



Better Turf for Better Golf

# TURF MANAGEMENT

from the USGA Green Section

## THE USGA GREEN SECTION: ITS WORK AND HOW IT IS DONE

THE WORK of the USGA Green Section has been greatly expanded since the establishment of the Regional Turf Service in 1953. There are now five Green Section Regional Offices located in various parts of the United States.

The duties of the Green Section fall into several categories. The primary objective is to render direct service to golf clubs which are subscribers to the USGA Regional Turf Service. This function consists of individual visits to the clubs by the Regional Directors, written reports summarizing the discussions and findings of those visits, help by correspondence and telephone, and group meetings where representatives of clubs with similar interests come together to discuss mutual problems.

The Green Section also has the responsibility of providing certain publications having to do with the maintenance of golf courses. One type of publication is the Regional Turfletter. Regional Turfletters are published in each of the five Regional Offices. They are more or less informal and informative letters which have as their purpose the discussion of topics of timely nature which primarily are of interest to the respective regions. The other publication is the Turf Management section of

the USGA JOURNAL. Articles appearing in the USGA JOURNAL generally have a somewhat broader appeal and are written with the thought that club members, as well as green committee chairmen and golf course superintendents, will read them.

The third phase of the Green Section's work is that of research and education. The Green Section sponsors research grants at state institutions. It supports fellowships or research assistantships. This is a form of grant-in-aid whereby research is done and a student is trained for advance work in the field of turf management at the same time.

Another part of the research and education program is the coordination of turfgrass research efforts at various institutions throughout the nation. This is largely a matter of keeping up with the work that is being done and passing the information from one station to another, more or less acting as a clearing house to prevent duplication of effort. In this capacity the Green Section cannot dictate, but it can suggest. Another important part of education is the participation of Green Section staff members in the numerous turfgrass conferences that are held throughout the country. The group meetings which were

mentioned in connection with Regional Turf Service also provide an excellent opportunity for passing on information to superintendents and green committee chairmen.

### *Visits to Clubs*

The heart of the direct service of the Green Section is visits to each club. Starting this year, it is planned to visit each club twice a year where possible. On such a visit the regional director goes over the problems with the superintendent and the green committee chairman. Notices are sent to the clubs ten days to three weeks in advance of the regional director's visit. Notices are sent to the superintendent and to the chairman of the green committee. These persons may invite anyone they wish to accompany them and the regional director on the tour of the course. It should be pointed out that the regional director never invites anyone else except the superintendent and the green committee chairman. It is believed that in some cases the superintendent and green committee chairman would like to talk over their problems in private with the regional director. If they wish to do this, they certainly should be given the opportunity.

The regional director considers that the period he spends at each course actually is time spent as an employee of the club. The time is to be spent in accordance with the wishes of the superintendent and the green committee chairman at the club he visits. Most likely the superintendent and the green committee chairman will leave the matter of procedure to the regional director. If this is done, the regional director usually chooses to go over the holes in order, beginning with No. 1, so that he will better be able to remember the features of the holes and so that he will be able to make notes in a more easily remembered order. There are times when the superintendent will take the regional director immediately to any troubles that he might have. If a club is experiencing difficulty it is well for the regional di-

rector to spend as much time as possible on the phases of maintenance which are giving the superintendent trouble.

There are times, however, when the superintendent will tend to guide the regional director away from trouble spots. This usually is because of a mistaken idea as to the purpose of the visit. The regional director must avoid leaving the impression that his visit is an inspection in which shortcomings are to be highlighted. The director must win the confidence of the superintendent if he is to be of any help whatsoever. As soon as the superintendent recognizes that the visit is in the nature of a helpful mission, and that he is not going to be criticized unduly for any shortcomings, he begins to discuss his difficulties more fully. It is then that the regional director may be of greatest help to the club.

The regional director almost always takes numerous notes on his visits. It has been found that it is well to point out to the golf course superintendent that notes are being made in order that one may better be able to remember the features of his golf course. The regional director who visits two courses a day for five days a week encounters so many different golf holes on so many courses that he sometimes finds it necessary to refer to his notes to refresh his memory on a condition pertaining to any given hole at a particular golf course. If the regional director can recall the conditions which prevail in connection with a particular hole or feature of hole, he is in a much better position to provide help when requests come by correspondence or telephone.

Perhaps the factor most important in determining the success of a service visit is tact and a helpful attitude on the part of the regional director. It is seldom that one visits a course where he can find nothing to criticize, but it is also seldom that he visits a course where he can find nothing to praise.

