



UNITED STATES GOLF ASSOCIATION GREEN SECTION

Southern Turfletter

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No. 6

December - 1962

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MORE THOUGHTS ABOUT SOIL PHYSICS

Basic principles of soil physics are finding practical applications on golf courses. The main point of interest (and sign of progress) is that many of the problems known for many years have been employed for favorable uses.

A good example of this is that of layering in a putting green soil. When a layer (either fine-textured or coarse-textured) exists in the root zone, the superintendent immediately tries to remove it by aerifying. However, the layer is employed favorably in putting greens built according to the "USGA Specifications for A Method of Putting Green Construction." Because the seedbed is porous, it would be droughty without the gravel layer under it. Of importance here is the difference between the relative particle size of the particles in each stratum.

Another helpful tool is that of accurate laboratory evaluations to determine the proper mixture for the seedbed soil. In recent research at Texas A & M this was illustrated quite graphically in a study of the nature and development of hardpans under field conditions. While the study was designed to study the formation of hardpans, some of the data are valuable for illustrating the hazards of guessing for determining the composition of a soil mixture. In the study four mixtures were made in which the percentage of sand varied from 100 percent to 55 percent. In the mixture with 85 percent sand, there was 15 percent silt and clay; and in the mixture with 55 percent sand, there was 45 percent clay and silt. The hydraulic conductivity of the soil with 85 percent sand was 22 times greater than that one with 55 percent sand. All the permeability determinations were made after the soil samples had been well-compacted.

Inasmuch as permeability is directly related to the relative amounts of coarse sand in a sample and inversely related to the combined total amounts of fine sand, silt, and clay, measurement of permeability is perhaps the most valuable single test for suitability of a mixture for a putting green.

What good is research when no new doors are opened or when no practical applications result from it? This question is asked often by those doing research as they report their findings and plan new experiments.

Some of the practical applications illustrated as a result of the data presented here are: (1) avoid excess quantities of very fine sand (.05 -.1 mm) and silt (.002 - .05 mm) and clay (.002 and smaller) in soil mixtures which will be subjected to compaction and also be required to produce top-quality turf, (2) know exactly how the soil mixture will perform after compaction at several mixture levels (in other words, have the mixture analyzed prior to its use), and (3) the type of sand in the mixture can cause a great difference in the performance of the mixture.

There are several areas for new research as a result of this study alone. Some of them are already under study and others soon will be.

FALL AND WINTER IS CONFERENCE TIME

A regular feature of the regional turfletters is "Coming Events." This alone illustrates our attitude concerning attendance at the various meetings. A quotation from A. S. Gregg was recently printed in the Western Turfletter, and it aptly states reason enough for one to attend turf meetings.

"You have a shilling. I have a shilling. We swap. You have my shilling and I have yours. We are no better off. But suppose you have an idea and I have an idea. We swap. Now you have two ideas and I have two ideas. We have increased our stock of ideas 100 percent."

Plan to attend the turf conference in your region and take an active part in the business of your association. Thus, one strengthens himself and the influence of his association's turf conference.

THE GREEN SECTION VISITING SERVICE-----

November 30 marks the 42nd Anniversary of the USGA Green Section. It was born on November 30, 1920, in the following action by the USGA Executive Committee:

"Resolved, that a Green Section of the United States Golf Association be and is hereby created for the purpose of collecting and distributing...information of value respecting the proper maintenance and upkeep of golf courses."

The purpose has not changed. The procedures have changed somewhat in an effort to be more effective and efficient. The Visiting Service is available to USGA member clubs at an annual fee.

Benefits derived from the Visiting Service are:

1. Direct conferences with a Green Section agronomist on the course.

2. Assistance by correspondence and telephone.
3. Two subscriptions to a USGA regional turfletter, dealing with golf turf affairs of the particular region, six times a year.
4. One subscription to the USGA JOURNAL AND TURF MANAGEMENT, published seven times a year.

Annual fees for the Service are:

Less than 18 holes.....	\$100
18 to 27 holes.....	\$125
More than 27 holes:	
(a) 36 holes.....	\$150
(b) Per regulation course in addition to 36 holes.....	\$ 40

For additional information, contact your regional office.

COMING EVENTS

1962	December 10-11-12.....	Texas Turfgrass Conference Texas A & M College College Station, Texas
1963	January 25.....	USGA Educational Meeting Biltmore Hotel, New York City
	January 30-31.....	Virginia Turfgrass Conference John Marshall Hotel Richmond, Va.
	February 4-5-6.....	Southern Branch of American Society of Agronomy Meeting Peabody Hotel Memphis, Tennessee
	February 10-15.....	34th GCSAA International Turfgrass Conference & Show El Cortez Hotel San Diego, California
	February 27-28.....	Southern Turfgrass Conference Peabody Hotel Memphis, Tennessee

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College Station, Texas
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