HOW'S YOUR TURF IQ???

- Overall nutrient availability is the highest at a soil pH of ______.
- 2. Phosphorus availability is highest at a soil pH of to
- A soil pH of 6 is ______times as acidic as a soil pH of 7.
- Name three common types of peat available for soil modification.
- How many of the 16 commonly recognized essential elements can you list?

Answers to the above questions will be found on another page.

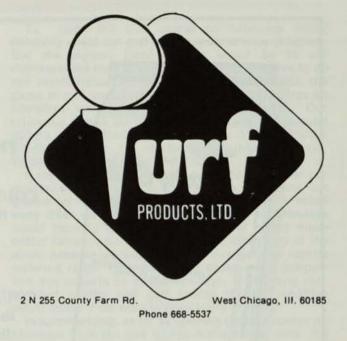


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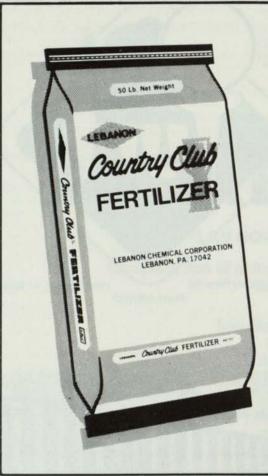
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M.A.G.C.S. April 19th meeting will be held at Mission Hills C.C.



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MONDAY - COURSE MAINTENANCY DAY

For the past twenty or more years, Mondays have been termed Golf Course Maintenance Day for many Chicago area golf courses. Westmoreland has practiced this program since the early '50s.

Much of our golf course maintenance program is geared around Mondays. We strive to and take pride in doing all work that would tie up any tees, fairways or greens on Mondays so that interference to members and guests during the other six days is at a minimum.

One might ask what is done Mondays that cannot be done with members around. Twenty-two (22) Mondays a year we fertilize greens, tees or fairways. Once or twice a year we aerify greens and tees. During drought conditions we catch up water on Mondays, tree removal around tees and greens occur on Mondays and fairways are cross-cut on Mondays. All of these operations are necessary and in one way or another would cause interference or inconvenience to golfers. Also, the grounds crew is allowed to work much more efficiently on Mondays, because we are not stopping our machines to wait for golfers to play a ball.

Fertilizing takes time and care. When fertilizing greens, tees or fairways, it is always our practice to water in the fertilizer. If not, the salt content of the fertilizer could burn or discolor the turf. When fertilizing, each green is closed for 30 to 45 minutes so that the fertilizer is thoroughly watered in. One green at a time.

Aerifying is another culture practice that completely takes greens or tees out of play. From start to finish a green is out of play for six (6) hours during the aerifying process. On these days the golf course is closed to everyone. Progress has been made in this operation over the years though. Ten years ago, it took 2 to 3 Mondays to aerify 18 greens. Today with newer machinery and better relations with neighboring superintendents, we can aerify 18 greens in 1 day.

During drought periods our irrigation pumps have operated for 24 hours on Mondays. During the other nights we try to apply just enough water to carry the turf through the day, striving to avoid creating wet spots. On Mondays we triple our watering time and attempt to catch up the moisture lost during the week and fairways are wet for a number of hours after watering. With our system it takes 9 hours to give fairways 1 hour of water or about ¼ inch, 2 hours for tees and greens and 1 hour for approaches. 14 hours to thoroughly water everything. Often on our peat fairways we will repeat the process to prevent the peat from drying out. It is not unusual for our irrigation pumps to operate 24 hours on Mondays. To open the golf course on Mondays would naturally upset our golf course maintenance program. But the biggest inconvenience would be to our members and their guests. Where we now strive to do our maintenance work that would interfer with the game of golf on Mondays, by opening the course on Mondays we would be forced to interfer. Our efficiency would be limited, due to working around golfers and chances are what we now do on Mondays would have to be carried over into Tuesdays, Wednesdays, Thursdays and Fridays.

If we open on Mondays, we would have to alter our maintenance program to mow greens, we never cut greens on Mondays. This would take 9 man hours away from us. Our catch up watering on Mondays would have to be eliminated and this would mean wetter fairways during the mornings every day of the week, because we would have to increase our nightly watering rates. This also would cause more compaction due to carts on wetter fairways. In the long run, our turf quality and golf course playing condition would suffer if we were to open every Monday.