### *Reports of Visits*

An integral part of the new Regional

Turf Service is the written report. This document ties the discussion and thoughts of the yearly service into permanent records of the golf course superintendent and club official. The suggestions made, the problems encountered that year, proposed changes in course design and other improvement undertakings are recorded here for future use and a permanent history is provided.

When Regional Turf Service was in the planning and early operational stage, many persons had the feeling that a service visit and written report would take the form similar to a military inspection report where all discrepancies and failures would be listed. This, of course, was never the purpose of Regional Turf Service and such feelings have proved to be unfounded. The written report has come to be, in many cases, the greatest aid a superintendent and green chairman have when dealing with the budget committee. Rather than distract from the superintendent's well thought-out conclusions, it supports his thinking in most cases where he needs support—before club officials.

If a superintendent is queried as to why tees have no grass, why the greens putt slow or why new traps are not being built, any answer he gives probably will sound more like an excuse for not accomplishing the work than a sound evaluation of the problems he faces. However, if the Regional Turf Service report points out that a manpower shortage exists at the club — and the needed tee enlargement program, more frequent green mowing and general course improvement operations are curtailed because of manpower—then the superintendent has an opinion from an outside source and the querying club member receives a sound, substantiated reason and no longer can look upon the superintendent's reply as a defensive excuse. This is not a hypothetical situation; it has occurred numerous times.

Does this mean that all turf managers are always right in the eyes of the Regional Turf Service report? Not so, for

## TURF MANAGEMENT

The book "Turf Management," sponsored by the United States Golf Association and edited by Prof. H. B. Musser, is a complete and authoritative guide in the practical development of golf-course turfs.

This 354-page volume is available through the USGA, 40 East 38th Street, New York 16, N. Y., the USGA Green Section Regional Offices, the McGraw-Hill Book Co., 350 West 42nd Street, New York 36, N. Y., or local bookstores. The cost is \$7.

a spade must be called a spade—and particularly in turf work. If proven recommendations have been suggested one year and, in the following years, no honest effort has been made by the superintendent to try any of these proven recommendations on his course, then, in all honesty to the club, the regional director is duty bound to call this situation to the attention of club officials in the report. Further visits and reports would be largely a waste of time and money under these circumstances. Of course, there are all degrees between the immediate acceptance of a suggestion and the absolute, complete and final rejection of one. If a superintendent (or anyone else) is completely closed to new ideas, new approaches and new methods, then extension work is up against a difficult situation and little may be expected from it. There must be at least a slight degree of open-mindedness before a demonstration or suggestion will be accepted. Incidentally, open-mindedness must also be present in the regional director because sometimes the superintendent is justified in his rejection of a suggestion. The Regional Turf Service reports should openly congratulate superintendents who are efficient managers and who have tried new ideas and devised new methods of their own. At the same time, reports should be critical when criticism seems warranted after considering all of the facts. In other words, *honesty* is the primary ingredient in report writing.

As any college freshman soon learns, some professors grade their students by

## **NEW SUBSCRIBERS TO USGA RESEARCH FUND**

Goldthwaite's Texas Toro Co.,  
Fort Worth-Housont-Dallas, Texas  
Golf Course Superintendents Association  
of Northern California  
Golf and Lawn Grass Nurseries,  
Atlanta, Ga.  
Malinckrodt Chemical Works,  
New York, N. Y.  
Ranelagh Golf Club, Buenos Aires,  
Argentina  
Vineland Chemical Co., Vineland, N. J.

the weight of the document turned in rather than by the content. Regional Turf Service reports should not be so judged. They should contain the highlights of the visit and need not go into great detail. The one or two most important points discussed during the visit could make up the bulk of the report. One and a half to two pages of single spaced copy should prove adequate in most instances.

### *Mail and Phone*

More requests for help by correspondence and telephone are received in the Regional Offices than one might imagine. They often come from clubs which face an urgent and immediate problem, such as a sudden disease or insect attack. These urgent calls usually are telephoned requests. One of the interesting things about such calls is the fact that they most frequently come from outstanding golf course superintendents. The man who does a good job is the man who also takes advantage of all the help available to him. Perhaps this is not a surprising revelation.

In an earlier paragraph, the need for taking notes concerning golf course features was mentioned. The regional director can be much more helpful if he has a mental picture of the area under discussion. The regional director is a scientist who is trained to consider the environmental factors which may contribute to a particular difficulty. The untrained person who may report symptoms of his

troubles over the phone frequently fails to recognize the significance of contributing factors.

