NORTHWEST TURFGRASS TOPICS

VOL. 12, No. 2

PUYALLUP, WASHINGTON

SEPTEMBER, 1970

FROM THE PRESIDENT'S CORNER



By Tom Keel

I hope you have all recieved the information about the conference that was sent out both in Turf Topics and a news letter that gave the program. If any of you didn't receive this information, you are not listed on the mailing list. Please send me a post card and we will correct this and send you the information.

If things go as planned we should have an outstanding conference, both in program and attendance.

Also, you should have received from Art Elliott, the material on membership. This should be helpful as a tool in promoting and obtaining new members.

I am looking forward to the conference for several reasons. One is a chance to get away after a busy summer. Our usage has jumped from last year 32% in the overnight camping areas, and 28% in our day-usage area.

We have completed several major projects. One is a reservoir project, and we expect heavy attendance next season. Also, our salmon harbor at the coast, has been breaking records. And, we have started the second boat basin.

I am looking forward to seeing you at Salishan.

IRRIGATION PROBLEMS

By Roy L. Goss

I have sat through many discussions with designers and informed people in the irrigation industry and have heard conflicting opinions and stories about the water requirements for turfgrasses.

Anyone who has been on the receiving end of an under-designed water system certainly felt the pinch during the summer of 1970. A number of golf courses and other turfgrass areas simply did not have water capabilities to keep their areas green. This may be due to inadequate water supply or inadequate pumping systems or possibly have something to do with the design of the systems.

This article is not intended to present a mass of scientific facts about how to design an irrigation system but only to point out some real hard facts about water use by plants. There has actually been little or no work done on the consumptive use of water by turfgrasses. Certainly, there are differences among species in their requirements for water due to rooting depth and the management practices associated with them, but basically all turfgrass plants will remove identically the same amount of water from the soil before permanent wilting sets in. In other words, this water still has to be replaced somewhere along the line.

I have heard figures quoted all the way from 1/2 inch per week up to 2 inches per week of consumptive use by turfgrasses during the maximum season of heat, wind and grass growth. Just to give you a case in point, let's examine the following information. During two or three weeks in July, the U.S. weather bureau reported 1.77 inches of evaporation in the Puyallup area. Some of the areas in the Pacific Northwest had less evaporation and other areas had more but basically this is about an average. The "K factor" (a factor which compares the actual use of water from the soil by the plant which includes both the evaporation and transpiration as compared to evaporation from an open pan) for turfgrasses is almost 1 to 1 with evaporation. This means, simply, that the grasses during that period used about 1.77 inches of water during that week. This indicates, then, that the consumptive use was about 1/4 inch of water daily.

Obviously, when it is cloudy or if there has been a shower or two, or the temperatures are lower or there has been no wind, then we will not use as much water as compared to the opposite. However, for design purposes or for predicting a water requirement or pumping requirement we had better be thinking about 1/4 inch daily consumptive use during the maximum season.

(Cont'd on Page 4, Col. 2)

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SALISHAN LODGE Gleneden Beach, Oregon October 7, 8 & 9, 1970

THEME: Turfgrasses In Our Environment.

GENERAL CHAIRMAN: Tom Keel, President, Northwest Turfgrass Association.

PROGRAM CHAIRMAN: Roy L. Goss.

WEDNESDAY - OCTOBER 7, 1970

MORNING:	
10:00 -	Registration

Golf Tournament.

AFTERNOON:

1:15 - 1:30	Welcome: Tom Keel, President Northwest Turfgrass Association.
1:30 - 2:15	Environmental Pollution and Marine Life – Joel Hedgpeth, Oregon State
	University, Resident Director, Marine Science Center, Newport, Oregon.
2:15 - 3:00	Understanding the Physical Characteristics of Your Putting Green Mixes. William
	B. Davis A.E.S., Extension Turf-Landscape Horticulturist, University of California,
	Davis, California.
3:00 - 3:20	Break.
3:20 - 4:20	Solving Park Problems - Panel Discussion. Jack Sim, Director of Parks and
	Forest, Josephine County Oregon, Grants Pass, Oregon and Roy L. Goss,
	WWREC, Puyallup.
4:20 - 4:45	Question and Answers for the Afternoon Session.
EVENINC	

6:30 - 7:30	Social Hour.			
7:30 -	Banquet	and	Evening	Program.

