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# TIMELY TURF TOPICS

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from the USGA Green Section

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## WEST COAST TRIP

By MARVIN H. FERGUSON

AGRONOMIST, USGA GREEN SECTION

A visit to the West Coast, for the purpose of getting acquainted with our member clubs, soliciting new members, increasing Green Section Subscriptions, and encouraging greenkeeper organizations, was made in May and June, by Marvin Ferguson, of the USGA Green Section; O. J. Noer, of the Milwaukee Sewerage Commission, and A. L. Brandon, Secretary-Treasurer of the Greenkeeping Superintendents' Association.

The trip involved visits at Hayden Lake, Idaho; Spokane, Pullman, Ellensburg and Seattle, Wash.; Portland, Imbler, La Grande, Corvallis and Klamath Falls, Ore.; Palo Alto, Burlingame, Millbrae, San Francisco, Claremont, Orinda, Berkeley, Oakland, Los Angeles and San Diego, Calif.; and Tucson, Ariz.

Meetings of greenkeepers and others interested in turf were held at Seattle, Portland, San Francisco, Los Angeles and San Diego. The First Annual Turf Conference at Washington State College was held on May 24 and 25, and the Green Section Committee meeting was held on June 8, prior to the Open Championship at the Riviera Country Club in Los Angeles.

Reports of the visits are in chronological order.

### Spokane, Washington

On Saturday, May 22, the Indian Canyon and the Downriver Golf Clubs (both municipal courses), the Spokane Country Club and the Wandermere Country Club were visited. Sunday, May 23, was spent at Hayden Lake, Idaho, and at the Manito Golf and Country Club in Spokane. There were very heavy rains both days.

The chief troubles in the Spokane area

are pearlwort, *Poa annua* and conditions resulting from rather heavy soils. Most of the courses were very well kept. It is significant that little fairway fertilization is practiced despite the fact that large quantities of water are used. Insect pests are not particularly troublesome. Considerable use has been made of 2,4-D for controlling weeds.

### Pullman, Washington

The First Annual Turf Conference was held at Washington State College on May 24 and 25. Highlights of the two-day program were the fertilizer discussions by O. J. Noer, of the Milwaukee Sewerage Commission, and Professor L. C. Wheeting, of the State College of Washington; the discussion of turf diseases by C. S. Holton, of the U. S. Department of Agriculture, and Roderick Sprague and George Nyland, of the State College of Washington.

Weed control problems were discussed by Lowell Rasmussen, of the State College of Washington, and Clarence Seely, of the University of Idaho and the U. S. Department of Agriculture. G. A. Amsbury led a very interesting discussion of machinery maintenance problems. Marvin Ferguson outlined some of the new developments in the field of turf management. A. L. Brandon of the Greenkeeping Superintendents' Association discussed "The Value of Greenkeepers' Organization in Serving Turf Management Problems."

At the dinner meeting on Monday night, Marvin Ferguson spoke on "A Turf Program for the Pacific Northwest." A recording was made on Tuesday for the Special-Events radio program of the State College of Washington by E. G. Schafer,

## Preparing Zoysia for Planting



Bureau of Plant Industry Photo

*Zoysia japonica*, Japanese lawngrass, was increased vegetatively in flats in the greenhouse during the winter. The sod was removed from the flats and cut into 2-inch squares with an edger. The plugs were molded and spot-sodded into Aerifier holes at 24-inch intervals. Planting was done in a bluegrass lawn at the Plant Industry Station, Beltsville, Md., on May 3 and 4, 1948. The strain shown is Z-52, a low-growing, fine-bladed strain of *Zoysia japonica* of pleasing, dark-green color

O. J. Noer and Marvin Ferguson. The recording was primarily an outline on the purposes of the turf conference.

The conference was well planned and executed through the efforts of E. G. Schafer, A. G. Law, E. J. Kreizinger and Dr. Mark Buchanan, of the State College of Washington.

### Ellensburg, Washington

On Wednesday, May 26, the party drove to Seattle, stopping briefly at Ellensburg, Wash., where the Ellensburg Country Club course is being reconditioned. Weeds are quite a problem, and the greens have developed a very deep mat.

On the whole, the greens were very good in Seattle. A mat had developed on the greens of a few courses. This mat prevented the penetration of moisture, so the greens were quite hard in spite of frequent rains and irrigation. Heavy soils and the

abundant use of water indicate the need for improvement in drainage and aeration.

### Seattle, Washington

A meeting was held on Friday evening, May 28, at the University Golf Course. Approximately 35 persons were present. The group included greenkeepers, dealers and park officials. This group was very much interested in the development of a research program at Pullman, Wash.