In summarizing, as far as opening the golf course on Mondays from the golf course maintenance view, the biggest inconvenience would be to our members and their guests. We would still have to perform our maintenance operations, but the pride the grounds crew has had in maintaining the golf course with the least possible interference to our members and their guests would be lost.

Submitted by: Julius Albaugh, Grounds Supt.



Schroeder's Nursery, Inc.



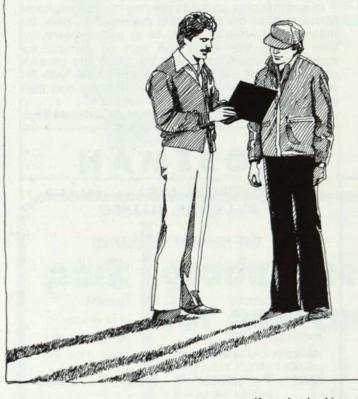
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TURF INSECTS

Insecticides are pesticides. Most of the commonly used insecticide products that are recommended to control insects affecting turf are known as contact poisons. To effectively control turf insects one must insure contact between the insect and insecticide. Controlling soil inhabiting insects, such as grubs, is best achieved by drenching the insecticide into the soil. Control for foliar feeding insects, such as sod webworms, is only achieved by keeping the insecticide in contact with the foliage.

In most cases, insecticide applications are applied after the insect becomes a problem and this usually isn't discovered until early signs of injury have been observed. One exception, however, comes to mind when discussing grubs. Usually an insecticide is soil drenched as a preventative.

There is no single insecticide that will adequately control all turf pests. The first step in turf control is to identify the culprit. Once you've learned to recognize early signs, wide scale turf loss will be avoided.

WHITE GRUBS — The June beetle (May beetle) are the adults of the true white grub, (grub worms). The grub worm has a U—shaped body and brown head. It's about half the size of your little finger. The body is white with the tip of the abdomen shiny and transparent, the body contents showing through the skin.

The adult June beetle deposits individually, pearl white, spherical eggs preferably in lush green grass.

Most common to the true white grub is a three year life cycle. Tiny grubs that hatch from the eggs live in the grass and feed near the surface until the first cold spell in late September. They then tunnel downward, overwintering about 18 inches below the ground surface. The following May they return near the surface to feed on the grass roots again until late September when they overwinter deep in the soil. The following year, in early June, they pupate in an earthen cell. Within four weeks they change to adults but remain in this stage until late May or June of the following year when they emerge to feed and lay eggs.

The annual white grub, also known as, the false June beetle or masked chaefer, is another turf pest closely related to the true white grub. The life cycle, however, lasts only one year.

The adults in both species of grubs feed on the foliage of shrubs and trees. In severe infestations, the leaves on trees, particularly oak, may show extensive damage.

The grubs feed on the roots of many plants. They often kill large patches of sod in lawns, golf greens, cemetaries and parks. Damage usually occurs in patches. Small areas may be entirely destroyed while others are apparently not affected. When damage is severe, patches of turf can easily be rolled back as if being cut by a sod cutter. Examination of the roots will show severe root pruning.

In heavily grub infested lawns, skunks, raccoons, moles and other small animals have been known to invade the lawn in search of the grubs for food. By removing their food supply (the grubs), you will eliminate the secondary problem of these animals coming onto your property in search of food.

Control — Areas of turf grass, such as homeowners' lawns and golf courses, are not always seriously attacked by grubs to warrant control. However, when severe grub damage occurs, control is best accomplished by incorporating a residual insecticide into the soil. **SOD WEBWORM** — Sod webworm moths are night flyers and attracted to lights. They have a wing span of approximately one inch, are tubular shaped and buff in color.

The larvae are gray to light brown in color and contain small, dark spots. Feeding is near the crown of the grass plant causing irregular browning. Close examination of the grass is needed to find webworms. Getting down on one's hands and knees is often necessary to find an indication of silken tubes and feeding tunnels of the larvae. Observe small greenish fecal pellets adjacent to injured areas. Another method that is effective in discovering larvae in your turf is to mix one tablespoon of pyrethrum emulsion or two to three teaspoons of household detergent to a gallon of water and pour it over one square yard of turf. This will bring the larvae to the surface. Early detection is important for control. The presence of unusual numbers of birds, especially robins, may also indicate that larvae are present.

