

Others will follow in the March number. Those who were unable to attend the meeting may thus have opportunity of becoming acquainted with the reports and discussions given in New York.

The program follows:

JANUARY 4, 10 A. M.

- Opening remarks.....CHAIRMAN FINDLAY S. DOUGLAS
- Annual report of the acting chairman of the United States Golf Association Green Section Research Committee .....H. L. WESTOVER
- Greenkeeping yesterday and today.....JOHN MORLEY
- Old and new turf problems as viewed by a green committee chairman .....R. F. ARNOTT
- A professional's view of turf problems..... JOHN B. MACKIE
- Green cost analysis.....J. W. BRYANT, JR.

JANUARY 4, 2 P. M.

- The Green Section experimental work.....JOHN MONTEITH, JR.
- The new experimental turf garden in Chicago.....C. A. TREGILLUS
- The new Green Section demonstration plots as an aid to the greenkeeper.....F. H. WILSON
- Green Section extension work.....KENNETH WELTON
- Some recent work at the Arlington Turf Garden. JOHN MONTEITH, JR.
- New phases of turf disease work.....A. S. DAHL

JANUARY 5, 9 A. M.

- The organization of the Green Section.....WYNANT D. VANDERPOOL
- The Metropolitan District Green Section.....HARRY P. KIDD
- Improvement of golf turf in Canada.....G. P. MCROSTIE
- Soils in relation to golf course turf.....J. G. LIPMAN

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**Annual Report of the Acting Chairman of the United States Golf Association Green Section Research Committee for 1928**

By H. L. Westover

On November 30, 1928, the Green Section completed its eighth year of service—six years (1921-1926) as a separate organization, and two years (1927-1928) as the instrument of the Green Section Committee of the United States Golf Association. In spite of numerous handicaps it is believed that the year as a whole can be regarded as one of progress and accomplishment.

During the entire existence of the Green Section there has never before been a season when conditions were so trying for turf grasses. The hot, humid weather was especially favorable for the development of various diseases, and much excellent turf was seriously damaged in spite of control measures. However, these unusual conditions offered an excellent opportunity for experimentation, and it is believed that the information gained will be very helpful in meeting such emergencies in the future. Considerable progress can be reported in further control of some of the destructive turf grass dis-

eases, such as brown-patch and snow-mold, and in the control of insects, especially the Japanese beetle and the June beetle, and earth-worms.

It is a pleasure to report that our chairman, Dr. Oakley, whom most of you remember as being deeply interested in the work of the Green Section since its inception, is much improved in health. He expects to return to Washington in the early spring and will then actively resume his place as chairman of the Research Committee of the United States Golf Association Green Section.

That the work of the Green Section is becoming more generally recognized is evidenced by the requests that we have had for starting experiments in cooperation with various State institutions, and by the large number of letters we have received from various sources for information on turf grass problems.

The United States Golf Association clubs receiving Green Section service totaled 1,056 on November 30, 1928, as compared with 1,012 clubs on the same date last year, representing a gain of 44 clubs. It was largely through the efforts of the Washington office that 29 of these new clubs joined the United States Golf Association.

In spite of unforeseen expenses, the Green Section has operated within its budget. The total appropriation for the current year was \$28,000, of which \$7,100 represents contributions to experiment stations for cooperative investigations. The total expenditures were approximately \$27,047.85, leaving an unexpended balance of approximately \$952.15.

The cost of printing the Bulletin exceeded our estimate by a considerable amount, due to the fact that beginning with the May issue 1,500 more copies have been printed each month than heretofore. This increase was considered advisable inasmuch as most numbers of the Bulletin since that date have been devoted largely to one subject. It is felt that bulletins of this nature can be used to advantage in answering questions and will therefore be in demand for some time to come. Our costs for supplies have been greater than expected, due primarily to the necessity for furnishing seed and fertilizers for several demonstration plots that have been established on golf courses and which were not contemplated at the time the budget was prepared. Certain funds in the budget were, however, not required for the purposes indicated and we were able to draw on these in cases where the expense exceeded the estimate. The budget provided \$1,200 for work in California, but only \$241.12 of this amount was expended, due to the fact that we were unable to complete plans for starting these experiments until fall.

The Green Section at Washington has collected and forwarded to the New York office \$3,533.26, which represents income from such items as service to daily-fee courses and foreign clubs, individual Bulletin subscriptions, sales of back numbers of the Bulletin and binders, and refunds of travel expenses.

A detailed financial statement for the year ending November 30, 1928, has been published in the report of the Executive Committee of the United States Golf Association Green Section.