The turf conditions in Seattle were very good. There is some pearlwort and some *Poa annua*. The chief troubles are caused by matted greens and compacted soils. Irrigation of fairways is practiced extensively. It is felt that some saving of water could be effected by the more liberal use of fertilizer.

### Portland, Oregon

The party drove to Portland on Satur-

day, May 29. On the evening of May 29, we were the guests of Arthur Craig, of the Alderwood Country Club. Unfortunately, flood conditions prevented our visiting the courses lying near the Columbia River. Several of these courses were flooded following the break on May 30 in the dikes at Vanport.

On Monday, May 31, the party flew from Salem (the Portland airport being closed because of flood conditions) to Pendleton, Ore. From there we drove to Imbler, Ore., where we visited H. L. Wagner's seed farms. Mr. Wagner has approximately 1,000 acres in the Grande Ronde Valley in grass-seed production.

At the La Grande Country Club in La Grande, Ore., the mixed fescue and bent fairways were excellent. There were some localized dry spots on the greens despite a great deal of rain. A somewhat matted condition on the greens had prevented the water from getting into the soil.

The meeting of the greenkeepers' group in Portland was held on Tuesday, June 1, at Lloyd's Golf Course. Thirty-five were in attendance. The meeting was preceded by the inspection of several golf courses in Portland and a "brag and gripe" session.

It is interesting to note that most of the "gripes" had to do with drainage, irrigation, aeration and matted greens. It is believed that these four problems are by far the greatest trouble-makers on the Pacific Coast.

### Corvallis, Oregon

On June 2, H. A. Schoth, agronomist of the U. S. Department of Agriculture, showed us some of the experimental work which is under way at the Oregon Experiment Station in Corvallis. The Station, working cooperatively with the U.S.D.A., has developed a number of good turf grasses.

While many other States surpass Oregon in turf acreage, Oregon probably derives a greater percentage of its income from turf grasses through the sale of seed than does any other State.

At the present time there is not a turf-research project, as such, at Oregon State College. However, its contributions to turf

through the seed industry are of considerable importance.

### Klamath Falls, Oregon

On June 3, Mr. Brandon went directly to San Francisco, while Messrs. Noer and Ferguson stopped at Klamath Falls to look over the seed-growing areas operated by Geary Brothers. The Geary Brothers' ranch comprises approximately 4,500 acres of land in a valley which may be irrigated easily and quickly. A large part of the supply of bentgrass and red fescue is grown here.

### San Francisco, California

A joint meeting of the Northern California Golf Association and the Northern California Golf Course Superintendents Association was held at the Olympic Club-at-Lakeside in San Francisco on June 4. Approximately 65 persons were in attendance. This group is in the early stages of developing a turf research program for Northern California.

Methods used in other States were outlined. The group was urged to coordinate its program with that of Southern California, as both sections will depend upon the State experiment station for much of the research work.

In visiting the courses in this area, many conditions were found which were similar to those in Washington and Oregon.

### Los Angeles, California

June 7, 8 and 9 were spent visiting clubs in the Los Angeles area.

Monday night, June 7, the party attended a Green Committee meeting at the Los Angeles Country Club. Colin Simpson is chairman of the committee, and William Beresford is the greenkeeper.

The USGA Green Section Committee meeting was held in the afternoon of Tuesday, June 8. James D. Standish, Jr., Chairman of the Green Section Committee, presided. One of the important items discussed was the feasibility of establishing a Green Section branch office on the Pacific Coast at some future date.

Another topic of discussion was the function of the Green Section at the present time in coordinating and advising the officials of the University of California at Los Angeles and the Southern California Golf Association in their present turf-research project.

Mr. Simpson was appointed a member of the USGA Green Section Committee by Fielding Wallace, USGA President. Mr. Simpson is Chairman of the Southern California Golf Association Green Section and is very active in his support of the cause of better turf.

Following the Green Section Committee meeting, there was an open meeting which was attended by members of the Southern California Golf Association and the Southern California Greenkeepers' Association. Approximately 135 persons attended.

The proposed turf research project at U.C.L.A. was discussed by Dean Hodgson and Dr. Stoutemyer of U.C.L.A., after Dell Griggs and Mr. Simpson had presented a history of the turf research movement in Southern California.

Mr. Standish and Mr. Wallace presented a history of Green Section activities and accomplishments. Mr. Ferguson outlined the Green Section's program and its aims at the present time.

Mr. Brandon discussed the value of greenkeepers' organizations and urged his listeners to attend the Annual Greenkeeping Superintendents' Association Conference and Show, to be held in Los Angeles, from February 7 to 11, 1949.

