

# GREENSMEN ALL SET

By JOE GRAFFIS

*NAGA meeting points way  
to successful year of golf*

**C**OMING up to cheerful expectations with an attendance of almost 500 greenkeepers and equipment and supply company representatives, the tenth convention of the National Association of Greenkeepers at Cleveland, Feb. 5-7, presented the most optimistic general picture seen for six years in the course maintenance department of golf.

Program of the conference appraised lessons of the previous year and marked out jobs due for emphasis during 1936. Papers were handled in practical, rather than theoretical vein. Sales at the convention exhibits were better by far than those for several years past, even though the main purpose of the exhibit is to facilitate shopping. Sales were spurred by prospects of price increases in many lines.

The veteran John Anderson of the Essex County (N.J.) CC heads the greenkeepers' association for the coming twelve months. Associated with him are a representative group of officers qualified by experience and temperament to push the organization through a year that is confidently expected to witness a speeding up in greenkeepers' group advance.

With Anderson as president, the association elected John Quail of Pennsylvania Vice-pres. and A. L. Brandon of Illinois, Sec.-treas. Brandon will also personally contact sectional greenkeepers' organizations and edit the organization's bulletin.

Directors elected for two years: Frank Ermer, Ohio; Peter Stewart, Illinois; and Joseph Ryan, Pennsylvania. Directors for one year; John Gormley, New York; Leo Feser, Minnesota; and John Gray, Ontario. Dr. John Monteith, Jr., of the U.S.-GA Green Section, was made an honorary member of the association.

M. C. Farnham, supt. of the Philadelphia CC., as chairman of the conference did an excellent job of conducting the sessions in a way that brought out helpful discussions at the conclusion of the set addresses. Addresses presented at Cleveland will be published in detail in *GOLFDOM* as quickly as space permits.

Digests of the conference material follow.

Dr. H. B. Sprague of the New Jersey Experimental station at New Brunswick,

spoke on Root Development and Grasses. He presented informative charts with his address. Sprague brought out that the grass root system is at least partly regenerated every year. Unless the short-lived root hairs have conditions favorable for their development the grass plant can make but little use of the soil.

## Watch Grass Roots

In explaining why he made no recommendations as to specific practice, Sprague said that there is a difference in grasses when they are handled in the same fashion. Kentucky bluegrass has a working depth of 9 inches in the soil in which he studied root conditions; red top, handled in exactly the same way on the same soil, a 7-inch working depth; and red fescue an 11-inch working depth. Weight of the root systems also varied considerably. He advised root study for the greenkeeper to determine what grass will thrive best under local conditions.

Sprague surprised many of his hearers by reporting that the New Jersey investigations showed *poa annua* was not a shallow-rooted grass. He and his associates have come to the conclusion that *poa annua* survives or encroaches on turf because it starts fresh from seed every fall.

He spoke on the relations between temperature and watering and root development, pointing out that temperature response has an important bearing on proper treatment of grasses.

The New Jersey scientist made it plain that root investigations are far from being sufficiently complete to permit research men to tell exactly what happens and what practice to employ in assuring proper results in turf culture.

He warned that even if there is a good root development in a wet spring, the grass roots may die or at least stop functioning, should excessive watering water-

log lower soil. Sprague noted the tendency of grass to make growing conditions better for itself by adding to the humus supply. He also went into detail regarding effect of fertilizers on roots. Sprague mentioned that fertilizing practice for developing durable turf might not be at times what the player wants in top growth, but the greenkeepers would have to make a compromise. He gave considerable data on proper cutting heights. Treatment, soil conditions and climatic factors governed cutting height, along with the character of the grass.

### Soil Analysis

#### Is Complex Matter

O. J. Noer, technologist of the Milwaukee Sewerage Commission, had charts passed out to clarify points in his address on Soil Analysis.

The difference, said Noer, between fertile and unfertile soil lies not in the total amount of nitrogen, phosphorus or potash in the soil but on the ability of the soil to make plant foods soluble from the insoluble supply at the time the plant makes its greatest demands. Newer methods of soil analysis determine the available solvent material.

Noer believes that the value of soil analysis is limited at present by data which will correlate analysis with fertilizer experience in the field.

He expressed doubt that determinations of nitrogen are of much value so far as golf turf is concerned, since turf in good condition is absorbing nitrogen, a condition which can be readily determined by experienced greenkeepers. Determination of phosphorus and potassium is not so simple a matter.

