



Better Turf for Better Golf

TURF MANAGEMENT

from the USGA Green Section

THE GOLF COURSE WORKER — TRAINING AND DIRECTION

The USGA Green Section conducted its fifth annual Educational Program at the Biltmore Hotel, New York City, on January 27. The Chairman was William C. Chapin, Chairman of the USGA Green Section Committee.

Ten papers dealing with as many phases of managing golf course personnel were presented throughout the day. Excerpts from four of the morning session papers are printed on the following pages. Edwin Hoyt, Northeastern Chairman of the USGA Green Section Committee, served as moderator of the morning session.

The Scientific Approach To Management

By DAVID LILLY

Member, USGA Green Section Committee, and Chairman, Green Committee, Somerset Country Club, St. Paul, Minn.

The central problems facing golf courses today are ever increasing costs on the one hand, and more intensive usage on the other. The latter compounds the former. Figures show that, on the average, 70 per cent of the total golf course maintenance budget is spent on salaries and wages.

In view of this large expense item, let us ask this question: Does the superintendent spend **enough** time and effort training himself in the area of labor management? I am afraid not in all cases; yet, I think you will agree with me that it will be only through improving efficiency in management that our golf courses, parks, and school grounds will be able to maintain their quality of service without substantial increases in their budgets.

Management is the art of getting things done through people. The professional manager, like the physician, combines

science and intuitive judgment in the practice of his profession. The use of science in management as we know it today need not, and must not, be confined to the management of industrial plants. "It won't work here!" and "We're different!" is an admission of failure to be progressive, and to admit that yours, or any other organization, is not being run in the most efficient manner. Certainly, individual cases are unique, and solutions, of course, vary from organization to organization, but **sound management** principles are **not** unique, and their application should **not** be limited to the factory!

Historically, the profession of management is very old. The sciences supporting the profession, however, date back only to the last decades of the nineteenth century. While considerable misunderstanding will always exist concerning the place of science in management, we can readily

understand how ineffectual the medical profession would be without the benefit of a scientific approach to their problems.

In its simplest terms, a scientific method may be any method that applies a logic of effective thinking, based on applicable science, to the solution of a particular set of problems. Such a method is applicable in an "exact" science, as in the case of the physical sciences, or in an "inexact" science as in the social sciences. Professional management in solving business problems merely combines the logic of effective thinking with the facts gathered by the scientific approach. It differs from traditional management in the manner in which decisions are made, i.e., decisions made under professional management are based on facts developed by a studied approach, as contrasted to predicating decisions primarily on opinions, prejudices and unsound rules of thumb.

Management, as a function in an organization, plans, coordinates, motivates and controls the efforts of others so that the entire organization moves toward specific objectives. It follows then, in the case of a golf course that management is

a function of executive leadership in golf course operations. The managerial functions (of the superintendent) involve planning, coordinating and controlling the activities of others in accomplishing the organization's objectives, within the framework of the policies set up by the club.

If one were to summarize, in as few words as possible, the nature of the management function, perhaps the best reply would be "decision making." Decision making itself is simply the selection of one alternative from a group of two or more alternatives. Among this group can be found the alternative of maintaining "status quo." This possibility should not be underrated, for this, in some cases, may be the best solution. The number of alternatives available, of course, is limited only by the imagination and resourcefulness of the analyst—the manager.

Note: The foregoing paragraphs are excerpts. The full text of Mr. Lilly's paper appeared in the August 1960 issue of USGA Journal.

Importance of the Superintendent in Training and Direction of Workers

By DR. GENE C. NUTTER

Member, USGA Green Section Committee, and Executive Director, Golf Course Superintendents Association of America, Jacksonville Beach, Fla.

A watch is one of the most marvelous and useful instruments of mankind. It commands a position of pivotal importance in this unique age when time is considered our fourth dimension. In a way, this delicately integrated, complexly mechanical organized system acts as the hub of our world—and yet how much we take this essential instrument for granted.