THURSDAY – OCTOBER 8, 1970

MORNING:

8:30 - 9:30 Panel Discussion – Personnel Management and Public Relations. John Zoller, Eugene Golf and Country Club, Bill Bengeyfield, U.S.G.A. Green Section, Garden Grove, California, Tom Keel, Director of Parks, Douglas County, Oregon, Roseburg.

9:30 - 10:15 Proper Specifications for Irrigation Systems. Roger Gordon, Landscape Irrigation Consultants, Redondo Beach, California.

10:15 - 10:30 Break.

10:30 - 11:15 A Survey of Parks Problems in Oregon. Wilbur Bluhm and Willard Lighty, Area Extension Agents, Oregon State University.

11:15 - 11:30 Question and Answer Session.

11:30 - 12:00 Northwest Turfgrass Association Membership Annual Meeting.

(Cont'd on Page 3)

AFTERNOON:

12:00 - 1:15 Lunch.

- 1:15 2:30 Panel Discussion. Equipment for the Turfgrass Industry. Tobe K. Thompson, Jacobsen Manufacturing Co., Boise, Idaho, Russell E. Rose, Ryan Equipment Co., St., St. Paul, Minn., W. H. (Babe) Brinkworth, Toro Manufacturing Corporation, Cupertino, California.
- 2:30 -

8:00 -

Free time for recreation, committee meetings, or other conferences.

EVENING:

Certification. The Turf Professional's Degree. A general discussion regarding educational training and professional requirements for all turf managers. Cliff Wagoner, Director, G.C.S.A.A. Modesto, California, Walter Boysen, G.C.S.A.A., Oakland, California, Bud Johnson, Washington Tree Service, Seattle, Washington, and John D. Beheyt, Eastside Spray Service, Kirkland, Washington.

FRIDAY - OCTOBER 9, 1970

MORNING:

- 8:30 9:15 Trees and Their Care. Bernard Wesenburg, WWREC, Puyallup.
- 9:15 9:45 Role of Turfgrasses in Environmental Pollution. O. M. Scott Company.
- 9:45 10:20 Studying the Problem Green. William B. Davis, A.E.S., Extension Turf-Landscape Horticulturist, University of California, Davis, California.
- 10:20 10:35 Break.
- 10:35 11:10 Pre-and Post-Emergent Controls for POA aNNUA. Roy L. Goss, WWREC, Puyallup, Wash.

11:10 - 12:00 Research Reports, Charles J. Gould, Plant Pathologist, WWREC, Puyallup, Wash., Roy L. Goss, Associate Agronomist, WWREC, Puyallup, Wash.

CONFERENCE REGISTRATION:

Members-One Register Free, Others from member's organization- \$8.00. Non-Members-\$15.00. Ladies Registration-\$5.00.

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FROM THE OREGON COMPOST HEAP

By Byron Reed

It looks like a great crowd is in the offing for Salishan Lodge and the Northwest Turfgrass Conference, October 7, 8, 9, 1970, Those who haven't thought of reservations by this date are not enjoying the hospitality of Salishan. The house is full!!! Your reservation will be honored by Salishan and placed in a nearby motel.

This has been a real hot summer and all of the golf superintendents, here in Oregon, have been put to the full test. One only has to observe the crowds on golf courses, these days, to know that the golf superintendent has his hands full. If someone ever comes up with a method of handling the crowds and good turf management all at the same time, we will all breathe easier.

Some job changes since the last column. Myron Olson, formerly with John Zoller at Eugene Country Club has taken the Superintendent's job at Springfield Country Club. Richard Malpass, formerly at Shadow Hills Estates Golf Course, has taken the Superintendent's job at Riverside Golf & Country Club in Portland, Oregon. Dick Lovell, formerly with Harvey Junor at Portland Golf Club has taken the Superintendent's job at Bend Golf Club.

Sunset Golf Club, in Coos County near Charleston, Oregon, opened August 1, 1970. Dennis Olson has done a fine job bringing this golf club to the open date.

Looking forward to seeing you at Salishan.