Noer advised that soil tests be made by men experienced in the work. Acidity tests, he said, should be made in the field and at various depths. With the charts he went into the variations between soil analysis methods. He noted that tests do not accurately indicate the soil phosphorus supply where lead arsenate is used.

### Tregillus Gives

#### Maintenance Program

C. A. Tregillus, supt. of Mill Road Farm course and former head of the Royal Canadian Golf Assn. Green Section, presented a notable address on features of maintenance work necessary to player and budget satisfaction under conditions that seem due in 1936.

This particularly informative paper is

printed in full, beginning on page 15 of this issue.

C. F. Irish, tree specialist of Cleveland, pointed out that tree maintenance is an important, though frequently neglected phase of grounds work because a tree once lost can not be replaced for years. Tree feeding, the most important detail of the tree maintenance program, requires competent experimentation to determine what is the best food for trees under existing conditions. He spoke in interesting and practical detail on tree fertilizing and protection of trees from insects and disease.

Irish gave the greenkeepers many expert pointers on pruning, bracing and lightning protection. Tree planting and drainage were other matters treated by this expert in a manner that every greenkeeper will find worthy of close study when his remarks appear in a following issue of GOLFDOM.

Bob Scott, able greenkeeper of the Baltimore (Md.) CC, presented a most interesting address on his hobby, which consists of constructing museum-like exhibits of factors associated with his work. The displays advocated by Scott not only assist in the education of the greenkeeper in a very pleasant manner, but also unquestionably have wide interest for club members, since the extent and importance of the greenkeepers' work is brought interestingly to the members' attention.

In concluding his talk, Scott asked the greenkeepers to cooperate with the Middle Atlantic Greenkeepers Assn. and the USGA Green Section in preparing a greenkeepers' turf exhibit for display at a flower show to be held in Baltimore.

### Monteith Tells Lessons Of 1935 Course Maintenance

A feature address was that of Dr. John Monteith, Jr., technical head of the USGA Green Section, in which were set forth his observations of 1935 conditions, results and practices; from these, he pointed out factors that will have considerable bearing on greenkeeping work this year. The Monteith paper will not be printed in this issue of GOLFDOM since very much the same ground as he covered in his Cleveland speech was discussed by him in an article appearing in last month's GOLFDOM, to which readers are referred.

Interpolated during the Monteith address and in answering questions during the concluding discussion, the Washington



A practice green adds maintenance, but it also adds patronage at fee courses. The green shown here, 36 holes in length, prevents impatience when the first tee is crowded at the Mid-City (Chicago) course.

authority made several interesting references.

One concerned the talk he had with Bob Jones of Atlanta concerning over-watering of greens to stop balls. Monteith expressed the hope that Jones and other prominent players would educate the golfing public to the damage done by over-watering through popular demand. Air circulation as a turf disease preventative, and weed control by chemical treatment were two further subjects discussed by Monteith. He warned that chemical weed control has developed to a point where it can be applied with certainty.

Earl Barrows of Minneapolis, a pioneer in the patent grass plant field, spoke on patent grasses, the protective feature and the development of a grass that can be patented because of its distinguishing features. He showed charts of grass growth density made during the research work connected with the patent bent and suggested close study of plugs as a means of acquainting greenkeepers with actual status of growth.

#### Sod Webworm, Chinch Bug Problem Handled by Ohio Expert

Dr. J. S. Houser, Ohio Agricultural Experimental station at Wooster, told of work being done to control sod webworms and chinch bugs, the latter more restricted in area of the damage, but an even more baffling menace than sod webworms. Inasmuch as Houser's address is replete with technical data on fighting these pests it is to run in full in two issues of GOLF-DOM; the first installment, on sod webworms, appears in this issue.

A paper by Herb Graffis, editor of GOLF-DOM, on the greenkeepers' publicity problem was read by J. S. Connelly, superin-

tendent of the Army and Navy Club at Washington.

Graffis expressed the opinion that the wave of sub-par scoring in tournaments should not unduly concern golf's rulers. The longer distance of the golf ball is less serious than popularly supposed, inasmuch as the leading winners are among the shortest hitters in golf. He believed that high standards of greenkeeping, making possible many one-putt greens, is an unmentioned but primary factor in low scoring.

