AUGUST, 1966
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The Bull Sheet

Official Bulletin
Midwest Association of Golf Course Superintendents

GOLF

DINNER

AUGUST MEETING

MONDAY, AUGUST 29, 1966

RAINBOW SPRINGS COUNTRY CLUB

MUKWONAGO, WISCONSIN

MAKE UP A

CAR

LOAD

THE BULL SHEET, official publication of THE MIDWEST ASSOCIATION OF GOLF COURSE SUPERINTENDENTS.

DOUG JABAAY, Editor
P. O. Box 305
Naperville, Ill. 60540

The President's Message

I was sure disappointed that I was unable to attend our July meeting at Olympia Fields.

All reports I got were praises for Oscar Miles on the condition of the golf course through the hot and dry spell. Congratulations, Oscar.

The turnout was excellent and the manager and the club really extended themselves.

Walter Fuchs, thank you for taking over in my absence. I hear you did a fine job conducting the meeting.

Congratulations to Ted Woehrle, Walter Fuchs, and Roy Nelson, to National appointments. It is my hope that the entire Association will be one hundred percent behind them.

The cool weather is a blessing to all of us after the terrible weeks of hot and dry days.

The Superintendents should be commended on the job they have done under these conditions. Let's hope all the club members realize the long and hard hours we have had to put in.

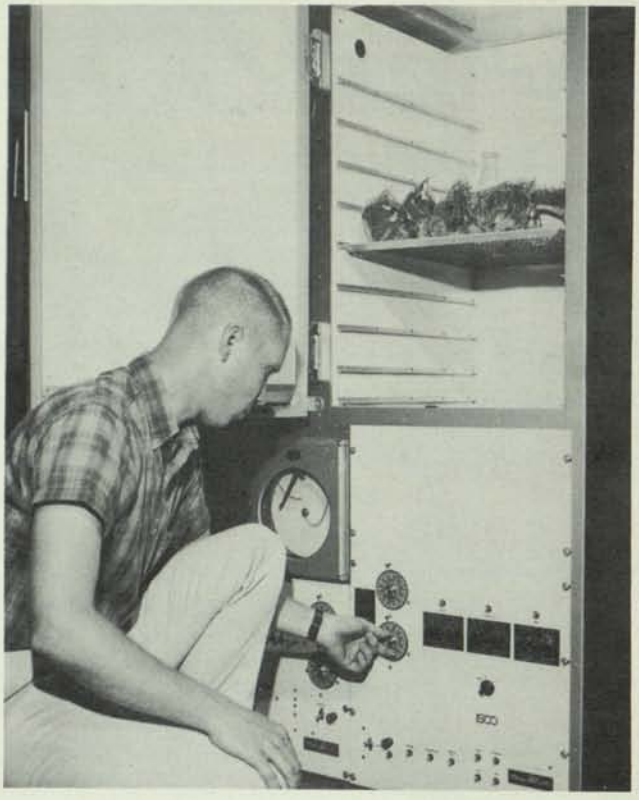
It is very hard to fight the elements. Before anyone criticizes, they should take this into consideration.

I think about now we would all be very happy with a couple of inches of snow. Expecting to see you all at Rainbow Springs.

Adolph Bertucci
President

P.S. I hope no one was inconvenienced by the error of our date for the joint meeting.

PATRONIZE OUR ADVERTISERS



University of Illinois ornamental horticulture graduate student Bill Blaine adjusts the controls on a growth chamber used for studying diseases in turf grasses. Grants by the Illinois Turf Grass Foundation and the Midwest Golf Course Superintendents Association made the growth chamber possible. This is one of many valuable contributions from the organizations in the past several years, according to the U. of I. turf grass specialist J. D. Butler.

REPORT ON AUGUST MEETING IN NEXT ISSUE

MIDWEST TURF FIELD DAY REPORT

Purdue University, Lafayette, Ind.

The next Midwest Regional Turf Conference is scheduled for March 6-8, 1967.

Graduate student Hayden Watkins has been minutely examining the possible benefit of several sucrotallowates, bi-products of animal processing, for spray additives. Such materials can make effective, easily-bio-degradable wetting agents.

