

NORTHERN MICHIGAN TURF MANAGERS ASSOCIATION

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3733 APOLLO DRIVE
TRAVERSE CITY, MI 49684

TUESDAY
JULY 2nd, 1985
McGUIRES CADILLAC



PHONE: 616/943-8343

The next meeting of our Association will be a luncheon and will be held at the above location. Lunch will be served at 12:00 Noon, a business meeting will follow and we are very fortunate to have as our speaker, Mr. Greg Matthews, part owner of Pine View Golf Club, a man who has been very active in golf in Michigan for many years. He has been an outstanding contributor to the Michigan Section P.G.A., past Vice-President plus has received many honors for what he has put back into golf. He also has received many honors for his contributions to the Lions Club and has done outstanding charitable work for the "White Cane" benefit. We are very fortunate in getting this outstanding speaker.

There will be a cash bar for those that wish to whet their appetite however please arrange your time to be available for lunch. Lunch will be baked chicken plus the goodies and your cost will be \$5.75. Golf is available after the luncheon, carts are \$8.00 plus \$2.00 for the golf tournament which will be a blind bogey. Telephone number to call at the pro shop is 616/775-9949 and it is suggested that you get starting times.

September 19-24, 1985 -- Mid-Year Turfgrass Conference and Show, will be held at the Indiana Convention Center & Hoosier Dome, Indianapolis, Indiana. Educational seminars, staff training workshops, trade show. If you have any interest, want any additional, are curious about attending, please feel free to call G.C.S.A.A. Headquarters, toll free, 1-800-472 7878. Indianapolis is not too far away to see such a great event for anyone interested in turfgrass or the equipment to maintain it.

Due to higher standards being initiated to become a Certified Golf Course Superintendent (CGCS), the Treasure Coast GCSA chapter has formed a study group for those planning to be certified. The group will be open to anyone interested in the certification program, including those not eligible to take the test this year.

The 17 Treasure Coast members who are eligible to take the exam in 1985 are being urged to give the matter immediate attention. The study group plans to meet one evening a month through September. The chapter will request that a proctor come to the area to administer the certification exam shortly after the last study session.

The study group hopes to have currently certified members helping with the sessions. Each session will be devoted to one of the six parts of the test: history and bylaws; rules of golf; turf management; plant chemicals and mathematics; reports, records and budgets; and leadership, delegation and training.

GCSAA encourages members to participate in organizing similar groups. Member interactions are a valuable part of the learning experience and association development.

**CGCS
Study
Group
Formed
By
Local
Chapter**



We must have numbers for July 2nd so please mail your POSTCARD immediately.

THE RESEARCH TEAM . . .

The GCSAA and The Green Section

With Vital Commitment to the Future

by JAMES W. TIMMERMAN, President, GCSAA, Orchard Lake Country Club, Michigan,
and JAMES G. PRUSA, Associate Executive Director, GCSAA, Kansas

AT THE BEGINNING of the 1960s, President Kennedy promised to put an American on the moon within 10 years. What followed was the greatest technological advancement in the history of mankind. In less than the 10 years, an American walked on the moon, and the promise was realized.

How was it made possible? Was it accomplished through great speeches or wishful thinking? Hardly. Rather, it was made possible by defining the challenge, the establishment of the goals and objectives needed to resolve the challenge, and the commitment of the resources and spirit necessary to achieve the objectives.

Perhaps there was a great deal of symbolic significance when astronaut Alan B. Shepard, Jr., took out his trusty moon club and struck that famous golf shot on the lunar surface. That club, which is now enshrined in the USGA Museum at Golf House, forever welded the technological achievement of the Apollo program with the game of golf.

Golf today faces serious challenges that, to be resolved, will require a technological thrust similar to the Apollo program. Barely 20 years after Kennedy committed us to set our aim at the moon, the game has launched a similar project. Though perhaps not equal in scope, this project appears to be at least equal in difficulty. Our own race to the moon will determine the future of golf — and consequently, for each of us

who labor within this game, the project will determine our futures.

The challenges are not difficult to identify, to understand, or to define. For many years now, the problems facing golf have become increasingly clear to most golf course superintendents, industrial business people, university scientists, and the leadership of both the USGA and the Golf Course Superintendents Association of America. Each year we've exchanged information that brought to light the developing challenges. The problems have hardly been hidden; after all, many in golf have been aware of and have predicted the escalation of problems for years.