FRIT FLIES — This is probably one of the up and coming insects which at present is getting more publicity than others, especially on golf courses. It is a very small, black fly. The maggots tunnel into the grass stems near the surface of the soil causing the upper portion of the plant to die. On greens, damage usually first appears near the perifery and moves inward. Blue grasses are susceptible. On sight identification is usually not very reliable. Laboratory study of the larvae is needed for a positive identification. The adult frit flies will settle on white golf balls when they are dropped on the golf green. If this is the case, note to see if browning has started about the collars of the green.

ARMYWORM AND CUTWORM — The armyworm moth, which is about an inch long, is tan to grayish brown and has a tiny, white dot in the center of each forewing. It's wingspread is about one and one-half inches. They deposit their eggs, which are small, white, globules, in rows or groups on the leaves of the grass and then roll the grass blade around the egg mass.

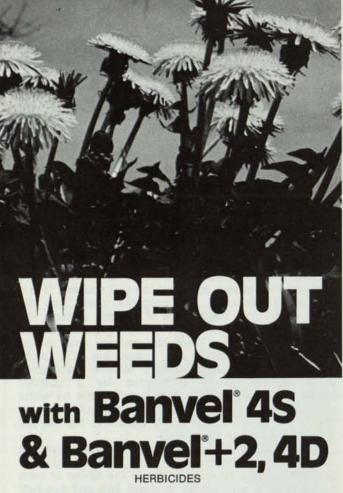
It is usually very hard to find the larvae as they feed at night and hide in the soil or groundcover during the day. Damage is similar to that of the sod webworm. They chew the leaves of grasses, causing brown patches.

Cutworms are similar to armyworms in their life cycle. Both are caterpillars of moths (Miller's). Damage is also similar.

CHINCH BUGS — Chinch bug injury is characterized by the lawn turning a yellowish color in scattered patches. If the feeding continues the patches enlarge and turn brown. The damage is caused by the nymphal stage of the insect as it sucks out the plant juices. The greatest amount of damage appears in July and August, especially in the sunny areas of the lawn. Chinch bugs are sun lovers.

The adult chinch bug is about one fifth of an inch long, black in color with white patches on the wings. Chinch bugs are true bugs from the order Hemiptera. (Hemi means half; ptera means wings). All insects that belong to this order have the same characteristic--the wings are half hard and half membraneous. All bugs are insects but not all insects are bugs--just those that belong to the order Hemiptera.

> Stanley Rachesky, Entomologist University of Illinois



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Host, Leonard Schneph - Brookwood C.C.

Our educational speaker for the March 21st, 1977 meeting will be Mr. Allan T. Reid. Allan is a Certified Paramedic and his topic will be on Cardiopulmonary Resuscitation or better known as "CPR".

Allan will explain and demonstrate the "CPR" procedure. To do this he will use a movie and manikins to better illustrate his points.

We are hoping that enough interest is created that we can have our members sign up for classes in "CPR". Usually the classes run for three nights at three hours per session. At the March meeting we will pass around a paper for those members interested in taking such a course.

The Boy Scouts have a good motto: "Be Prepared". Are you?



Bob Siebert, Penny Meyer, Mike Bavier



I. to r. - Mrs. Warren Bidwell, Mrs. Roger La Rochelle, Mrs. Mike Bavier, Mrs. Kenneth Goodman



Denita Jackman, John Jackman, Pat Sokolis



Mrs. Brad Johnson, Carlen Goodman, Mrs. Bob Kronn



MAGCS Gang, celebrating Director Mike Bavier's victory



Bob Kronn, Brad Johnson, Harold Michels



G.C.S.A.A Director, Mike Bavier, Bob Williams



Mike Bavier, Barbara Sering



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HOW'S YOUR TURF IQ? *ANSWERS*

- 1. Overall nutrient availability is highest at pH of 6.5.
- 2. Phosphorus highest availability is at pH of 6 to 7.
- 3. A pH of 6 is **ten** times as acidic as a pH of 7 since pH values are expressed as logarithms. Thus a soil pH of 5 is ten times as acid as one at pH of 6 and 100 times as acid as the one at pH 7.
- 4. The most common peats are: peat humus, sphagnum moss peat, reed-sedge peat and hypnum peat.
- 5. The sixteen elements are as follows: Carbon, Hydrogen, Oxygen, Nitrogen, Phosphorus, Potassium, Calcium, Magnesium, Sulfur, Iron, Manganese, Zinc, Copper, Molybdenum, Boron and Chlorine.