On June 9, we visited Dr. Stoutemyer at U.C.L.A., looked over the proposed site for the turf plots and discussed research problems which might be attacked. The Turf Research Advisory Committee will work with Dr. Stoutemyer in planning his research program.

Dr. Stoutemyer accompanied the party to the new El Rancho Golf Course, now under construction. El Rancho has been selected as the site for the 1949 USGA Amateur Public Links Championship.

Messrs. Noer and Ferguson flew to San Diego on June 10 for an inspection of golf

courses and the San Diego Municipal Stadium and a conference with a group of 15 greenkeepers. This group is not formally organized at present but plans are being made to form a greenkeepers' organization.

### Tucson, Arizona

On the return trip to Washington, a stop was made at the Tucson Country Club, where bentgrass greens were established in October, 1947.

The temperature at Tucson was 105° in the shade at noon on June 13. There is a great deal of speculation as to whether the greens will go out during July and August. Fortunately, Tucson has cool nights—the night temperatures are often 30° lower than the midday temperatures.

Most of the greens are fairly well drained, and the root systems are good at the present time. It is believed that the greens will survive under those conditions.

The courtesy shown to our party in all the places visited was much appreciated.

### TURF FIELD DAYS

- August 19, 1948.....Maryland  
Twelfth Ft. Belvoir Post Engineer  
School, 9:30-3:30. Plant Industry  
Station, Beltsville, Md.
- September 8-9.....Rhode Island  
For Greenkeepers, at Kingston, R. I.
- September 10.....Rhode Island  
Second Annual Lawn and Garden  
Field Day. J. A. DeFrance, Rhode  
Island State College, Kingston, R. I.
- September 20-21.....Pennsylvania  
H. B. Musser, Pennsylvania State Col-  
lege, State College, Pa.
- September 27.....Indiana  
G. O. Mott, Purdue University, Laf-  
ayette, Indiana
- October 15.....Maryland  
Turf Gardens, Plant Industry Station,  
Beltsville, Maryland. F. V. Grau,  
USGA Green Section, Beltsville,  
Md.

## SUMMER TURF TROUBLES

### Scald

During the hot summer months, many greenkeepers will have trouble with "scald" on greens. The basic cause of such trouble is usually poor soil conditions, hence poor drainage and poor aeration. The "trouble season," during the heat of summer, is not the time to take drastic steps toward the correction of these fundamental faults. The grass must be kept alive until a season when weather conditions are more favorable.

Scald usually occurs first in small, localized dry spots. These spots are sometimes caused by lack of thorough mixing of the soil, by uneven surfaces, or by allowing the grass to form so dense a mat that water does not get down into the soil in sufficient quantity. When the soil becomes completely dry, the soil particles resist wetting, and the water is likely to run off instead of soaking into the soil.

Deep forking, preferably with a hollow-tine fork, will allow water to soak into the dry spots. After the soil is "re-wetted," it will take water in a normal manner. The use of tree sub-irrigators is sometimes effective in "re-wetting" these dry spots.

If the greens are poorly drained or have been kept too wet by rains or over-watering, the turf is likely to be shallow-rooted. Under these conditions, greens often start to wilt during the heat of midday. In this case, the wilting is more general and may first be detected by a marked foot-printing of the greens. The grass becomes bluish-gray in color and will eventually die unless the wilting is checked.

There is seemingly a paradox in this case, because the soil is saturated with water and yet the grass wilts because of drought. The shallow-rooted turf dries out in the surface half-inch and wilts even though water may be standing in the cups.

Frequent light syringing to moisten this surface layer will cool the grass and prevent it from dying. As the excess water in the soil moves out, the roots will start going deeper. Forking aids aeration and

may help to get the roots down more rapidly.

When grass is weakened by wilting and the roots are shallow, no heroic efforts should be made to force it into growth. Topdressing and fertilizing should be avoided until the grass begins to recover. The thinning out of grass on greens allows invasion of clover and many other weeds that seem to spring up overnight. One might be tempted to apply an herbicide, but the grass is very likely to die completely if treated with an herbicide while it is in such a weakened condition.

### Algae

The first indication of algae in putting greens is a thinning of the grass and the appearance of a greenish or brownish-black scum on the surface of the soil. If the condition is allowed to develop, the grass will sicken and die completely and the algae will cover the area with a thick scum which, when wet, is slippery. When dry, it will crack and flake.

Algae is a green plant which grows only in the presence of abundant moisture. On

### SUGGESTED READING

The Connecticut Agricultural Experiment Station has just published a bulletin entitled *Control of the Japanese Beetle*. It is Circular 166 and was published in May, 1948.