Simply stated, potable water for irrigating fine golf turfgrasses is a rapidly diminishing resource. In addition, even after all the improvements in golf course management, the price of golf still remains too high. Both of these problems affect the game's welfare by tending to drive up the price a golfer must pay to play. At the least, these factors make it difficult for us to reduce the real cost of golf in order to allow people of all ages and economic means to take up the game.

Over the years, golf course superintendents have done an excellent job of holding the annual cost increases of golf course maintenance close to the annual rate of inflation. However, we must now work to reduce, in real dollar terms, the annual cost of golf course

maintenance in order to allow the price of golf to become competitive with the other leisure sports.

Real reduction of golf course maintenance costs is in itself a difficult challenge. Complicated by the accelerating scarcity of potable water for golf course irrigation — which some of us have experienced already — and the worldwide increasing demand for the same water, our ability to reduce the price of golf and create expansion becomes a challenge on a scale the industry has never previously encountered.

THE OBJECTIVES of the Turfgrass Research Project are clear and simple to state: It is our goal to develop new grasses that will use 50 percent less water and require 50 percent less maintenance. Though simple to state, to achieve such goals is anything but simple.

The key change in strategy is an emphasis on basic research.

Frankly, we have a wealth of knowledge on fertilizer studies and applied disease and insect control methods from the applied research conducted on existing turfgrass varieties. What we truly lack is the basic knowledge of the plant mechanisms. So enters a new strategy.

For example, basic research is now being conducted to better understand the processes that go on within the turfgrass plant. These physiological processes have not really been understood. However, with the current combination of

research talent and a more realistic level of funding, significant scientific discoveries are anticipated.

This better understanding of physiological mechanisms that control drought tolerance, heat tolerance, and water utilization within the plant will allow the turfgrass breeders to select and screen new varieties.

Another thrust of the research project is in turfgrass tissue culture, a basic science area closely related to genetic engineering. This is potentially a promising area. Tissue culture is an advanced technique of *in vitro* (in the test tube) propagation of individual turfgrass plants cloned from a single plant meristem cell.

On the cutting edge of today's biotechnology, this research could greatly reduce the breeding time normally necessary for selecting and screening for improved environmental tolerances. This also establishes a foundation of knowledge necessary to create new species of turfgrass for golf.

Major developments in this project will have direct applications in food and fiber crops. Imagine what it might mean to unlock the secrets of how some plant cells are able to utilize energy and water more efficiently. Research in turfgrass

for golf might improve our ability to feed people.

Over the past 18 months, the start-up phase of the USGA/GCSAA Turfgrass Research Project has accomplished a great deal. A detailed plan of attack has been established covering a 10-year period. Specific time objectives have been determined for each phase of the project, project leaders have been selected to head teams of research scientists, committee members have been designated to visit each major project site, and, most importantly, the program is on schedule.

Basically, the project's initial phase calls for the collection of turfgrass germplasm from around the world. After input from the plant physiologists, the plant breeders will screen for stress factors and desirable genetic traits. Eventually the selected strains will be moved out to beta sites for further study under varying climatic conditions and cultural practices.

One noteworthy example of the project's innovative breadth and provisions for differing regional realities: The golf course superintendent's old nemesis, *Poa annua*, is being approached

(Continued)



Dr. James R. Watson (standing), member of the USGA Turfgrass Research Committee, confers with GCSAA President James W. Timmerman on research matters for 1985.

as a friend instead of a foe. *Poa annua* is being studied to see if its strengths can be enhanced while reducing its weaknesses. Perhaps an improved variety of *Poa annua* will be available because of this effort.

IT IS ESTIMATED that 200,000 people are employed in various phases of golf in the United States, and additional family dependents total another 600,000. That's nearly a million people who are directly dependent on golf for their subsistence and welfare. You can double that number to include all those people employed by turf equipment manufacturers, golf equipment manufacturers, advertising agencies and other segments.

There can be little doubt that golf is more than recreation; it obviously provides a living for a significant portion of the population. The combined financial resources of golfers and those who depend on the game could generate the kind of major funding required to support the research that's already underway.