Users of restricted chemicals will need to have a permit by October 1977.

Private Golf Course Operators and farmers can receive the necessary training and take the self evaluation for the permit at a program sponsored by the University of Illinois Cooperative Extension Service in DuPage County.

The program will be held Friday, March 4 from 12:00 to 5:00 P.M. at the DuPage County Auditorium (421 N. County Farm Road, Wheaton).

Please advance register by calling the Cooperative Extension Service at 682-7486. A registration fee of \$2.00 is payable at the door.

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RAY MURPHY

MOTHERHOOD, APPLE-PIE AND THE GOLF COURSE SUPERINTENDENTS ASSOCIATION OF AMERICA

Most Superintendents would support both "Motherhood and Apple-Pie" as long-time pillars of our heritage, but what of the benefits of the G.C.S.A.A.? Every organization, whether it be political, economic or social in origin, must stand the final "cost-benefit" evaluation if its existence is to be continued. In this article I will attempt to establish two points: first that the G.C.S.A.A. does not yield a positive "cost-benefit" ratio for the individual member superintendent; and, secondly, to suggest an alternative program that will fulfill the original objectives of furthering both the educational and financial position of the golf course superintendent.

First we must establish the ground rules of measuring the "cost-benefit" ratio. I am suggesting that the Annual Report of the G.C.S.A.A. be used to evaluate the effectiveness and efficiency of management. This approach is similar to the Management By Objective system (M.B.O.) employed by private industry to measure and compare business operations as to their effectiveness in obtaining stated goals. The costs and benefit figures will come from Exhibit B, or the Statement of Income and Expenses in the 1976 Annual Report. Under the division "Expenses", we find the categories "Member's Insurance Premiums" and "Membership Activities and Services" which include direct benefits to the member superintendents. (I might interject that the Life Insurance has been \$1,000 for many years and this benefit might bury "Chicken George" back in 1865, but today it would place us one foot below ground in a broken plastic box). A secondary benefit, but one I consider indirect, would be the category "Directory and Newsletter''

My Exhibits A and B illustrate the dollar amounts of these expense categories as presented by the G.C.S.A.A. Exhibit B also illustrates the percentage of these member benefits in relationship to total income (dollars available for benefits) for the years 1976 and 1975. During 1975, \$110,032.63 or 14.7% of total G.C.S.A.A. income was returned to the member superintendents whereas during 1976 \$105,812.43 or 14% of income was returned in the form of direct benefits. Not only is the dollar amount declining, but also the relative percentage of total available funds by .7%. If we enlarge the benefit category and add item three of Exhibit A to our analysis we find the 1976 benefits to be \$120,590.45 or 15.98% of total income compared to \$126,412.59 or 16.93% during 1976. Thus, the direct benefits for a member superintendent seem to be declining both absolutely (dollar, cent) and relatively (percentage of available income). Remember also that while benefits are reduced, dues were increased by "fifty percent" or \$30.00 per year.

Let us now attempt to measure the efficiency of management or more simply, the salaries and related payroll taxes as shown under Exhibit B of the Annual Report. During the year 1976, total salaries and payroll taxes were \$205,060.09 as compared to \$189,562.97 during 1975. Thus, the percentage of salaries to total available income increased from 25.4% in 1975 to 27.2% in 1976, while the members direct benefits were declining from 16.93% to 15.98%. Even the Federal Government returns more than 16 cents on the tax dollar to the taxpayer.