President's Corner

(Cont'd from Page 1, Col. 1)

EDITORS NOTE: The editor has in his possession, evidence that we have a true athlete in our group. It seems that our athlete was attending a county parks conference in Portland and dropped by Benson Tech to get in his daily three miles of running. It seems that an all-comers track meet was in progress so this athlete entered the three-mile event along with six other fellows in the 30-40 year-old age group.

Not only has this athlete claimed to have lost 42 pounds this last year but also won this track event in a time of 17:58.5, bettering his previous best of 18:00.9, during an all-comers meet in Roseburg. This sterling athlete is non other than our President, Tom Keel, Director of Douglas County Parks. This evidence indicates "No wonder the County Commissioners can't catch him."

Congratulations Tom, this is a great accomplishment and now we can believe you are also in great shape.



IN MEMORIAM



George Avard Lawton

George Lawton died at his home in Tacoma, Washington on April 14, 1970. He was born in the same city on June 6, 1929. The cause of George's death was diagnosed as acute subarachnoid hemmorrhage which was caused by a birth defect. George leaves behind his wife, Anna, and Daniel, age 14 and daughter, Joanne age 9.

After returning from the Korean war, George worked at the Tacoma Country and Golf Club under Henry Land Sr. from March 1953 to March 1956. From March 1956 to June 1959 he was the superintendent at the Elks Allenmore Golf Course. He then moved to Olympia as Superintendent of the Olympia Golf and Country Club from June 1959 to January 1965. In January 1965, George returned to Tacoma Country Club as Assistant Superintendent until he took over as superintendent on March 1, 1968. We all mournhis passing and wish to convey our deepest sympathy to his family.

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Frank Gavan

Frank was golf course superintendent at the Cedar Hill Golf Course in Victoria, B.C., when he died at the age of 65. His death was a result of multiple injuries received when a part of a fallen tree broke off and fell on him when trying to clear the tree from the golf course.

Frank was born in Ireland, raised in England and came to North America in 1929, travelling throughout the U.S. and Canada as a Musician. He married in Terrace B.C. where he led a 30 piece orchestra and a 10 piece dance band and also designed and managed a 9 hole golf course later in Nanaimo, B.C.

Frank worked as a logger and surveyor in the B.C. interior and was secretary of the Rod and Gun Club at Terrace, and field man in that area for Ducks Unlimited.

In addition to Frank's many talents, he was an accomplished woodcarver and painter, particularly of wild life settings. He is survived by his wife Bertha, who still resides in Victoria. The Turfgrass Association extends to Mrs. Gavan, and the family, our deepest sympathy.



Irrigation Problems

(Cont'd from Page 1, Col. 2)

You may wonder why, since this maximum season occurs for perhaps only two to four weeks, that we should design a system to deliver the maximum amount of water all the time. Many turfgrass managers are descriminating to the point that they do not want brown areas at any time. If so, then the maximum use factor dictates the design. If, on the other hand, you have no objection to some off-color or brown turf for approximately one month, then you can possibly get by with less water. It is a poor practice to apply on a continuing basis, less than the consumptive use because the soil continues to dry out in spite of your efforts to the point where high tensions build up and water will simply run off of the high spots and into the low spots. You end up, therefore, with a few green spots and many brown areas.

There is some consolation, however, when turf does go dry. Poa annua will dry out just as quickly, if not more so, than desirable bentgrass, fescues, and bluegrasses, therefore, it will help to keep down POA aNNUA somewhat and in the case of golf courses, the golfer does score better since he gets much longer dreves on dry courses.



HOW MUCH NITROGEN?

(Cont'd from Page 7, Col. 2)

Most of these organic additives require additional nitrogen applications, Loamite has had nitrogen added and does not require any appreciable quantity of nitrogen outside of the needs for the grass. Loamite will supply some nitrogen to the growing grass for a short period of time. All of the other materials will require additional amounts of nitrogen over and above the needs of the grass. The best way to judge this is to watch the color and growth rate of the grass and supply sufficient nitrogen to keep it in a healthy growing condition.

One last important consideration with organic materials, is to be sure that they are uniformly incorporated with the soil so that no pockets of pure organic material exists. These pockets will decompose and cause uneven settling of surfaces. They will cause other problems as well. Off-site mixing is generally recommended where organic materials are to be incorporated.