All those clubs, golf course superintendents and others who have contributed to the turfgrass research fund deserve our gratitude. In the past, those in the game have provided the necessary funding for turfgrass research, but the magnitude of the current challenge requires us to shift from measuring funding in hundreds of thousands of dollars to millions of dollars.

Most people recognize that it takes millions to conduct basic scientific research on this scale. After all, one need only look at medical research or efforts in basic agricultural research.

Let there be no doubt that the basic research needed today in turfgrass science is no less complex or expensive than in those other areas. It will take similar amounts of money to achieve the breakthroughs needed to assure the future of golf.

We — primarily golf course superintendents — can choose to do nothing towards tackling these problems and golf will probably survive with some growth. Most golf courses will continue to plug along, and most superintendents

will remain employed. For all practical purposes, however, the game could anticipate a generally stagnant future.

There is another avenue that offers a different future — one of prosperity for golf. We can work together to promote expansion of the game and, to paraphrase Dr. Alister MacKenzie, provide "pleasurable excitement" to millions of new golfers.

For those pragmatists among us interested in the more tangible benefits of our involvement, supporting the USGA/GCSAA Turfgrass Research Project simply translates into new opportunity and increased prosperity. Of course, expansion and opportunity mean more management positions, expanded golf course ownership, and greater income for golf course superintendents. In the most basic tangible terms, it means personal growth and development for each of us.

GCSAA's main role is to improve the management ability of golf course superintendents through continuing education and high professional standards. We also have a responsibility to support fully the subject of turfgrass research program under the auspices of the USGA Research Committee. The degree to which we, as a profession, shall be recognized for the future successes of this turfgrass research project are limited only by the degree to which we dedicate support for the project.

Let us rally our support for this massive research undertaking. Let us become salesmen to our clubs, our fellow superintendents, and our communities — encouraging the broadest possible base of contributors. By the 21st century, we will assure that no one can suggest that this generation of golf course superintendents failed in its responsibility. Our objectives are clear: To develop improved turfgrasses that use 50 percent less water, require 50 percent less maintenance, yet are still green and pleasing to the eye.

We can muster the resources necessary. Let us now commit our spirit and demonstrate our determination — and thus pay honor to the proud tradition of our profession.

Some of The Best Nine Hole Courses In Michigan

Crystal Lake Golf Course
Beulah (daily fee)

Frankfort Golf Club
Frankfort (daily fee)

Heather Hills Golf Club
Almont (daily fee)

Lakewood on the Green
Cadillac (daily fee)

Signal Point Golf Course
Niles (private)

Sparrow Hawk Golf Course
Jackson (daily fee)

Stoneycroft Hills Golf Course
Bloomfield Hills (private)

Source: National Golf
Foundation

Take Time

Let's take time to smell the roses,
Let's take time to view the dawn,
Let's take time to enjoy summer,
Too soon it will be gone.
We cannot see the woods for trees,
We hurry from here to there.
Take time to behold God's handiwork —
His beauty is everywhere.

— Irene Schweinfurth

7 Sins in the World

H. H. HUMPHREY EULOGY

by: Pres. J. Carter

[Quoted from Mahatma Gandhi]

1. WEALTH WITHOUT WORK
2. PLEASURE WITHOUT CONSCIENCE
3. KNOWLEDGE WITHOUT CHARACTER
4. COMMERCE WITHOUT MORALITY
5. SCIENCE WITHOUT HUMANITY
6. WORSHIP WITHOUT SACRIFICE
7. POLITICS WITHOUT PRINCIPLE

Agri-Systems Soil Testing Laboratory Will Continue

MANY INQUIRIES have been made to Green Section regional offices concerning the status of the soil testing laboratory facilities of Agri-Systems of Texas, Inc. Dr. Marvin H. Ferguson developed the soil laboratory and many of its techniques 20 years ago, and with his death, on January 10, 1985, the future of the laboratory has been of great concern to many in the field.

Agri-Systems will continue to be active in testing of soils for USGA Putting Green Construction Specifications. Judith Ferguson Gockel, Dr. Ferguson's daughter, was the manager and chief technician for Agri-Systems for eight years; she will continue the laboratory operations.