Can lower rates of pesticides be used? Can better selectivity be secured? Can plant uptake be increased? Such questions are the basis for continued research—Compare clover control and weed kill in plots.

Continued Fertilizer Research

During 1966, nine sources of nitrogen, including 5 experimental fertilizer blends, are being compared at rates of 0, .5, 1, 2 and 4 pounds actual notrogen per 1,000 sq. ft.

Test No. 1 was initiated June 14; Test No. 2, July 19. Ratings (1-best—9-poorest) are taken prior to each clipping harvest. Of particular interest is Ureaform 4# actual N/1,000 sq. ft. per application. Where this has been repeated for three years, its release pattern is quite uniform compared to single applications of previous years.

AA data from experiments are shared with the sponsors. General rates of nitrogen are well known. Merion bluegrass needs 4 pounds of nitrogen per 1,000 sq. ft. per year for continued amplpe growth.

Crabgrass Killing

Field Day report of 1954, twelve years ago, first showed the selectivity of the organic arsenicals. Since then widespread usage has occurred. Crabgrass infestations have been treated in test No. 2 (west) before fertilizer was applied. In test No. 1 (east 20 ft.) three applications have been made during three previous weeks. No bluegrass damage has occurred.

Midwest zoysia

Zoysia has been grown on eleven locations of our turf plots since 1950. Currently sample plots are maintained for general observation. These are mowed at 3/4 inch with clipping removed and fertilized three to four times a year.

Midwest zoysia now three years old is marked. It is providing a medium density turf, which was our aim. Ample supplies of Midwest are available from Agricultural Alumni for starting nurseries. Limited supplies may be available from commercial nurseries in some areas. Midwest zoysia spreads approximately twice as fast as Meyer zoysia under comparative growing conditions.

A space planting of some experimental types is being maintained for further Zoysia selection work.

Fall Seeding Lawn Varieties

One annual, six perennials, two red fescues, four bluegrasses and one bent were planted September 27, 1965. Note continued thinning of annual—it was badly damaged during the winter and continues to be thin. Of these the bluegrasses provide the better turf. All grasses have done well during 1966 with minimum disease showing in these new plonts.

Older Bluegrass Performance

Since 1959 we have recommended the blending of available bluegrass varieties so that the vigor and disease characteristics of each grass could be combined into best adaptation and turf performance. Generally blends give ratings intermediate to the best grass present under its best performance. Generally when disease takes down the worst performer (for example, leafspot on Newport), the performance is above that of the individual.

Several sod growers are using blends for multi-purpose, and specify the same pricing as Merion sod. New selections appearing on the market can be incorporated into blends even at light rates as desired.

How Much Density in Bluegrass?

Note thatch and cores taken from a "dense bluegrass" and "thin bluegrass" after six years of uniform management. Generally density has been desired as a means of weed control by ground covering.

At the 1965 Field Days the gradual involvement leading to current space planting of bluegrass was stressed. Currently we are testing three U.S. experimentals, four experimentals from Europe, and three private experimentals. No new varieties of bluegrass have been put on the market in 1966.

"Shall We Release It?"

Recent compilation of data shows that a dark green blugrass selection has some of the best disease resistance observed. The grass has been planted in numerous states and research from Rutgers is encouraging. Because of its slow growth as young and mature grass, it is suggested it could be a desirable grass for sod growers.

Normal procedure would be to release the grass through Agricultural Alumni Seed Improvement Association. They would make contracts with seed growers in the Northwest, as well as make contracts with sod growers in the Midwest and East so that seed is both grown and sold under contract for an initial period, perhaps three years. Breeder seed has been secured. A plan is being considered—it may be implemented over winter. At the earliest, seed could be available to sod growers in the fall of 1968. It may be that more than one selection having similar turf performance characteristics would be released as a blend. The question—"Shall we release It?"

Dwarf Blugrasses

Graduate student Terry Riordan continues his research on low-growing blugrasses which have good rhizome development. Over 100 selections have been made. All of these are space plant experimentals, but the work is most promising.