On the other hand, this same marvelous mechanism, when disorganized, disassembled, torn apart and no longer meshed, is of no value to society. All of its jewels, balance wheels and working gears have no value per se. It is the organization of these various and specialized parts which give value to the watch.

So it is with the role of the superintendent in golf course operations. The most beautifully designed architecture,

the most extravagant clubhouse, the most verdant grounds, the biggest name professional or the most famous membership will not long enjoy these advantages unless they have also employed a professional golf course superintendent to insure the useful longevity of their facilities—and their golfing pleasure. The golf course superintendent, like the watch, is often taken for granted. But, also like the watch, he is the real hub of a golf course facility.

Social activities can thrive in town clubs, hotels and restaurants. Yachting clubs can enjoy their activities on the natural waterway of our fortunate land. But gentlemen, a golf course, despite public viewpoint, is not a natural asset. A putting green e.g. is the most advanced and intensive agriculture production known. Only a well trained qualified

superintendent can maintain the delicate balance between successful grass production on the golf course and the adverse effects of the increasing demands of golf. Furthermore, the problems of golf course management are increasing, as evidenced by spiraling interest in golf, the rushing increase in golf cars, and the economic problems of higher cost of labor, supplies and equipment.

A Special Vocabulary

Turf-grass technology has advanced rapidly since World War II. Evidence of this is the specialized vocabulary of the modern golf superintendent which includes such terms as systemic herbicides, broad spectrum and antibiotic fungicides, pelletized and controlled nitrogen release fertilizers, gaseous soil sterilants, calcined clay soil structural amendments, poly-cross bentgrasses and tensiometrically controlled irrigation systems. Industry and turf research institutions have made this development possible. But, only the qualified, professional superintendent can combine these tools with his knowledge of soils, biology, grasses, ecology, business management and labor management to provide the high quality golf facilities demanded of our age.

Thus, I am pointing out indirectly that the superintendent is the focal point of golf facilities. It follows then, that he must also be the focal point in the training and direction of his workers, because the sum total efforts of his workers reflect and become the products of his leadership, technical ability and management efficiency. It logically follows also, that factors which decide the selection, management and attitude of the superintendent—decide or at least have some bearing on, the selection, quality and performance of his workers.

Three Serious Problems

Three serious problems face our golf course superintendents—and GCSAA, as the "Voice of the Superintendent." While these problems are not directly concerned with training and directing workers, they definitely and consequently affect this aspect of the superintendents' work because they have a strong influence on the kind of help available for golf course work, on the working facilities and conditions, and in the final analysis, on the

kind of superintendents. These problems are:

1. To create an awareness by golfers and club members of the problems and ramifications of golf play and player habits on turf condition and golf course maintenance operations.

Golf Cars Affect Turf

The use of golf cars is increasing and every phase of golf is now looking on cars with renewed interest and with keen anticipation of increased revenue. Yet, in all of this enthusiasm, no one seems concerned with the effect of cars on turf wear and tear—a definitely established problem.

In northern areas, later and later fall play has conflicted with standard maintenance practices essential to root renewal of the turf and reconditioning for the following season. Many other such problems could be cited.

There is no question that it is the superintendent's responsibility to educate his members to these facts. Neither is there any question that the superintendent should shift his practices to the interest and desires of his members. However, there are limits to the adverse effects that grass as a biological organism will tolerate. On some courses and under some conditions these limits are rapidly being approached, and future trends and pressures of the game are increasing the rate of this decline.

2. The general lack of knowledge and recognition of the role of the golf course superintendent in golf.

This relates to the first problem, but has the direct effect of influencing the kind and number of men attracted to the superintendents' profession. Because of his behind-the-scenes role, it has been difficult for the superintendent to gain professional recognition or status, even though his work requires knowledge of many biological disciplines, practical engineering, business management techniques and an increasing demand for public relations and administrative ability.