The complete mailing list of the Bulletin totaled 3,120 on November 30, 1928. This included 1,056 clubs that are members of the United States Golf Association, 23 privately owned daily-fee courses, 22 municipal courses receiving the Bulletin without charge, 26 foreign clubs, 29 individual subscribers residing in foreign countries,

387 individual subscribers residing in the United States, 3 Canadian clubs, 160 Canadian subscribers receiving the Bulletin through special arrangements with the Royal Canadian Golf Association, and 337 complimentary copies. For the year ending November 30, 1927, the mailing list totaled 3,250, indicating a decrease of 130 in circulation for the year ending November 30, 1928. The decline in the mailing list is due largely to the fact that during 1927 we carried 177 former Green Section member clubs which had never been active or allied United States Golf Association clubs. Omitting these clubs there was an actual increase of 88 in the mailing list. The purpose in carrying these clubs was to give them ample opportunity to join the United States Golf Association and receive the Bulletin and Green Section service. When they did not signify their intention of becoming members of the United States Golf Association they were dropped from the mailing list beginning January 1, 1928. Since that time a number of these clubs have joined the United States Golf Association.

There has been an appreciable increase in the number of clubs that receive the Bulletin through affiliation with the United States Golf Association, and there has also been some increase in the total number of paid subscribers. In 1927 there were 29 Canadian clubs receiving the Bulletin and Green Section service as compared with 3 at present. This decrease is due to the fact that through arrangements made with the Royal Canadian Golf Association we now supply that organization with 160 copies of the Bulletin each month for their member clubs, without Green Section service. The three clubs still receiving the Bulletin and service at the former rate are not members of the Royal Canadian Golf Association.

The experimental plots established in cooperation with State experiment stations at Manhattan, Kans.; Lincoln, Nebr.; New Brunswick, N. J.; and Gainesville, Fla., have been carried on with some additions and continue to be a source of interest and to furnish much valuable information on turf maintenance for clubs in their respective districts. The plots established several years ago in cooperation with the University of Minnesota will likely be discontinued in 1929, as the demonstration plots recently established at the Interlachen Country Club will serve to demonstrate the more important phases of turf grass maintenance to clubs in that district.

New experimental plots have been established in cooperation with Stanford University, at Palo Alto, Calif.; Massachusetts Agricultural College, at Amherst, Mass., and on the Mill Road Farm Golf Course, near Chicago, Ill. The plantings at Palo Alto, the first made by the United States Golf Association Green Section in the Far West, should be of much assistance in determining the best practices in turf grass maintenance for that part of the country, especially for California conditions.

Quite comprehensive experiments are planned for the new experiment station at Chicago, which, through the generosity of Mr. Lasker, is located on his private property. The results from these tests should be applicable to a large number of courses and are the first designed to furnish information on turf grass maintenance especially applicable to the local conditions.

In addition to the experimental plots named above, demonstration plots were established the past season on 15 golf courses.

The second annual greenkeepers' convention sponsored by the United States Golf Association was held at the Country Club of Atlantic City on the 4th of June and continued at Pine Valley Golf Club on the 5th, after which several of those in attendance at these meetings came to Washington to study the turf experiments at Arlington Farm. While the number present was smaller than the previous year, there was much interest in the work carried on at the various points visited. The greenkeepers were invited to play golf at both these clubs, and prizes were awarded at the Country Club of Atlantic City. An evening meeting was held at this club, during which many topics of interest were discussed. The United States Golf Association Green Section is much indebted to both of these clubs for the courtesies extended, and especially to Mr. H. Kendall Read, of the Country Club of Atlantic City, and Mr. Norman Mattice, of the Pine Valley Golf Club, for their personal efforts to make these meetings a success.

To those of us who have followed the turf grass experiments closely it becomes more and more apparent that there are many problems, such as drainage, soil texture, and proper construction of the greens, that are much more closely associated with the development of a satisfactory putting surface than was formerly believed. The problems are so numerous that we can not hope to solve them in one year nor in five years. Scientists have been working for years on farm crop problems and are still finding an abundance of investigational work. Why then should we become impatient in the solution of turf problems? Still with the loyal support of the United States Golf Association, such as we have had in the past, and with the assistance of the greenkeepers, green committee chairmen, and others interested in golf, these problems will gradually be solved.

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## Greenkeeping Yesterday and Today

By John Morley

About fifteen years ago there were scattered throughout the United States a few hundred golf courses. The word "greenkeeper" was not generally known. About 70 per cent of the courses were under the direct supervision of professionals, most of whom had received their training in the British Isles. In most cases the methods to which they had been accustomed proved very unsuccessful owing to the climate and soils of the United States being different from those of their native land. They were to a large extent handicapped because very little knowledge was to be obtained, even from Washington, on the best methods to pursue. Not more than 10 per cent of these professionals would have qualified as the greenkeeper of today.

In those early days, although we were fortunate in being able to import good grass seed from foreign countries for use on our golf courses we were lacking in knowledge of the proper care of turf. It is true that we had our turf experts. One of the leading experts was the late Fred W. Taylor, of Philadelphia, who claimed to have discovered that by mixing clay, bone meal, and cow manure in a cement mixer and using the mixture in layer formation in the construction of a putting green, the problem of raising ideal turf was solved. This method we all know proved to be a failure.