UNITED STATES GOLF ASSOCIATION
GREEN SECTION
WESTERN OFFICE

P.O. Box 567 Garden Grove, California

WM. H. BENGEYFIELD
Western Director

Phone KEllogg 2-2935

• Western Turfletter •

Vol. 10 - No. 3 May - June, 1961

How YOU Can Overcome - - -

THE WEST'S OLDEST PROBLEM -- WATER

The farmer was rocking on his front porch listening to the "pitch" of a young encyclopedia salesman. The salesman listed the reasons why his set of reference books should be on the farmers shelf.

"And I guarantee you", he concluded, "that these books will double your present farm efficiency."

"Son," said the farmer after a pause, "I don't believe I'll need your books. You see, I'm only farming now half as well as I actually know how."

Faced with the driest year in recorded history, California, Nevada and Utah golf course superintendents have a long, hot, dry summer ahead. Despite water rationing, some western agricultural sections are already "Disaster Areas". To be successful this year, the superintendent will need every trick in every book he can find; wisdom and alertness will count heavily. And when men such as Gomer Sims and Hector Clark in southern California and Al Emery in Salt Lake predict a summer of tough irrigation, it's time for everyone to review, tighten up and review again his irrigation plans.

Turf is probably the most poorly irrigated crop in this land today! Since man is a slave to habit, many superintendents wrongly "standardize" their irrigation program. How often has the night irrigator been told "Give all greens 15 minutes of water tonight"? This is where summer trouble usually starts.

Dr. Bob Hagan, University of California, Department of Irrigation has said, "If we are to learn to save water and to save money in turf irrigation, we must recognize that turf irrigation habits are often bad habits from the standpoint of soil characteristics and needs of the grass for water. Irrigation practices unfortunately are usually set by habit or calendar - - - while they should be set by requirements of the grass plant."

What Are The Requirements of The Grass Plant?

Well, several factors are involved and they're all important. The one most frequently overlooked and abused however, is the effective depth of rooting of the grass in question. If, for example, a green is 100% Poa annua with a rooting depth of only one inch, then the superintendent and his irrigator must concern themselves with that one inch of soil area where grass roots are present. They must manage their irrigation so that one inch is always within the correct range for good grass growth.

Soils are important too. The soil depth, type, depth of previous wetting and soil drainage must be considered for each green, tee and fairway area. Some may say that this is impractical - - - others will say that it is essential. As soil moisture is increased, grass obtains the needed water supplies more easily and more growth takes place. But, also, as water is added to the soil, the soil pores become filled with water until air is excluded. Then rapid decline in growth results from a lack of oxygen for root respiration. Normal root activity ceases and trouble begins.

Another determining factor is the weather. Such daily variables as temperature, humidity, cloud cover and air movement play a tremendous role. For these reasons, it is impossible for anyone to "standardize" an irrigation schedule.

What Are The Answers?

"The experienced irrigator knows there is no substitute for looking below the surface of the ground in irrigation", says Dr. Hagan. "It is difficult, in fact impossible, to irrigate well by always looking at the surface. The use of a soil tube is essential in good irrigation management." - - - - - - - - Some have urged the use of soil tensiometers on greens to determine "when to irrigate". At best, this seems a poor substitute for the soil probe tube and the superintendent who must know "what's going on down below".

Fertilizers also have a place in water conservation. Experiments with many crops have shown that where adequate fertility levels are maintained, less water is required to obtain a good yield. In fact, when adequate fertilizer has been combined with near optimum moisture, yield increases have ranged from 50 to 300 per cent. The result is a net increase in water economy brought about by fertilizer applications.

Experienced superintendents also find that frequent summer spiking or aeration (expecially on greens, but also for tees and fairways as well) helps infiltration rates and reduces surface run off. Surface sealing is checked during the summer. Thus, less water is needed as that which is applied is more effectively placed.

The time may soon come when the expression "He spends his money like water" will disappear. For we are entering a new era when we will have to spend our water as we should spend our money --- to get the greatest return for the most sparing use of this vital resource. The long, hot, dry summer lies ahead.

NEW HELP FOR WESTERN GREEN SECTION SUBSCRIBERS

Continued increase of USGA member clubs subscribing to the Green Section Visiting Service has brought about an addition to the western advisory staff this summer. Mr. Wayne Allen, USGA Agronomist has visited golf courses throughout the south and southwest for several years. Now, he will devote six weeks of the coming season to visits in the Western Region. He brings with him a wealth of turfgrass experience and a fine agronomy background from Texas A & M.

Wayne Allen will make his headquarters in the Western Green Section office during his tour. His work will start in late June so that Green Section subscribers will have maximum assistance during the most critical part of the turf management year. This is but a part of the Green Section's continuing program to assist member clubs and superintendents in producing better golfing turf. - Is your club taking advantage of the service?

RESEARCH REPORT ON CONTROL OF PEARLWORT

Long a troublesome weed pest of putting greens, Pearlwort (a very small, erect annual herb with very narrow leaves -- somewhat like moss) may now come under chemical control. Recent research under Dr. Joe Duich at Pennsylvania State University indicates that Endothal has been selective in bringing about Pearlwort control. However, there has also been a wide range of difference in susceptibility of various bentgrasses to injury from Endothal. For this reason, Dr. John C. Harper II, Extension Agronomist for Penn State suggests the following program where Endothal is used:

"1. The material should be applied at a rate of one-quarter pound of actual ingredient per acre. Air temperatures should not exceed 75 degrees.

"2. As with any other herbicide, it should be applied when the green has adequate soil moisture. Discoloration on the less susceptible bent strains may last 3 to 7 days. On the more susceptible strains, discoloration often persists for as long as 10 days.

"3. Seldom will one application be sufficient for complete control. During seasons when cool temperatures exist, two applications at three week intervals is suggested. For example, one in the early fall and a second in mid fall would be acceptable. Spring applications are effective as well.

"4. After one application has been made at the rate of one-quarter pound actual ingredient per acre, it is suggested that if there is little or no apparent damage to the desirable grass, the rate can be doubled to one-half pound actual per acre for subsequent treatments. This increased rate should be used only on those bentgrasses which show high tolerance to the material.

"Endothal has been used quite successfully on several greens as an annual treatment. However, this is a potent material and extreme caution must be used in measuring and in application."

* * * * *

"I don't like to lose, and that isn't so much because it is just a football game, but because defeat means the failure to reach your objective. I don't want a football player who doesn't take defeat to heart, who laughs it off with the thought, "Oh, well, there's another Saturday." The trouble in American life today, in business as well as in sports, is that too many people are afraid of competition. The result is that in some circles people have come to sneer at success if it costs hard work and training and sacrifice."

Knute Rockne

U. S. GOLF ASSOCIATION GREEN SECTION
WESTERN OFFICE
P.O. Box 567 Garden Grove, California

BULK RATE
U.S. POSTAGE
PAID
Garden Grove, Calif.
Permit No. 83

Dr. J. R. Watson, Jr.
Cheif Agronomist
Toro Manufacturing Corp.
Minneapolis 6, Minn.