Requests which are made by correspondence are usually concerned with less urgent problems. They usually pertain to long-range plans or the availability of grasses, soil test data and matters of a similar nature.

Group meetings are sometimes held with representatives of many clubs (although such meetings are being reduced this year). Group meetings may have representatives from as few as three to as many as 25 clubs, depending upon the number of golf courses in a localized area. The primary purpose of group meetings is to permit superintendents and green committee chairmen to ask questions concerning management of their golf courses and solutions to their problems. Usually, representatives of clubs in a more or less localized area will have problems of mutual interest to be discussed.

There is one difficulty that is sometimes associated with these group meetings. This difficulty is in getting the superintendents to enter into the discussion. This reticence or reluctance to enter the discussion usually calls for some advance planning on the part of the regional director to promote participation by the group. A meeting may take many different forms. In the case of an evening meeting, a regional director may use slides to bring to mind some of the outstanding problems of an area. In talking about slides pertaining to particular problems, considerable comment is apt to be elicited from the audience.

Sometimes meetings are held during the day and in this case the matter of discussion takes care of itself because when superintendents and green committee chairmen meet at a golf course and look at a few greens and fairways, problems will naturally come to mind and be discussed. Group participation ceases to be a problem after the first few meetings. A group

whose members are well acquainted discuss their work freely.

Some meetings are more or less formal in nature. If they do take such a form, staff members of local colleges or turf associations may be called upon to participate in the meetings. This kind of meeting usually allows greater opportunity for educational features to be brought in. While the purpose of the meeting is not primarily one of education, it seems desirable to introduce this kind of discussion when it can be done without obscuring the primary purpose of the meeting.

### *Periodical Publications*

The Green Section presently is responsible for two important periodical turf-grass publications that relate to golf course management and maintenance. The first is that which appears regularly as the Turf Management section of the *USGA JOURNAL*. The *USGA JOURNAL* is published seven times yearly and copies are mailed to all USGA Member Clubs. Its content is national in scope and the Turf Management section, naturally, is slanted in that direction. On the other hand, the second Green Section periodical, the *Regional Turfletter*, places emphasis on turf matters within each individual region. Each *Turfletter* deals with local problems as seen through the eyes of each regional director, and offers suggestions about what to do about them. Each regional director publishes six individual *Turfletters* annually which are sent to persons designated by each club subscribing to *Regional Turf Service*. Usually the green chairman and the golf course superintendent are the designated recipients.

Published golf turf management and maintenance information first became available in the United States through the publication of *The Bulletin of the Green Section of the United States Golf Association* when the Green Section was formed in 1921. Later Green Section publications were *Turf Culture* and *Timely Turf Topics*. This represents a substantial

## **USGA GREEN SECTION REGIONAL OFFICES**

Correspondence pertaining to Green Section matters should be addressed to the nearest office below:

**USGA Green Section Northeastern Office,**  
Lipman Hall,  
College of Agriculture,  
Rutgers University,  
New Brunswick, N. J.

**USGA Green Section Mid-Atlantic Office,**  
Room 206, South Building,  
Plant Industry Station,  
Beltsville, Md.

**USGA Green Section Southeastern Office,**  
Georgia Coastal Plain Experiment Station,  
Tifton, Ga.

**USGA Green Section Southwestern Office,**  
Texas A. and M. College  
College Station, Texas.

**USGA Green Section Western Office,**  
1709 West Eighth Street,  
Los Angeles 17, Cal.

amount of information issuing from the Green Section on golf turf culture for 35 years.

During the year 1955, the Turf Management section of the *USGA JOURNAL* contained thirty-five articles of importance pertaining to golf course turf. These included fourteen articles which dealt with advice and management, thirteen articles on research, two articles on club relationships, and six articles dealing with announcements and administration. *Regional Turfletters* published during 1955 contained some seventy articles on matters of local interest in management and maintenance. These included articles on grass selection, nursery establishment, disease, weed and insect control, water management, fertilizer management, soils and soil testing, conference announcements and highlights, and questions and answers.

The *Regional Turfletter* is a chatty, informal publication which serves our Member Clubs as follows: (1) It brings timely turf information to club officials (green committeemen and superintendents) interested in golf course management. (2) It brings new developments of re-

search to golf course officials. (3) It conveys practical information that each regional director picks up in his travels that he believes will be helpful to others. (4) It emphasizes specific golf turf problems found within each Region, and tries to encourage some search on these problems. (5) It contains information of the nature that club officials could use for their individual club bulletins for locker room and club house bulletin boards. (6) It directs attention of club officials to the important turf meetings and conferences that take place nationally and within each Region. (7) It helps strengthen the golf turf program within each region, thus benefitting each member club, locally and on a national basis.