Similar effort is being devoted to finding vigorous, aggressive, fast spreading clones which would be suitable for highway usage. Note variation in space plantings. Available varieties from this work are at least six years away.

Close Cut Bluegrass

For three years a block of bluegrasses, both commercial and experimental, have been maintained at 3/4 inch cut with weed and insect control, but without disease control. Severe damage from extensive leafspot occurred in April and May of 1966. The Anheuser dwarf has continued to be outstanding under such good management. Prato was badly damaged with leafspot, but is coming back well. 0217, an experimental, has been one of the better performers. K-5-47 experimental continued to look good.

The two outer sections have had two years of calcium arsenate use for crabgrass and **Poa annua** control. The center section has not had crabgrass prevention.

Vertical Mowing

Numerous tools are available for vertical thinning and mowing of grasses. These assist in renovation, assure better coverage and permit the use of less

(Continued on next page)

TURF FIELD DAY REPORT (continued)

seed in overseeding programs. Those providing openings in the soil are preferred for overseeding.

Crabgrass Preventers

Continued research on new materials includes Planavin of Shell Oil Company, Z-5 of Sherwin-Williams, an experimental of American Cyanamid, plus new formulation-combinations of others. Because of extended dry weather, limited observations are available.

Purdue Stadium

Maintenance on the Stadium continues to favor bluegrass. The Zoysia originally planted, mixed with bluegrass, has completely died due to fall fertilization combined with wintertime temperatures. Note the dense turf formed by the light green 16-B in the renter of the field. The field has a 1% slope (10" crown center above sidelines).

Vertical Slitting

Wherever disposal of surface water is a problem, vertical slitting (thus making narrow trenches into which porous materials are placed) may benefit. This is being widely done in low areas on golf courses, and some is being done on athletic fields. The idea is to trench as deeply as possible with as narrow a trench as possible. Either pea gravel or coarse sand may be used for filling the trench. Sand or calcined clay should cap the trench to overflowing. Where possible tie into tilelines by crossing tilelines. Usually use of the area may continue immediately after trenching.

Rootzones

After seven years the durability of numerous calcined clays appear adequate. The exposure to wear, weather and chemicals has not caused a rapid deterioration. Where soil under calcined clay pulls much of the capillary water out of the calcined clay above it the rootzone is too drouthy. Where there is a sand layer, which reduces capillary pull, adequate moisture is retained.

Subsurface Irrigation

A new and different approach is also being undertaken. We have large sheets of plastic; we have plastic tile with slits. Adjustable float valves will maintain a reservoir of water in base sand. Distribution pipe will serve as drainage for excess rain also. Laboratory determinations have shown a column of sand placed above a reservoir can be kept moist at the surface. Research of David Ralston and David Bingaman utilize the north edge of the experimental green to determine reservoir depth, rootzone depth, exact rootzone texture needed and possible mires which can be used for this. Individual plots are one meter square.

Wilt Reduction

Continued research on foliage coatings utilizing materials available show that some wilt reduction can be accomplished as a part of good grooming on golf greens, etc. Dilutions of concentrate 1 into 19 water seem practical with most materials currently available.

Zoysia in Fairways

In 1959, rows two feet apart were planted as sprigs of Zoysia selections in the north half of No. 8 fairway Lafayette Country Club. Without irrigation and no weed control it took two years before small areas began to show. Complete take-over by these Zoysias indicate extent of adaptation.

Arsenicals used in 1964 on part of the adiacent fairway illustrate the contral of **Poa annua** and the extensive bluegrass spread since then.

FROM THE MIDWEST TURF NEWSLETTER

Keeping Turf Turgid!

Turfgrass clippings are normally more than 80% water and up to 90% under some conditions.

Grass will show obvious wilting when the moisture in leaf approaches 75% and will show severe wilting below 70%. (Incidentally, corn grain has stopped growing when the moisture content drops below 40%.

Leaf sensitivity to moisture has been repeatedly observed by turf managers. The green starts to wilt. Hand-rinsing reduces wilting—in ten to fifteen minutes the leaf look turgid. Perhaps that leaf moisture was always above 70%. Zoysia leaves that appear to be dormant will show turgidity in as little as ten minutes. This plant is most sensitive to leaf moisture changes due to its thin-walled cells.