In addition to the training received from her father and some formal course work at Texas A&M, Mrs. Gockel has studied soil physics and soil mechanics. She developed and now holds two patents, based on fluid movement and soil structure, widely used in the oil drilling industry today. She and her

husband, a petroleum engineer, operate an engineering and laboratory service for the oil industry.

Plans have been made to upgrade and improve the present soil testing laboratory equipment and to expand the services now offered. Assurances have been made that the same high standards for testing and the same frame of reference will be maintained. The new mailing address is:

Agri-Systems of Texas, Inc.
15511 Baldswelle
Tomball, TX 77375
Attn: Judith Ferguson Gockel
(713) 376-4412

For efficient delivery in the Houston area, use U.S. Mail or United Parcel Service. Rates for the various testing procedures remain unchanged.

Agri-Systems is *NOT* the "USGA Soils Laboratory." Rather, it is a private contractor. It has agreed to conduct the physical soil analysis requirements for USGA Green Section Specification greens.

USGA GREEN SECTION RECORD

MARCH/APRIL 1985 11

LOCATING HYDRAULIC TUBE LEAKS

J. Douglas Rothwell
The Royal Ottawa Golf Club

A common spring startup problem associated with automatic irrigation systems is, locating hydraulic tubing leaks. My Assistant, Rheel Ladouceur, devised a simple device to locate these leaks, that proved very successful last spring, saving time and labour.

The widget (see diagram) is essentially a reservoir that holds red food dye

coupled at one end to a portable compressed air tank (40-60 psi) and at the other to the hydraulic tubing. We found leaks within several minutes and from as far away as 100 feet or so. In some cases it was necessary to refill the reservoir. The undiluted red dye was readily visible at the grass surface.

List of Materials and Assembly

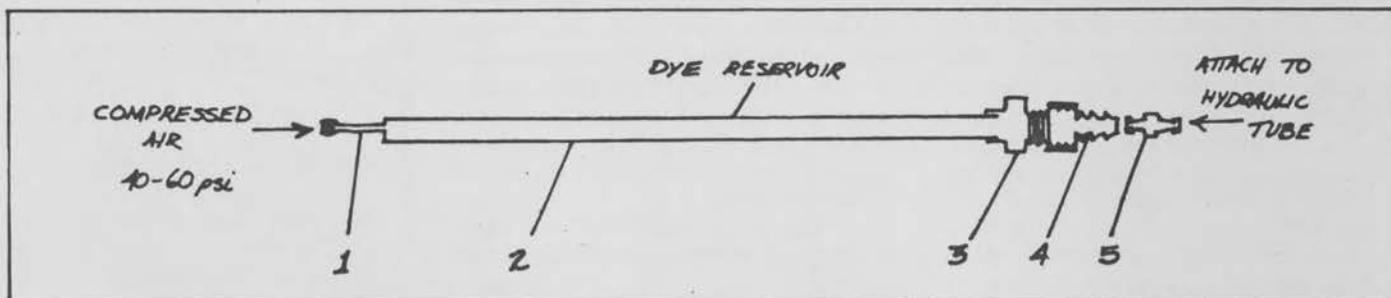
1. Air valve stem - solder to copper pipe
2. 1/2 inch copper pipe

3. Brass adaptor (1/2 in. slip x 1 in. thread) - solder to copper pipe
4. Brass hose adaptor 1 in.
5. Hydraulic tube connector - fit and solder to hose adaptor.

To Operate

Unscrew at hose adaptor, add dye and reattach. Couple air valve stem to compressed air tank and hydraulic tube connector to hydraulic tubing and pump dye to locate leak.

Credit: "Greenmaster" — 4/84



SPIN GRINDING

by SCOTT WEILER
FOLEY-BELSAW CO.

REEL GRINDING

Spin grinding has taken off in the past few years as an alternative to proper reel grinding, offering "time savings" and "increased accuracy". The trend toward spin grinding is a result of the efforts of a few self-serving manufacturers telling you what you want to hear. Unfortunately, the whole story is seldom told for fear of rejection of the spin grind concept.

Everyone understandably looks for ways around undesirable tasks. Reel grinding has been in the undesirable category since day one, and finding a better way of sharpening has been a constant consideration.