This thwarted recognition of the real superintendent and his profession has prevented qualified young men from becoming superintendents. They are either unaware of this really attractive and challenging profession, or they shy away because of the unfavorable concept of the

work, or the unattractive wages. This problem affects golf club operations and golfers, and any help from the other quarters of golf will be an assist—but not just to the superintendent—but to the game.

Again, this problem affects the training and direction of golf course workers because it influences the kind and quality of available help.

3. The problems of securing and training qualified, professional superintendents.

Here lies one of the real challenges of the superintendent, his profession and our Association. It is a problem so basic and vital that it must be solved before we can logically or intelligently talk about training or directing workers.

Replacements Needed

This problem is driven home in stark realization when we point out certain statistics. The majority of our leading superintendents come out of the grand old golfing era of the '20s and '30s and are now rapidly approaching retirement. Their average age well exceeds 50 years. Very few men entered golf course work during the depression, none during the war years, and few thereafter, until the mid '50s. Consequently, we do not have an adequate reserve of trained superintendents to replace the anticipated 300 yearly retirements. Add to this the 200-300 new golf courses constructed annually that must secure qualified superintendents, and we can foresee 500 vacancies per year. Where do we get qualified replacements?

From our colleges, we would like to tell you, because it is true today, and will be more so tomorrow, that the successful golf course superintendent be a college educated man. Some of our most promising men today have postgraduate degrees because it is very difficult to squeeze into the normal four-year college curriculum enough of the wide range of subject matter required for professional superintendents' schooling. However, the advanced degree is not necessary, if the undergraduate program is well designed, and if the student will supplement this schooling with night school and correspondence courses and other self aides. On top of this college study the trainee must build practical experience in golf course management and the art of golf course

grooming. Then, if he is diligent, energetic and productive, he is in position to become an outstanding, professional superintendent.

Few Turfgrass Graduates

Where, then, do we stand on the number of college graduates in turfgrass management? In 1960 there could not have been more than 50 graduates in turf from all of the colleges and universities in the U. S. Of these graduates, many went into phases of the turfgrass industry other than golf.

So, you see quickly the gravity of our problem, and if you are far-sighted, you can visualize the impact on golf. We are indeed fortunate to have great help and support from the Green Section, which initiated our earliest advance in turfgrass technology and has striven always to improve our knowledge. However, the problems I have discussed here are problems that the superintendent himself must solve.

An Educational Program

GCSAA is moving to improve this situation by developing a three-pronged educational program consisting of: (1) scholarship promotions for undergraduate students, (2) educational programs, such as our Annual International Turfgrass Conference opening next week in Toronto, which are designed to advance the knowledge and professional level of our superintendents and to keep them abreast of the rapidly moving technology, and (3) correspondence courses, now under development, to reach worthy and interested men unable to continue their training at colleges.

As we work to solve our problems, we reiterate that we recognize our responsibility to our own profession and to golf. We emphasize our desire to move ahead as rapidly as possible. At the same time, we enlist the understanding, the patience and the assistance of all departments of golf. Only through the solution of the three basic problems will we really answer the secondary needs of training and directing help. And, only by making you, as golfers, aware of these problems can we solicit and encourage your help. It has been my intent and my privilege to review these problems with you today.

Daily Planning And Programming Of Work

By TOM LEONARD

Member, USGA Green Section Committee, and Superintendent, River Oaks Country Club, Houston, Texas

One of the more important factors of training and directing the golf course worker is the daily planning and programming of work by the golf course superintendent. To do only daily planning and programming on a golf course would be like a broad jumper who jumped without first making a run to the pit. Let us back up and make a run at this subject by starting with the planning for the entire year.

Yearly Planning

In the year's planning, set up tentative schedules for new construction, fertilizing, cultivating, weed control work, etc. Plan the program for the greens, tees, fairways, and roughs into a chain of events, remembering the old saying, "a chain is no stronger than its weakest link." The work on a golf course is a never ending chain made of links of work activities. These links must be strong to get work completed efficiently and effectively, to use labor and material to their greatest advantages, and to help offset the high cost of maintenance.