*Chemicals, Humus and the Soil*, by Donald P. Hopkins, is a book in which the controversial matter of the value of chemical fertilizers versus the value of compost is discussed quite thoroughly. The two major divisions of the book are composed of "The Case for Fertilizers" and "The Case Against Fertilizers." The book may be obtained from Chemical Publishing Company, Inc., Brooklyn, N. Y.

## Result of Poor Drainage and Aeration



*USGA Green Section Photo*

Spots such as this commonly are called "scald." Actually, it is a dry spot. The dead turf in the light area is matted, and water does not penetrate into the soil. The turf may be saturated on top while the soil one inch below the surface is bone-dry. Frequently, algae will develop in these areas.

putting greens, it is troublesome only under conditions of heavy clay soils, usually badly compacted, where water is unable to

penetrate and percolate. In other words, drainage and aeration are poor. The algae is able to thrive because the conditions have been unfavorable to the growth of good turf.

### CONFERENCE DATES

January 13-14, 1949.....Maryland

Mid-Atlantic Association of Greenkeepers, at Lord Baltimore Hotel, Baltimore, Md.

Ernest N. Cory, University of Maryland, College Park, Md.

February 21-24.....Pennsylvania

H. B. Musser, Pennsylvania State College, State College, Pa.

March 7-9.....Indiana

G. O. Mott, Purdue University, Lafayette, Ind.

When algae is observed, steps such as the following should be taken at once to correct the conditions:

1. Dust the areas with hydrated lime at the rate of 2 to 3 pounds to 1,000 square feet. Hydrated lime quickly raises the pH of the soil and checks further growth of the algae.

2. Tine-fork the affected areas *deeply* to admit air into the soil and to break the smothering scum.

3. Apply minimum quantities of water to discourage algae and to allow the drowned grass roots to renew growth.

*(Continued on page 18)*

## CONTRIBUTIONS TO TURF RESEARCH WORK DURING 1948

Augusta National Golf Club (Masters Tournament).....	\$1,000.00		
Augusta Women's Golf Association.....	10.00		
Carolina Golf Association.....	50.00		
Clapper, O. O. (The John Samuel Clapper Memorial Grant).....	500.00		
Florida State Golf Association.....	150.00		
Forest Park Cemetery.....	100.00		
New England Golf Association for:			
Connecticut State Golf Association.....	\$300.00		
Maine State Golf Association.....	100.00		
Massachusetts Golf Association.....	300.00		
New Hampshire Golf Association.....	100.00		
Rhode Island Golf Association.....	300.00		
Vermont State Golf Association.....	100.00	1,200.00	
St. Louis District Golf Clubs.....		400.00	
Southern Golf Association for:			
Alabama Golf Association.....	\$100.00		
Athens Country Club.....	50.00		
Greenwood Country Club.....	25.00		
Nashville District Golf Association.....	100.00		
Savannah Golf Club.....	25.00		
Sea Island Company.....	100.00		
South Carolina Golf Association.....	25.00		
Southeastern Section of PGA.....	200.00	625.00	
Southern Turf Association.....		100.00	
USGA Green Section (through "Education Fund") to:			
Florida Agricultural Experiment Station.....	\$300.00		
Michigan State College.....	375.00		
Pennsylvania State College.....	1,500.00		
Rhode Island State College.....	300.00	2,475.00	\$6,610.00

Thus far during the fiscal year 1948 the Green Section has sent to cooperating experiment stations checks to the amount of \$10,660.00. This sum represents some contributions received from contributing organizations in 1947 but has not been drawn until this year. The contributed amount was allocated to the following cooperating organizations:

Florida Agricultural Experiment Station.....	\$ 300.00	
Georgia Coastal Plain Experiment Station.....	3,235.00	
Michigan State College.....	1,125.00	
Oklahoma A. & M. College.....	2,500.00	
Pennsylvania State College.....	1,500.00	
Rhode Island State College.....	2,000.00	\$10,660.00

### Summer Turf Troubles

*(Continued from page 17)*

It is known that algae (clover and crabgrass, also) frequently develops in areas where the grass has been weakened by brown patch, dollarspot, snowmold and other diseases. Insects, too, can weaken grass and predispose it to algae growth.

In the long-term program, it is well to remember that algae has not been known

to damage healthy, dense turf which has been grown on sandy soil of open, porous texture in which drainage and aeration are good. Where algae is known to recur year after year, it may be well to plan a program to recondition the soil during the cool seasons.

This suggested program applies to Bermuda greens and to bent greens wherever they are grown in the United States.