The combination of national and regional publications now emphasized by the Green Section covers a broader field than was possible before. It keeps each regional director ever alert for information which may better enable the Green Section to serve USGA member clubs on a regional and national basis.

### *Research and Education*

Research and education received the primary consideration during the first 30 years of the Green Section's life. It is an extremely important part of the work. The emphasis has now been shifted to direct service through the Regional Turf Service plan, but the importance of research and education has not been minimized. As a matter of fact, research and education efforts have been increased since the beginning of the Regional Turf Service program. The regional offices are very helpful in the carrying on of a well-balanced research program. This is because regional directors are operating in the field and are better aware of the many problems facing golf course management throughout the nation. Because of this intimate contact with golf course problems, the Green Section is able to do a better job of placing its limited funds advantageously in order to get the most research done for the money.

How does the Green Section carry out its responsibilities in the matter of research and education? Funds are rather limited in view of the extremely large number of problems that face golf courses throughout the country. Recommendations concerning the use of these funds are based upon the premise that funds from golf sources should support studies of those problems that are peculiar to golf, or should support work in an area where specific knowledge is particularly needed.

Grants-in-aid made to state institutions are one of the ways in which research is sponsored. These grants usually are in amounts of \$500 to \$1,000. They usually are made for some special purpose or for the study of a specific problem. There are several advantages to research grants. When a college or a state experiment station accepts a grant-in-aid, it must assign its own personnel to the study of the problem at hand. The funds from a grant-in-aid usually are not sufficient to allow their use for the payment of salaries, though in some cases additional labor is hired from these funds. By using its own personnel, paid for by its own revenues, the experiment stations or colleges often spend several times the amount of the grant-in-aid in order to get the studies completed. The experiment station officials are aware of the fact that they must spend much of their institution's money when they accept grants-in-aid; however, they continue to accept grants-in-aid because they feel an obligation to work on the problems presented to them. When a group or an interest has a great enough need for a bit of research that they are willing to pay for it from private funds, the agency directors then feel an obligation to spend some time and effort toward the solution of that problem.

Sometimes grants-in-aid may be used to stimulate interest. As soon as a state institution makes a contribution to the knowledge of a particular subject, in this case turfgrass management, inquiries begin to flow in. As the personnel of state in-

## COMING EVENTS

1956

**Feb. 20-23:**

Penn State Turf Conference, Pennsylvania State University, State College, Pa. H. B. Musser.

**Feb. 27-28:**

Southern Turfgrass Association Conference, Ridge-way Country Club, Memphis, Tenn. Reg. Perry.

**Feb. 28-29-Mar. 1:**

Cornell Turf Conference, Cornell University, Ithaca, N. Y. John F. Cornman.

**Feb. 29-Mar. 1-2:**

Minnesota Turfgrass Conference, Curtis Hotel, Minneapolis, Min. Roy Nelson.

**Mar. 5-7:**

Midwest Turfgrass Conference, Purdue University, Lafayette, Ind. W. H. Daniel.

**Mar. 12-13-14:**

Iowa Golf Course Superintendents Association Turf Conference, Iowa State College, Ames, Iowa. H. L. Lantz.

**Mar. 15-16:**

Michigan State Turfgrass Conference, Michigan State College, East Lansing, Mich. James Tyson.

stitutions learn of the great amount of interest in the work that they have done, they are inclined to continue the work and to seek appropriated funds from public sources. Many of the state and regional turf research programs that are currently contributing much to our knowledge were started by small Green Section grants.

Another from of grant-in-aid is a fellowship or research assistantship. This kind of grant serves a two-fold purpose. It assures the completion of a significant bit of research, and it provides for the advanced training of a student in the field of turfgrass management. The completion of a significant research project is a requirement that all colleges make upon students who are working toward advanced degrees. Therefore, when a student accepts financial aid through an assistantship he obligates himself to a thorough study of the problem which he attacks.

In 1955 the Green Section disbursed funds in support of research assistantships to six institutions. An assistantship at Rutgers University was established for the study of thatch control in putting green turf. This is one of the great troubles in putting green turf all over the United States. An assistantship at Rhode Island University supported the study of *Poa annua* control. *Poa annua* is one of the most widespread and troublesome weeds in the United States today. An assistantship at the Florida Agricultural Experiment Station was established for a study of nematode problems in turf. It is known that parasitic nematodes are found in much of the turf in the southern half of the United States. It is not yet known how much damage nematodes are doing. This study has as its purpose the discovery of the extent of nematode damage in turf.