Seasonal Planning

WINTER: Fertilizer use is less in the winter than in other seasons. Less time is spent mowing fairways, tees, greens, or roughs. Plans must be made for tree plantings, to clean up unsightly areas, to replenish sand in bunkers, to trim trees, to repair and rebuild equipment, and to do the many other "off season" jobs. The winter can easily be your most important season because it gives one a chance to repair worn links from the preceding year, and an opportunity to plan on starting the new year with a strong chain.

SPRING: Plan for fertilizing, cultivating, topdressing, mowing, seeding, or sprigging worn areas, etc. Make plans, but wait until proper weather conditions exist before going into action. An impatient, too early start can weaken links in the chain at the beginning of the year.

SUMMER: Try to be in position to settle down to the general maintenance practices of mowing, spraying, watering, fertilizing, trimming, etc.

FALL: Continue regular maintenance and make adjustments in preparation for

winter. In the South, this is the time for over-seeding greens, tees, and other areas for winter months.

Monthly Planning

In the monthly program, plan work links around golfing activities. Most country clubs have numerous special tournaments during a year. If special events are planned, it is very important to the members to have the course in good condition during that time. Edging bunkers or fertilizing fairways on a day of a tournament is bothersome to players. Plan these jobs earlier and have them completed so that fairways, greens, and tees are at their peak of condition for these events. Have bunkers edged and cleaned before the tournament, not during it. Have your greens mowed before the play starts.

Weekly Planning

Consider normal circumstances in weekly planning of work. Plan spray schedules for greens, tees, and other areas. Plan for every day maintenance.

Daily Planning

Ten points important to daily planning and programming of work are worthy of your consideration:

1. Have an assistant or a foreman with whom you can go over the activities that are planned for the day. After a day is completed, go over its operations and discuss in detail the plans for the next day. Be sure the program is understood exactly. Be sure he knows the plans for carrying out jobs. It is important for some one **other than** the superintendent to be fully acquainted with the plans, because in many instances work could be interrupted by visitors such as salesmen, members, friends, or even chairman of the green committee, or the superintendent may be gone from time to time to meetings such as this one, and the work must go on. It would not be very impressive if all workers stopped working and started waiting for instructions because the green committee chairman dropped by to talk about how a project was getting along.

2. Plan daily maintenance so the work will least interfere with play. Jobs that

may interfere with play can be performed when play is light. Cultivate on days when the club is closed or when play is light.

3. Plan your work so that larger operations can be started and completed in a reasonable length of time. Do not have so many projects 'open' that it becomes impossible to complete any of them. The day of the torn up golf course is over.

4. Listen to the weatherman. There is no need to plan to topdress greens or spray herbicides on fairways when the weatherman predicts rain. If inclement weather is forecast, and you know it, you have a chance to revise your program, or to put an alternate program in effect. Have some inside work planned for extreme weather.

5. Place employees on jobs where their abilities, desires, and interests can be used to the greatest advantage. Study employees abilities to be able to do certain jobs better than others. Learn which jobs each employee prefers to do and use him there when possible.

6. When a man proves he can do a job correctly, keep him on that particular job when possible. Example: Have regular greens cutters. Have an alternate to be used as a standby in case a regular can't be at work. Under this system an employee learns the job better because he is doing it over and over. I don't mean by this that a man should know only one operation. Your employees should be trained to do every phase of work so they can fill in on any job at any time needed. Daily work should be so routine to employees that you should only have to brief them on the jobs to be carried on, and never have to ask the fairway cutters to mow clockwise, counter clockwise, or across, nor a bunker man to cross rake the sand. They should know their jobs and do them correctly.

7. Plan an alternate daily program. Many work days are interrupted by the weather, equipment breakdowns, or sickness of employees. An alternate program should be planned.

