taken a good look at ourselves and developed a sense of direction, the next step in developing a healthy job outlook is to acquire the ability to become inquisitive; to acquire the ability to learn new things. Harvey Ullman once said "anyone who stops learning is old, whether this happens at 20 or 80. Anyone who keeps on learning not only remains young, but becomes constantly more valuable regardless of physical capacity."

The fact that learning is a science, based on well defined principles and axioms, never occurs to most of us. It isn't hard to learn, but very few try. If you sit down in your easy chair and read a book on how to play golf, then proceed about your regular business for the next few days without referring to what you have read, your golf game will improve little, if at all as a result of your reading. Unfortunately, most people think that learning is a process of absorption, an automatic result of reading or listening. If you simply read or listen to something, you are largely wasting your time or only entertaining yourself. You are not learning.



Lee Record, a graduate of Colorado State University, has joined the staff of the Eastern Region's Green Section. This office serves Green Section Visiting Service clubs in the Mid-Atlantic and Northeastern Districts. Mr. Record is a native of Cooperstown, N. Y.

Over 2000 years ago, Cicero, the Roman philosopher, said that "Man makes six common mistakes in his life; and one of them is neglecting development and refinement of the mind."

What is required when we learn something? This may sound simple but it carries much more meaning than the mere transfer of facts from a book or lecture to someone's mind. We have all heard the expression "he's an educated idiot." This is the fellow who has the ability to transmit facts from one location (such as a book or lecture) to another location, his mind. But it ends there. No matter how many facts he has, unless he can use those facts effectively in improving his adjustment to his work or to life in general, he has not "learned" anything.

We believe a golf course superintendent should be evaluated on the basis of what he can do, not what he knows. But he cannot do a good job unless he puts certain facts to work for him and unless he is willing to continually learn new ways of doing things better. It is when we take new facts and new principles and put them to work for us that we have truly "learned."