EXHIBIT A

	1976	1975
INCOME	\$754,260.38	\$ 746,601.14
EXPENSES:		
1) Members Insurance Premium	s 55,251.76	51,688.65
2) Membership Activities &		
Services	50,560.67	58,343.98
3) Directory & Newsletter	14,778.02	16,379.96
4) Salaries	118,710.17	173,088.29
5) Employee Payroll		
Taxes & Expenses	16,349.92	16,474.68

EXHIBIT B

INCOME:	1976	1975
INCOME.	\$ 754,260.35 (100%)	\$746,601.14 (100%)
EXPENSES:	1 10/ (105 010 10)	14.7% (110,032.63)
1 & 2 of Exhibit A 1, 2 & 3 of Exhibit A	14% (105,812.43) 15.98% (120,590.48)	16.93% (126,412.59)
4 & 5 of Exhibit A	27.2% (205,000.09)	25.4% (189,562.97)

Even as it has become evident that the Federal Government cannot solve all the country's ills from Washington, so too the G.C.S.A.A. cannot achieve the two major goals of "education" and "financial improvement" with a national approach. We can continue to pour money into Lawrence, Kansas as we have into Washington, yet the return from Kansas is declining. The questions is not one of dues being \$50.00, \$90.00 or even \$200.00, but one of evaluating the return on each dollar invested. I believe that currently we are attempting to solve "regional problems" with a "national approach" through the G.C.S.A.A. which can only fail.

One of the major problems facing each superintendent is how to increase his financial position and provide for his retirement years. Unfortunately, there is no simple chemical on the market to solve these problems; it is only by "public relations" and "communications" with our employers through our Midwest Association that we will be able to affect the market and obtain high salaries and better benefits. I am not suggesting "unionization" which tries to arm-lock the labor force, but that of establishing a strong professional organization that can influence the regional market similar to engineers, lawyers, airline pilots, and doctors. Remember, if your employer looks upon you as a "grass cutter", you will be paid as a "grass cutter".

The long-term objective of a regional market (Green Industry) would be to establish a turfgrass conference

to include members of the Green Industry. Regional suppliers would also be obtaining an advantage since their travel expenses would be lower and their customer or sales appeal increased. All conference personnel would be within the supplier's market region and potential customers; currently this is not the case at the national show.

My alternative to using the G.C.S.A.A. is a strong regional organization comprised of not just superintendents, but also other professional associations within the "Green Industry". The objective is to concentrate all efforts within a regional market where our salaries, benefits, education and suppliers operate. By moving our national dues to the Midwest Superintendents Association, we would add \$25,000 per year to the available funds to achieve our objectives. These monies would then be available to support regional research, public relations and communication, and establishing a long-range planning function to best benefit the financial situation of each member superintendent.

We now come to the task of organizing the machinery to accomplish our objective; the following could be used as a guideline or starting point:

1) Establish the following committees within the Midwest Association. (It is important that the committee members not be board members but that a board member be on each committee to facilitate communications).

a) Planning Committee

b) Public Relations and Communications

c) Superintendents Welfare Committee

2) Consolidate all superintendents within the Midwest Group since without a unified position there would be a loss of efficiency.

3) Cease membership in G.C.S.A.A. and increase dues at the regional level to generate funds to accomplish goals established by committees - Funds would then be available for insurance, retirement programs, and research projects.

4) Contact other regional groups, suppliers, educational institutions, to establish a planning committee.

5) Contact other regional groups already sponsoring conferences to compare feasibility studies and estimated costs.

Such a vast proposal cannot be obtained overnight or without financial support and hard work, but isn't it degrading to realize that only 16 cents on the dollar (whether it is our dollar or our employer's dollar) is being returned directly to the member superintendent through the G.C.S.A.A. and that this percentage is declining. This article has attempted to illustrate that our problems of education, financial welfare and employment are regionally orientated and can be influenced only through a regional market. A national approach to regional problems can only create confusion and inefficiency. It is time that our employers realize that we are truly a progressive, professional organization that can establish goals but, more important, we are capable of attaining these goals.

Robert E. Siebert Golf Course Superintendent Naperville Country Club Naperville, Illinois

Editor's Note: I am sure not everyone will agree or disagree with all the statements in the above article. No doubt "Bob Siebert" did considerable research work before the final draft. He brings out some very interesting points. If you agree or disagree, letters to the editor are always welcome.