8. On daily jobs, such as mowing greens, have a list of work items that you expect your employees to follow. The employees will learn that jobs are to be carried out in certain ways and these daily jobs will become routine easier and

quicker. Here is an example of a list for greens mowing:

- (1) Pole dew from the green.
- (2) Watch for spikes from shoes, rocks, coins, etc.
- (3) Remove flagstick from the hole and leave by mower transport wheels.
- (4) Start on one side of the green—not through the center.
- (5) Mow in a different direction each day.
- (6) Do not allow basket to "run over" with clippings.
- (7) Carry clippings to designated place when basket becomes full.
- (8) Mow at a normal pace—never overspeed the mower.
- (9) Turn the mower slowly enough so as not to lose control or bump back into a green.
- (10) Mow outer circle of green last.
- (11) Pole the green of any clippings that may have been dropped by the mower.
- (12) Replace the flagstick.
- (13) Always use wheels to transport.
- (14) Clean equipment before storing.

Greens cutters under this operation know what is expected of them and will take pride in doing a good job. Have similar lists for other operations that are carried out regularly.

9. Inform your employees: Don't keep your employees in the dark from lack of knowledge. Give them as much information about your plans as possible. There is no way that knowledge to your employees can hurt your operation or your position. The more an employee knows about a piece of equipment, the better he will be able to operate it. The more an employee knows about a golf course and its operation, the better he can do his job for you. He will learn to observe the golf course and report to you things such as broken limbs, leaking water fountains, heel prints on greens, etc. You should show your appreciation to employees for such help. The more your mechanic knows about a piece of equipment, and its application, the more apt he is to make it perform perfectly for its job. Your employees can answer many questions from

members if they have a general knowledge of your program on the golf course. This knowledge also raises the morale of your employees, and gives them a feeling of more security on the job.

10. Safety must be listed as one of our more important links when we consider the golf course workers. Constant remind-

ing of safety precautions to an employee shows your interest in him and his welfare.

There are many important links in the chain of daily planning. The superintendent who gives attention to every link will build the strongest possible chain of management practice.

Training the New Worker

By **WILLIAM H. BENGEYFIELD**

Western Region Director, USGA Green Section

Since this is the age of "Do it Yourself," I am going to attempt to put you to work both physically and mentally—and thereby avoid having to work too hard myself. You can see that this is going to be an unorthodox presentation. You are in for a treatment rather than a treat. When it is all over, however, I hope that the experience will be a memorable one and perhaps, because of it, you will have a greater insight to the emotions and feelings of the new worker on a rather important day in his life—his first on a new job.

We are going to attempt some very simple projects and I will need your full interest, co-operation and participation if this undertaking is to prove to be worthwhile.

A Simple Project

Each of you should have three of the 5 x 8 cards normally used for office indexing. Now, the first project that I ask is for everyone to take one of your index cards and make one of these simple paper boxes exactly like the one I hold in my hand. It is a very simple box made from a flat piece of paper similar to the one you will use. With this audience of above average intelligence, we will surely have no difficulty in solving this fourth grade problem. Incidentally, this is a leakproof box as there are no cracks in the bottom or on any of the box sides. All of the edges of the paper are at or above the top level of the sides of the box. O.K. now, please, everyone take a few minutes to make one of these boxes. Your co-operation is desperately needed as the rest of my presentation depends upon your making such a box right now.

(One minute pause)

Well, I can see that things are not go-

ing too rapidly on this first project so let's have a brief word of explanation. Now if you will all stop your present work, I will show you very briefly how to make this box so that we can proceed.

Instructions

First, let's take a new sheet of paper. This should be folded into three equal parts. This is done in width as well as in depth of the paper.

Now, in the upper left hand square that has been formed by these folds, all you need do is fold from the center of the left hand margin to the lower right hand corner of this upper left hand square. Repeat this on all four corners. Very simple—it's simply a fourth grade problem.