This indication of greenkeeping ability and progress, he lamented, was not being used as it should to emphasize the greenkeepers' performance and by inference or directly, the generally underpaid plight of greenkeepers.

He placed responsibility for this error of omission on the greenkeepers and their chairmen, because of their failure to acquaint members with course work, a subject in which members rightly should have some interest inasmuch as the maintenance cost of golf runs from 50 cents to \$6 or more per round at private courses. The Graffis paper pointed out that greens department bulletins in locker-rooms and clubhouses frequently were limited to such messages as "Play Winter Rules" or "Play Temporary Green on 16" instead of being lively informative current work bulletins.

He reminded greenkeepers that if they came into their equipment barns and found hung on their tractors signs "On the Bum," with the same bluntness as the "Winter Rule" signs, and there was no-one to explain, the boss greenkeeper would promptly do what is known in the profession as plenty of hell-raising.

He counseled cooperation between greenkeeper and chairman in the preparation

and display of bulletins for member information and satisfaction and eventually a salary-increasing realization of the greenkeepers' work and merit—at present largely unrecognized.

### McClure, Authority, Tells What Happens to Fertilizer

Prof. George McClure of Ohio State university reported on the research in which he has been engaged; the behavior of fertilizer in the soil. He showed charts of the rate of movement of nitrogen to point out how his research was for the purpose of helping greenkeepers to determine what fertilizer to apply for open or tight soil conditions, watering, and other factors. Ammonium nitrogen as supplied by ammonium sulphate or ammonium phosphates has the ability to stay in the soil for a much greater length of time than does nitrate nitrogen, McClure declared. Phosphorus doesn't go down into the soil rapidly, he stated.

Among practical applications of his findings McClure mentioned that prior to new seeding a rather large quantity of high phosphate fertilizer should be mechanically mixed with the upper 4 to 6 inches of soil so it will be down to where it will do roots of the new seeding the most good. Phosphorus is not lost by leaching. By discing in a heavier application of superphosphate than is generally used, then making the usual application of nitrogen and potash for a new seeding, phosphate applications can be forgotten for 4 to 6 years, McClure said. In the case of established turf McClure recommended heavier applications, less frequently, on phosphate-hungry soils. He related a case of heavy phosphate feeding in the fall sharply reducing crabgrass, although he remarked that an arsenate of lead application possibly had something to do with the crabgrass reduction in this instance.

The extended discussion which followed the rather deeply technical McClure address indicated strikingly the representative greenkeeper's advance in scientific knowledge since the time when McClure made his first address before the organization.

### How to Determine Equipment Need and Value

Prof. L. S. Dickinson, Massachusetts State college, in an address GOLFDOM is printing in full, emphatically stated that golf course maintenance has a pretty

husky diet of scientific data to digest right now and before cramming itself full with an overload it might well direct serious attention to the problems of business administration of the course.

Appraising the need and value of equipment, its efficient use and its financing, is a subject that demanded its share of scientific study at this time, Dickinson said. He outlined definite factors for the greenkeeper and chairman to consider in deciding on equipment purchase and management. He cited instances where inadequate and unreliable measuring devices were responsible for serious and unpardonable misuse of fungicides and fertilizers.

The Dickinson address laid down a buying policy that should have far-reaching value in the golf course field.

Fred Grau, formerly of the Green Section staff and now of the Pennsylvania State college concluded the conference with an address on "trouble-shooting" on Eastern golf courses. Grau's work consists of relaying the extensive and practical work of Profs. White, Musser and other turf stars with whom he is associated at Penn State, to the greenkeepers for practical application.

His talk, which will appear in full in GOLFDOM, abounded in instances of trouble elimination as a result of close cooperation between a state's greenkeepers and its state college staff. The Penn State student's golf course was mentioned by Grau as the site of numerous helpful experiments made by the college agricultural experts.

Grau, who has had much to do with sodium chlorate weed control work, reminded his hearers during his Cleveland address that the chemical methods to date have not proved to be a cure-all for weeds, and at no time ever were ballyhooed as such.

**N**OW is when the northern and central clubs can make strong use of bulletins advising details of work done at course and clubhouse since the close of last season.

These bulletins have a decided effect in getting the season under way early and strong and have a great influence on new membership solicitation.

Many daily-fee courses have found that advertising through newspapers and circulars early in the season is the most profitable advertising they do throughout the year.