A Review of Organic Materials for Turfgrass Construction

By Roy L. Goss

New materials and products are constantly appearing on our market. Due to the vast size of the Turfgrass Industry a lot of interest has been stimulated in this area by persons who have products to develop or sell. This article is a brief review of some of the organic materials available in the Pacific Northwest and the author's comments,

WHY DO WE USE ORGANIC MATERIALS?

Before deciding which organic material to use, perhaps we should ask ourselves why we use it. Under conditions of synthetic construction such as athletic fields, putting greens, etc., the basic material for the surface is sand. Sand is inert in reaction, holds little moisture, and will compact when particle sizes are quite fine. Organic materials added to sands will increase water holding capacity, nutrient holding capacity, and help to prevent the soil sand particles from compacting too closely together or, in other words, provide some softness, or resiliency to the soil. Organic material will also provide nutrients, and a medium for bacterial activity.

Soils that are truly classed as topsoil that are used for lawn construction purposes, playgrounds, golf course fairways, parks and other areas, usually do not require the addition of organic material since the organic matter level is usually high enough under natural conditions. Secondly, it is not entirely feasible to add organic material to large turfgrass areas such as parks and school grounds. Our organic discussions then should be confined to the specialized areas as pointed out above.

WHAT MATERIALS ARE AVAILABLE?

- 1. Sphagnum peatmoss
- 2. Sedimentary peat
- 3. Sawdust
- 4. Loamite
- 5. Seaforest
- 6. Other organic materials such as manures.

Seaforest is one of the most recent additions to the turfgrass market. It is a ground bark product which has been fortified with kelp to provide a number of factors; among them would be minor elements. Bark decomposes very slowly in the soils, hence the life of the material should be excellent.

Sphagnum peatmoss is probably one of the oldest organic products on the market for amending sandy soils. Although sphagnum peatmoss is an excellent material, it does have the tendency to compact under intensive use. It will not hold up so well as the bark or sawdust materials. It is still, however, an excellent material for use in construction. Sawdust can come from a number of sources and this factor should be carefully considered. It is not recommended that cedar sawdust be used alone in a soil mixture. A sawdust mixture can be composed of cedar up to 25% without producing harmful effects. For the most part, fir or hemlock sawdust is best. The hardwood sawdusts, although satisfactory, do decompose more readily in the soil and do not produce the desired effect as long as fir or hemlock. Sawdust should be composed of particles no more than 3/8 inch in size and preferably smaller. Many people receive shavings and chips which cannot be classed as sawdust. Sawdust should be leached before mixing.

Loamite is a processed sawdust material with much of the cellulose removed producing a more stable material that will hold up longer than sawdust or peatmoss in a soil mixture. Data are not available to compare Loamite with Seaforest. Specialized areas that have been constructed with Loamite have reported excellent results.

Sedimentary peat is a completely decomposed plant material that is found in local bogs in the Pacific Northwest. The material has little or no identity to the original plants that formed these deposits. The material can be broken down to a powder form by hand when dry and it appears almost as a mud when wet. These materials should be completely avoided where possible for construction of specialized areas. Small amounts of this material may possibly be used in areas outside of greens or football fields since it will supply organic material which will increase the nutrient and water-holding capacity of soils. Under heavy traffic, however, these extremely fine organic particles will float to the surface and cause sealing of the soils. This is ocassionally referred to as a "locked-up or frozen soil".

HOW MUCH ORGANIC MATTER SHOULD WE USE?

For the Pacific Northwest, particularly in the wetter areas, we feel that 30% organic matter by volume is the highest amount that should be used and preferably 25%. Organic matter will increase the water-holding capacity, therefore causing wet-soggy conditions during the winter. On the other hand, consider the fact that irrigation is practiced throughout the playing season on golf courses particularly, so it could likewise cause excessive water to be held in the surfaces in the drier regions as well. Therefore, volumes of 26-30% should be acceptable. In calculating peatmoss, always calculate on the basis of loose volume and not on baled volume. Baled peat has only about one-half the volume as loose peat.

(Cont'd on Page 6, Col. 2)

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