Now, if you will complete your box as rapidly as possible we can go on to the next project. I am surprised that this room of men who have been very successful in a number of fields of endeavor (including turfgrass management) are having so much difficulty with this very simple problem. Let's apply ourselves and move forward to the next project.

Here is the box. It was made from the same type of paper that I asked you to make yours from. It was done right here before your eyes. It is a leakproof box with all of the paper edges at or above the top level of the box. There is no need to tear the paper as this is a simple folding operation.

(Several moments delay)

Well, let's all stop our work again and see if we can't get together on this very simple undertaking. There is not a great deal of mental or physical skill required and yet something has obviously gone wrong. Why didn't this work out?

- A. You have never been exposed to this type of work before.
- B. Speed of explanation.
- C. Terminology used.
- D. Mirror effect.
- E. No motivation.
- F. Poor physical relaxation in this room.
- G. There was not a "successful environment."

All right, let us correct as many of these reasons as we possibly can and put together one of these simple boxes. Before taking the third piece of paper, let me try to develop your interest or motivation in this undertaking. After all, you should know what these boxes are good for, if anything. Well, the terminology and correct name for this type of box is a "Painter's Box." Painters use them quite frequently I am told, when they are doing field work such as painting signs along the road, on store fronts, etc. This simple box holds paint indefinitely; it is leakproof; the paint cannot run out; and it gives the painter an opportunity to mix paints for a particular tone or shade that he may desire without having to use a lot of extra equipment. After it has been used, it may be easily destroyed and no cleaning or great expense has been involved. Now if you are not a painter, this box may still come in handy as it could be used in a meeting such as this one for an ash tray if one is not provided. It could also be used on camping trips as a cup or small container. If nothing else, you can amaze your friends, the wife and the children tonight by your ability to make a cup from a flat piece of paper that is absolutely leakproof at least until the paper disintegrates.

Now, let's all take the third sheet of paper and we will slowly go through a complete explanation that, in the end, you will find very simple.

As we did in the beginning, fold the piece into three equal parts in width as well as in depth. Then, starting with the upper left hand square, fold the paper from the center of the left paper margin to the lower corner of the top left square. In this manner repeat this on the other four corners. After completion, fold the ends into place. And finally, fold the flap down to lock the cup together.

In the last several minutes, I have tried to reverse tables on you. You have been

put in the subordinate's place. Exactly the same position that a new worker faces in a totally unfamiliar job. You have experienced some of his emotions and feelings. When we first started the project, there seemed to be a sense of frustration in the audience and I believe you resented me a bit when I expected you to know how to build one of these boxes without any explanation.

They say that "the first step in solving any problem is in recognizing that a problem does exist." When any of us are exposed to a totally new experience or requirement, regardless of our intelligence, we are in a difficult position and not always "ourselves." If, in the past twenty minutes, this message has been brought home to you in a forceable manner, then our "do it yourself" visit together has been a successful one.

How many times have you heard people say, "I've told that fellow a dozen times how to do that job, and still he doesn't know how." This shows that someone has done a poor job of training. "Telling" is not instructing.

Instructing is telling, plus showing, plus try-out performance and follow-up. Let the worker do the job. Ask him questions. Let him ask you questions. And before putting him on his own, make sure that you know that he knows.

It is not difficult to be a good instructor. It does require patience, tolerance, tact and an honest desire to "know your people." Re-check yourself on these points every so often. Most people want to do a good job and it is up to you to motivate them and to show them exactly what is expected of them. If you will do this, you will surely succeed along with your new crew.

Kollett Joins Green Section Staff

James R. Kollett has been appointed a Northeastern Agronomist for the USGA Green Section. Kollett, who was Senior Research Agronomist for the International Minerals and Chemical Corp., Chicago, during 1959 and 1960, will assist Alexander M. Radko, the Green Section's Eastern Director. He will be located at Lipman Hall at Rutgers University, New Brunswick, N. J., one of the six District Offices operated by the Green Section.