Bluegrass responds slower than bentgrass; yet tolerates additional dryness before going completely dormant. Fortunately the wilting of grass serves as an initial warning before severe damage occurs. However, very prompt watering is necessary in many cases to prevent damage. Certainly it is well known that bentgrass loves water, and, as a rule, if in doubt, water bentgrass. In contrast, if in doubt don't water bluegrass.

RESEARCH ON WILT REDUCERS

For four years limited effort has been spent on observing the response to various wilt reducing compounds available. The question is—will wilt reducers slow down transpiration and reduce foot traffic damage sufficient to lessen the need for supplemental irrigation or cooling of grass during hours of golf course use? Our 1966 research program includes Foli-cote 128, Foli-gard (regular) and Foli-green.

The Mid-Atlantic Newsletter, vol. 15, No. 6, '66, says—"remember also when water is added to the soil the soil pores become filled with water; then a rapidly decline in growth results from lack of oxygen for root respiration." Does this fit your greens? We know water cools the soil as is evaporates. On many greens, as soon as the surface starts to dry, the green seems hard and in need of water; thus, the tendency to overwater is constantly repeated.

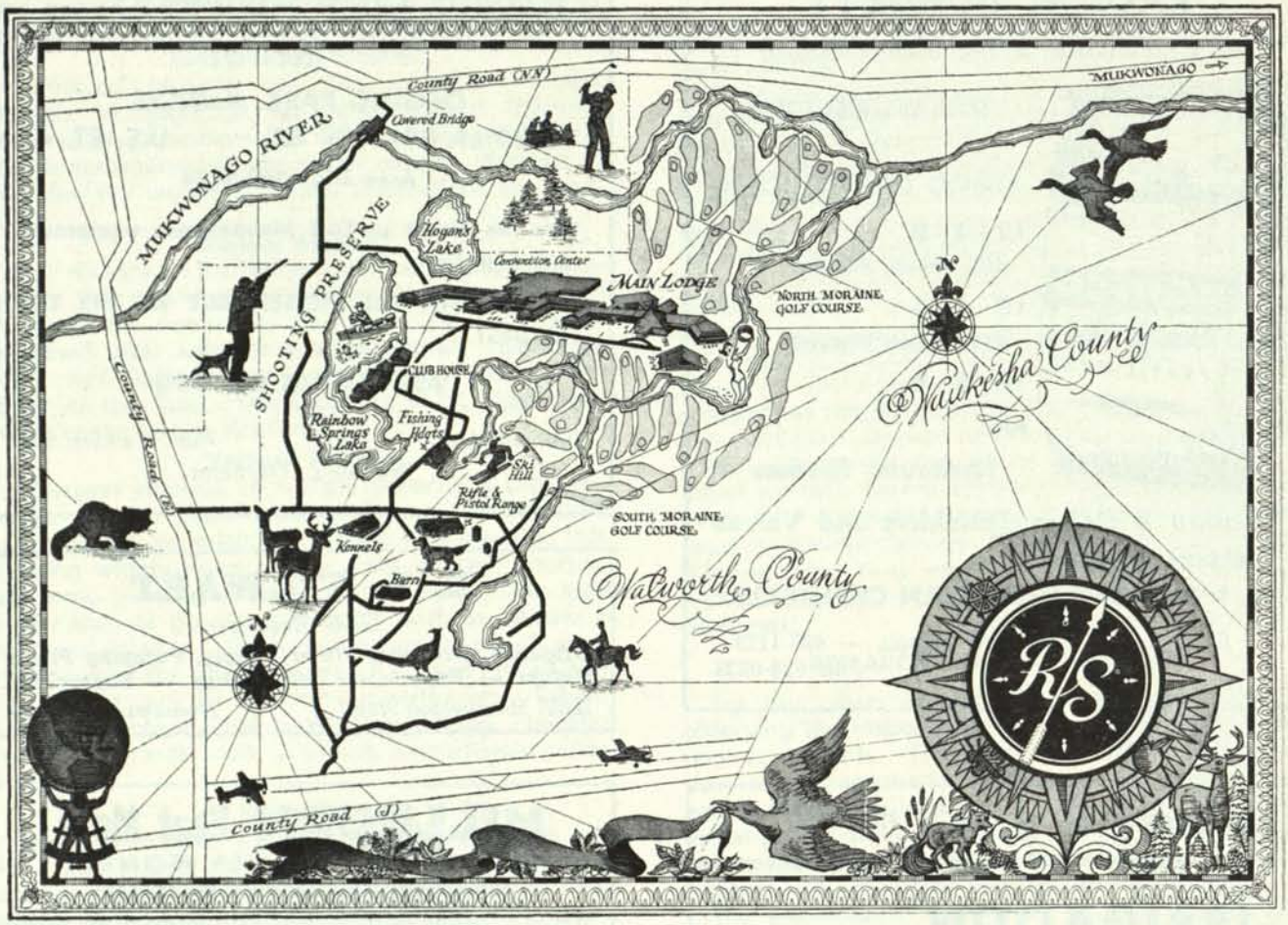
An article, "Summer Wilt on Bent Greens," Turf Management Bulletin 32-54 was published about 1954. It stated that "shallow rooting was the main cause of wilting. It has been said that much more turf is lost in the Midwest from wilting than from all combinations of disease damage; thus, the trend towards syringing, day-time watering, etc., to assure adequate water within the leaf tissue in the hot afternoons of summertime drouth." Active roots affect moisture for about ½ inch from tip.

