



Better Turf for Better Golf

TURF MANAGEMENT

from the USGA Green Section

TURF RESEARCH AT OKLAHOMA A. AND M. COLLEGE

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RESEARCH work on turf grasses and their management was begun in 1948 at the Oklahoma Agricultural Experiment Station under the supervision of Prof. W. C. Elder. These investigations for the first three years were supported in part by money furnished by the Tulsa Golfers Fund for War Wounded, Inc., through the USGA Green Section. The research is now supported by state Funds.

In March, 1948, a study was started on the "Effects of Heights of Clipping and Nitrogen Fertilization on Forage Yield and Chemical Composition of Bermudagrass, *Cynodon Dactylon*, (L) Pers. and Buffalograss, *Buchloe Dactyloides*, (Nutt.) Engelm.," by James P. Stephens, Jr., a graduate student in Agronomy under the field supervision of Prof. Elder. The results of the study, which was conducted for one growing season, indicated that a clipping height of one inch was more desirable than either five-eighth or two inches for maintenance of a smooth, desirable appearance of both Bermudagrass and buffalo. Stephens, also reported the calcium and phosphorus contents of these two grasses were not appreciably affected by nitrogen fertilization at rates of 50, 100, and 150 pounds of nitrogen per acre

in a single application, or by the clipping height. The nitrogen fertilization did produce a dark green coloration in both Bermuda and buffalograss foliage.

Root System Not Altered

The study, which was begun in 1948, was continued in 1949 by George Alva Niles, graduate student in agronomy, under the field supervision of Prof. W. C. Elder. This study also included the effects of different heights of clippings, rates of nitrogen fertilization, and dates of clippings on root production of Bermudagrass and buffalograss. The one inch heights of clipping again produced the most desirable appearance in the Bermuda and buffalograss turf. None of the treatments applied appeared to alter the total root system, as measured by dry weight, of either Bermuda or buffalograss.

The use of Dow Fume (MC-2) for the control of Bermudagrass on golf course putting greens in Oklahoma was first demonstrated and proposed by Prof. W. C. Elder in 1949 and is now used throughout the state.

Emphasis in turf research at the Oklahoma Agricultural Experiment Station has been primarily on management studies and

evaluation of species and strains of turf plants for Oklahoma conditions. As a result of these evaluation studies, U-3 Bermudagrass has been placed with foundation growers through the offices of the Foundation Seed Stock, Inc., at Oklahoma A. and M. and is now being increased for certified plant stock. There are several growers in the state at the present time.

Through the period of 1930 to 1935 centipedegrass was brought into Oklahoma to be used as a control for soil erosion on the agronomy farm west of Stillwater. Apparently the possibilities of this grass, especially as an erosion control measure, were forgotten during the mid-thirties when all the Southwest suffered from severe drouth. It was several years later before this grass again was considered as a turf grass for Oklahoma. During the early 1940's Prof. W. C. Elder observed some scattered plants of the original plantings which had survived the severe drouths and winter conditions that prevailed in Oklahoma since their establishment. In 1949 this centipedegrass was included in the turf plots on the Agronomy farm and was studied and observed until 1953, at which time all available vegetative material was moved to the irrigated seed production station at El Reno for subsequent increase by seed production or vegetative means. It shall be proposed that this grass be named and released in the near future.

In 1951 Dr. Roy A. Chessmore became supervisor of the turf research and was actively engaged in studies of weed control in turf in addition to the management and evaluation studies. These studies were discontinued in 1952 with the departure of Dr. Chessmore.

Turf research was placed under my supervision in June, 1953. Plots were established of all known species and strains of turf plants, with provisions made for including new ones as they become available to be studied, managed and evaluated for Oklahoma conditions. At the present 62 plots, 15 x 20 feet in size, of individual species or strains and combinations are be-

ing studied for height of clipping and response to various nitrogen containing organic and inorganic fertilizers.

Two Tests In Progress

At present a study is being conducted on the response of U-3 Bermudagrass to different rates of nitrogen fertilization from various nitrogen containing fertilizers, applied at regular intervals throughout the growing season. The effect of various materials for correction of chlorosis in seaside bentgrass is being studied in another test.

Prior to the actual initiation of a turf research program at this station, several people with a mutual interest in turf grasses met together in an annual conference at the college to share and receive all information which might prove beneficial in their program. The first of the present annual conference was held in February, 1946. This meeting was so successful that plans were made to make it an annual affair, but to change the time of the conference to the fall. So in 1946 two conferences were held instead of one.

The need for a summer field day was soon to become evident and with the initiation of turf research at this station an annual field day was made possible. It is at this time the participants are given the opportunity to visit the turf grass experimental area, local golf course and experimental home lawns to observe the work under progress at that time, also to follow up on the results year by year of work which is to their particular interest.

Two publications are available at the present time from this station relative to recommendations for establishment, maintenance and management of grasses in various areas within the state; special turf problems and weed control. These publications are: (1) *Lawns for Town and Country*, by Roy A. Chessmore, and (2) *Turf Grasses, Their Development and Maintenance in Oklahoma*, by W. C. Elder. These publications are available upon request addressed to: Mailing Room, Gardiner Hall, Oklahoma A. and M. College, Stillwater, Oklahoma.

National Golf Fund Checks Are Presented



ABOVE: Chester Mendenhall (left), member of the USGA Green Section Committee, looks on as James A. McCain, President of Kansas State College (center), accepts check from Robert Willits, member of the USGA Sectional Affairs Committee. National Golf Fund, Inc., checks totaling \$10,700 were distributed by the USGA Green Section to colleges and experiment stations in seven states. The funds were derived from the 1954 National Golf Day, sponsored by Life Magazine and the PGA with the cooperation of the USGA, and will be devoted to turf research.

BELOW: Dr. William H. Daniel (left), member of the USGA Green Section Committee and turf specialist for the Midwest Turf Foundation, presents a check to H. J. Reed, Director of the School of Agriculture, Purdue University.

