

UNITED STATES GOLF ASSOCIATION
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Western Turfletter

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PART OF WHAT WE LEARNED AT THE TURF CONFERENCES

In our September issue of your Western Turfletter we encouraged USGA member clubs to send their golf course superintendents to the Annual Turf Conference closest to home. From the enthusiasm generated, the record attendance, and the tremendous interest in question and answer discussion, we feel that the many clubs who followed our suggestion will be more than repaid in better turf for their golfers.

We are indebted to the conference speakers, the panel experts, experiment station personnel, group chairmen and secretaries, and the program arrangement committees. Their enthusiastic participation and effort to disseminate knowledge and keep things running smoothly assured the success of these worthwhile group meetings.

It would take a bound volume to cover the talks in detail, and those who registered will receive a transcript of the proceedings sometime in 1954. Others who were unable to attend may be interested in receiving this brief review of one talk given at each major conference in the West.

Sand Layers -- Pacific Northwest Turf Conference

Dr. Walter Gardner, Soil Scientist, Washington State College, demonstrated graphically with a visual display what happens to water movement in soils when a thin sand layer is perched within an otherwise uniform loam soil. There before our very eyes we witnessed how water applied completely saturated the soil above the sand layer and actually "welled-up" toward the surface again before the first drop percolated through to the normal soil beneath. Dr. Gardner explained that this false water table could also be created by using any material that differed from the normal soil. During hot weather when oxygen requirements are very high for both plant and micro-animal life in the soil a false water table stops root penetration. It is for this reason that the Green Section has long been emphatically against topdressing greens with straight sand or peat. When root systems are limited poor turf is bound to result.

Water Management -- Northern California Turf Grass Conference

Dr. Robert Hagan, Professor of Irrigation, University of California at Davis, explained that for the grasses benefit often our watering habits are bad habits. Our common turf grasses have the ability to root deeply on uniform soils, and intelligent water management is of foremost importance in obtaining the maximum depth of rooting. Hagan showed us that it is possible to devise proper watering schedules if the following points are known by careful investigation on the part of the turf irrigator:

1. Effective depth of rooting - It takes a soil sampling probe to find out this point because even our most shallow rooted turf grasses have the ability to grow roots at a depth of 8-inches or better under proper management.
2. Water holding capacity of your soil - Per foot of soil depth sandy soils hold 1/2 to 3/4-inch of available water, loam soils about 1 1/2-inches, and clay about 2 1/2-inches.
3. Delivery rate of your sprinklers - Place coffee cans as rain gauges running out from sprinkler head and measure amount of water delivered in a given period of time.
4. Water use rate in your area - This differs from day to day and place to place as influenced by light intensity, temperature, humidity, wind, and competition from other plants. Approximate values given were 2 1/2-inches per week in southern dry desert areas; 2-inches in middle and northern valleys; 1 1/2-inches on inland coastal slopes; and 1-inch along the coast.

Dr. Hagan passed out charts that would be useful in establishing irrigation schedules. These same charts are contained in the February 1953 issue of our USGA JOURNAL AND TURF MANAGEMENT.

Turf Management -- Southern California Turf Conference

Mr. O. J. Noer, Agronomist, Milwaukee Sewerage Commission presented an excellent well illustrated talk on turf problems across the nation. Mr. Noer emphasized the fact that basic fundamental turf culture concepts concerning water, fertility, diseases, soils, grasses, insects, etc. were the same in Chicago as they are in Los Angeles. The same fungicides, insecticides, herbicides, and turf management practices are successfully used all over the nation, and local problems are mainly concerned with degree of intensity. We learned the importance of proper identification of our problems, and that more emphasis should be given to the primary cause of turf troubles rather than what treatment should be used for secondary symptoms. As an example we were informed that algae is not a primary cause of poor turf but a secondary symptom that can only appear when something else happens to thin out our stand of turf. It is virtually impossible for algae to develop in a dense healthy vigorous stand of grass. Therefore, the intelligent turf manager will find out WHY the turf became thin and sparse as well as what to do for the algae. The same is true with regard to many of our disease and weed problems.

Alkali Conditions Affecting Turf Culture -- Arizona Turf Grass Conference

Dr. W. H. Fuller, Professor, Chemistry and Soils, University of Arizona told us that both the water and the soil are sources of common salts that can cause trouble to turf. He mentioned that desert irrigation water can add up to 15 tons of salts per acre foot of soil, and that frequent light irrigations will never wash the salt below the root zone. This pointed out the need for good drainage, good infiltration, and deep and infrequent irrigation to lessen the danger of excessive salt accumulation. Where soils are tight and slowly permeable the use of water with a high salt content will cause trouble. Finely ground gypsum can be added to improve water that is high in sodium salt, and much of our

trouble from the use of poor water can be overcome through proper seedbed preparation. We learned that alkali burns are noticed first in two areas: the slopes where water runoff is a problem; and the low spots where water tends to concentrate. All of these facts point out the need for good surface, internal and subsurface drainage if acceptable turf is to be grown.

Physical Condition of Soils -- Rocky Mountain Turf Grass Conference and Equipment Show

Mr. Thomas Mascaro, President, West Point Products Company, explained that three factors: the sun, the climate, and the soil control plant growth, and that only the soil can be altered by the turf manager. We learned of the following simple test that the superintendent can make with three pint jars that would tell him how much sand, silt and clay were present in his soil.

1. Add small sample of soil to 1st jar 3/4 filled with water. Shake and allow to stand for 2 minutes. This separates the sand.
2. Pour remaining liquid from 1st jar into 2nd jar and allow to stand for 5 minutes. This separates the silt.
3. Pour remaining liquid from 2nd jar into 3rd jar and allow to stand until water becomes clear. This separates the clay.
4. Pour off water from 3rd jar and allow all samples to dry. Estimate by volume percentages how much sand, silt and clay is contained in your soil. This information will serve as a useful guide in determining how much additional material should be added to improve physical condition of your topdressing, or where a choice is involved will help you to decide which lot of topsoil should be purchased.

We further learned from Mr. Mascaro that (1) water acts as a lubricant in destroying good soil structure, (2) turf cover improves soils, (3) a single ryegrass plant grown under favorable conditions may have over 600 miles of roots and root hairs, (4) air is necessary for beneficial animal life (6,000 pounds per acre foot) as well as the grass, and (5) roots do not grow in the soil but around the soil particles.

TURF IS BIG BUSINESS IN CALIFORNIA

A recent conservative survey by the Southern California Turf Research Advisory Committee in Los Angeles County indicates that cotton, livestock, citrus, etc. are "small potatoes" when compared to the extent of the turf grass industry in the state. The following figures as compiled in cooperation with the University not only points out the size of turf and the money involved, but also should suggest to taxpayers and legislature alike that turf research should be a major project at the various Experiment Stations rather than playing "second fiddle" as it has in the past.

1. 317 million dollar turf installation cost exclusive of land cost in Los Angeles County alone.
2. 159 million dollars per year spent on maintenance of turf in Los Angeles County alone.
3. Based on this work turf is a 1 billion 600 million dollar investment in the state of California.

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This Is Your

Western Turf Letter

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