For example, Radko ond others have reported the astonishing number of bruises made by golf spikes of a single player during a round of golf. We have counted up to 700 leaves per square inch in putting green turf, thus, one golf spike may damage or bruise several leaves, causing extra water loss and wilting. For many conditions when this becomes severe, surface rinsing is an immediate and partial solution.

Whatever can be done to reduce bruising by equipment, golfers, etc., should improve the survival of bentgrass. Probably the most important is a clean, sharp cut by the mower rather than a leaf bruising action.

Those hot, muggy nights, and warm, humid days of the midwestern summer can spell trouble. Those that maintain good turf try to counteract extremes, thus protecting their grasses until favorable conditions come.

THE RAINBOW SPRINGS COURSE LAYOUT. PLACE OF OUR JOINT MEETING WITH WISCONSIN. SORRY FOR THE MISPRINT ON THE DATE. THE CORRECT ONE IS AUGUST 29, 1966.



COMING EVENTS

Illinois Turfgrass Field Day — Sept. 9, 1966.
Illinois Turfgrass Conference — Dec. 1 - 2, 1966
Both events will be held at Urbana, Illinois.

DAVIS FIELD DAYS

Sept. 15 — Chevy Chase Country Club
Sept. 16 — Coghill Golf and Country Club

THE NATIONAL GOLF FOUNDATION

ITS PURPOSE — ITS PROGRAMS

By Harry C. Eckhoff
Executive Director
National Golf Foundation

Nine million golfers, over 8500 golf courses and the surge in golf equipment sales to more than $140 million a year is an astonishing testimony that golf, indeed, is the game of a lifetime.

Those of us concerned with interesting more people to play golf and involved with the development of more needed golf courses for use of the nation's fast growing population should be pleased indeed that we are a part of a program that is largely accepted by everyone.

Each year an increasing number of individuals take up the game and a growing number of developers build needed golf courses. Anyone interested in golf will want to know what the National Golf Foundation is and how it operates to promote golf play and more golfing facilities.

Purpose of the Foundation

What is the National Golf Foundation's purpose and where does it fit into the over-all golf picture? The National Golf Foundation was organized in 1936 as a nonprofit corporation by the leading manufacturers of golf playing equipment. Originally, its chief purpose was to stimulate over-all golf activity and provide information, by mail, on the organization, financing, construction, maintenance and operation of golf courses.

Today—30 years later—these same sponsors and others interested in enhancing a sound and continued growth of golf make possible the numerous activities of the Foundation.

Throughout the years the role of the Foundation has retained a fluid and vibrant quality. This flexibility has enabled the Foundation to diversify and gear its resources and effort toward three major areas: to stimulate golf activity, to assist in the development of additional golf facilities of all types wherever they are needed, and to offer both service and information pertaining to the instructional aspects of the game.