A research assistantship at Texas A. & M. College supports a study of soil physical properties of putting greens. Much valuable information already has come out of this study and it promises to contribute much to our knowledge of putting green construction. At Purdue University a re-

search assistantship supports a study of nutritional requirements of turfgrasses. The assistantship at the University of California at Davis supports a study of irrigation needs of turfgrasses. All of these studies are expected to yield significant contributions to our knowledge of turfgrass management.

Another part of the research and education program of the Green Section is the coordination of the research that is being carried on at many state institutions throughout the country. The Green Section supports financially a relatively small part of this research, yet the fact that the Green Section has had an interest in the initiation of the programs in many of the states places it in an excellent position to inquire about the research being done at the various institutions. By keeping aware of the research efforts of various state institutions, it is possible to suggest appropriate problems needing study and to prevent duplication of effort.

Another contribution of the Green Section to turfgrass education in the United States is through the participation of the various regional directors in turfgrass conferences. Green Section personnel appeared

in the program of practically every turf-grass conference held in the United States in 1955. In addition, all the regional directors attended the national Golf Course Superintendents Association Turf Conference and Show and a part of the staff attended the National Agronomy Society Meetings in Davis, Cal. The fact that Green Section personnel are able to attend these national meetings enables them

to gather information which they may pass along to individuals at the various USGA member clubs. Education in matters of turf management may be done in individual conversations or in group meetings. It is believed that the USGA Green Section has never carried on a more comprehensive program of research and education than it is doing at the present time.

## 1954-55 GOLF COURSE MAINTENANCE COSTS FOR 35 CLUBS

*Compiled by Harris, Kerr, Foster & Company, Accountants and Consultants*

An analysis of the golf course maintenance costs for 35 clubs located in all sections of the country indicates that for 1954-55 the average cost per hole amounted to \$2,204, an increase of slightly more than 2 per cent over the preceding year's average for these same 35 clubs. The highest costs were recorded by clubs in the West Coast area, with an average of \$2,750 per hole, due principally to greater payroll costs in that section. The costs for all other areas, eastern, southern and mid-western, were stable, however.

The 1954-55 actual expenditures for greens maintenance for these 35 clubs totaled nearly \$1,500,000, the average for each club amounting to approximately \$42,000.

For comparative purposes, the costs shown in the schedule below have been expressed in terms of one hole, since a number of the clubs included maintain 27 or 36-hole golf courses, as against the usual 18-hole course common to most clubs.

In all areas, the salary and wage cost for the greenkeeping staff was slightly higher than in the preceding year and generally accounted for about two-thirds of the total cost of golf course maintenance.

A breakdown of the costs:

	<i>Average All 35 Clubs (666 Holes)</i>	<i>East (17 Clubs 351 Holes)</i>	<i>South (6 Clubs— 99 Holes)</i>	<i>Mid-West (7 Clubs 126 Holes)</i>	<i>Far West (5 Clubs 90 Holes)</i>
<b>AVERAGE COST PER HOLE, 1954-55:</b>					
Salaries and Wages .....	\$1,538	\$1,493	\$1,507	\$1,450	\$1,873
Course Supplies and Contracts .....	356	397	339	372	190
Repairs to Equipment, Course Buildings, etc. ....	181	203	162	111	211
All Other Expenses .....	129	109	135	62	296
<b>Total .....</b>	<b>\$2,204</b>	<b>\$2,202</b>	<b>\$2,143</b>	<b>\$1,995</b>	<b>\$2,570</b>

**PERCENTAGE VARIATIONS, 1954-55 BASED ON  
1953-54:**

	<i>Percentage</i>				
Salaries and Wages .....	+3.1%	+ 1.2%	+ 6.3%	+ 6.7%	+ 2.4%
Course Supplies and Contracts .....	— .5	+ 8.8	— 3.9	+ 2.3	—23.7
Repairs to Equipment, Course Buildings, etc. ....	+1.8	+ 1.6	—14.9	+18.8	—18.6
All Other Expenses .....	+1.5	—11.4	+10.7	— 6.1	+20.1
<b>Total .....</b>	<b>+2.3%</b>	<b>+ 1.8%</b>	<b>+ 2.9%</b>	<b>+ 6.0%</b>	<b>— .5%</b>