The Foundation's current annual budget of almost $400,000 illustrates its consistent growth. In 1948 its annual budget was less than $40,000. During the past 18 years the Foundation has spent almost $3 million to promote golf.

In the accomplishment of its purpose, the National Golf Foundation coordinates its efforts with all the major national groups associated with golf. Among them are: the United States Golf Association, The Professional Golfers' Association of America. the Golf Course Superintendents Association of America, the Club Managers Association of America and the American Society of Golf Course Architects. It is not our desire to duplicate functions that are already being accomplished by another organization. It **is our aim** to be the national clearing house for golf information and to initiate and operate needed programs that will enhance the growth of golf.

Educational Services

Due to many requests from the nation's schools, colleges and other organizations, the Foundation initiated an educational services program in July, 1964. Qualified personnel of NGF's educational services staff are available as consultants and instructors for

(Continued on next page)

DAVIS FIELD DAYS

In September GEORGE A. DAVIS, INC. will have field demonstration days, "The Greatest Show on Worth." The Toro traveling van with Toro mowers and irrigation equipment plus Ryan's diversified aerifying and renovating equipment will be the center of attraction.

The shows will be set up as a formal presentation at 10:00 A.M. with lunch at 12:00 followed by demonstrations and trials in the afternoon. Dates and locations will be:

September 15th — Chevy Chase Country Club
Milwaukee Ave. at Lake & Cook Roads
Wheeling, Illinois

September 16th — Coghill Golf & Country Club
119th and Archer Avenue
Lemont, Illinois

Golf Course Superintendents as well as Park, Cemetery and School Grounds Superintendents are invited.

clinics, workshops, in-service training sessions, camp and recreation programs. The purpose of this service is to further golf knowledge and interest of the participants through a sound presentation of the fundamental skills and methodology of group instruction.

The response to this program has surpassed all expectations. Over 6700 individuals attended the more than 50 clinics and workshops conducted in 22 states and the District of Columbia during its first year of operation.

Due to its nationwide popularity, an expanded educational services program is now in effect. In addition to the Foundation's own staff, qualified individuals in various regions of the country are being used to conduct educational clinics and workshops in their respective areas under the general supervision of and format established by the National Golf Foundation.

Golf Course Development Services

Assistance in planning and developing new golf facilities is one of the most critical and demanding areas of the National Golf Foundation services. The Foundation's field service was initiated in 1953 when new golf course construction was almost at a standstill. Les than 250 new courses had been built in the eight years following Warld War II. Since 1953 over 3200 new courses have opened for play in the nation.

At the present the National Golf Foundation has five field representatives with offices in strategic areas of the United States. What do they do? Their duties include:

1. Meeting with individuals, private groups, or community organizations to assist in their preliminary planning of new golf facilities;
2. Providing over-all guidance in determining need, feasibility and potential use of planned facilities;
3. Presenting facts and figures on construction costs, methods of financing and operation;
4. Keeping abreast of golf course needs in their respective areas and providing information and services that will enhance a sound, continued growth of golf.

Aids In Planning and Instruction

The National Golf Foundation has numerous planning publications, among them: Planning and Building the Golf Course, Planning Information for Private Golf Clubs, Organizing and Operating Public Golf Courses, and Planning the Golf Clubhouse. It is constantly up-dating such publications. In recent months the Foundation has developed 25 new Information Sheets in the field of golf facility planning, financing and operation.

Likewise, the Foundation has developed numerous golf instruction materials including full-color motion pictures, loop films and filmstrips. In the production of such materials there is always close coordination with the USGA, the PGA or other appropriate organizations. Members of the PGA Educational Committee were consultants on all the Foundation's golf instruction films now in use.

Inventory on Nation's Courses

The National Golf Foundation is taking an inventory of the nation's golf courses. Over 7700 of the country's 8500 coruses have already replied to our detailed questionnaire. The information received on these operations is now on magnetic tape master files at our data processing center. This is proving most helpful in accomplishing needed research.