Flat or spin ground reels have a tendency to be more accurate if they are set up properly. With the design of most reel mowers in the U.S. today, it is imperative that the reel be brought back to as perfect a cylinder shape as possible. Short cuts in this area (i.e., Touch Method from end to end) take away any benefits offered by the Spin Grind Method. NOTE: Touch Method may be used on units which adjust reel to bed knife since cutting is always done at the same point due to stationary bed knife.

Relief Angle: A question that comes up frequently in grinding conversations is, "Why is relief necessary?", or "Why is no relief required?"

No matter what your beliefs - spin grinding offers only a "flat" grind with no relief, it simply cannot be any other way. The manufacturers of most reel cutting units design relief into their mowers for the following reasons.

1) Ease of manufacture and assembly. 2) Ease of sharpening between grindings (lapping or back lapping). 3) Minimal contact between reel blade and bed knife.

DISCUSSION: POINT #1 - During assembly of reels, a perfect cylinder shaped reel is desired for proper reel to bed knife contact. To achieve this, Spin Grinding is

used to true the reel containing pre-relieved reel blades before assembly. This virtually eliminates lapping when done correctly.

POINT #2 - Since the relief, which is built into each reel blade offers a smaller "land" or "flat" to be lapped during between grindings sharpenings, every bed knife and reel combination wears or dulls to some degree during use. The Back Lapping procedure is the procedure of applying fine compound while the reel is being turned backward (Back Lapped), and the bed knife is adjusted for contact with the reel. The Lapping Compound, along with contact between the reel and bed knife, removes a certain amount of steel on both cutting surfaces to expose a sharp cutting edge once again. With a relief grind on the reel blade, the process of lapping a reel unit is easily achieved. Without relief, the lapping process takes much longer since more surface to lap translates into more time to lap.

The statement came up, "With a flat grind your cutting edge holds up better and doesn't need lapping." Now we know better than that. Anything that cuts anything gets dull. If you're expected to spin grind when you're supposed to lap, where is the savings.

POINT #3 - Minimal contact between bed knife and reel is desirable. "Zero clearance" when the bed knife and reel are sharp is the ultimate goal.

Naturally it is impossible unless grinding or lapping has just been done. After the two cutting surfaces start to dull, slight contact between the bed knife and reel is required to cut. A new cutting unit has no more than a narrow "land" on the reel blade to make contact with the bed knife. A half worn reel (flat on half the thickness of the reel blade) has half the blade in contact with the bed knife which also has a flat on it.

If all the relief is worn off, the full contact of the reel blade is in contact with the flat of the bed knife which is exactly what you start out with on a spin ground reel.

Minimal contact between the mating parts is desirable because of reduced heat build up, lower power requirements to drive reels and

to help maintain a sharp cutting edge in addition to minimizing the wear of gears, bearings and seals. Excessive wear may not show up at first, but in the long run noticeably higher repair costs will be evident when a flat grind is used.

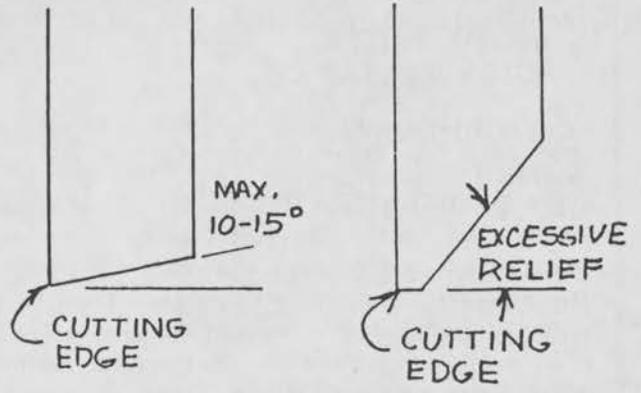
How much relief is enough? Too much?

Since there is no way of measuring precisely the amount of relief on a reel blade, it is enough to say that any relief is better than none. Conversely, too much relief will have adverse results including: a) Weak cutting edge and blade. b) Fast reel wear. c) Frequent bed knife to reel adjustment.

Too much relief is usually a result of placing a double relief on the reel blade.

Examples of reel cross sections - correct and incorrect applications.

CORRECT RELIEF GRIND **INCORRECT RELIEF GRIND**



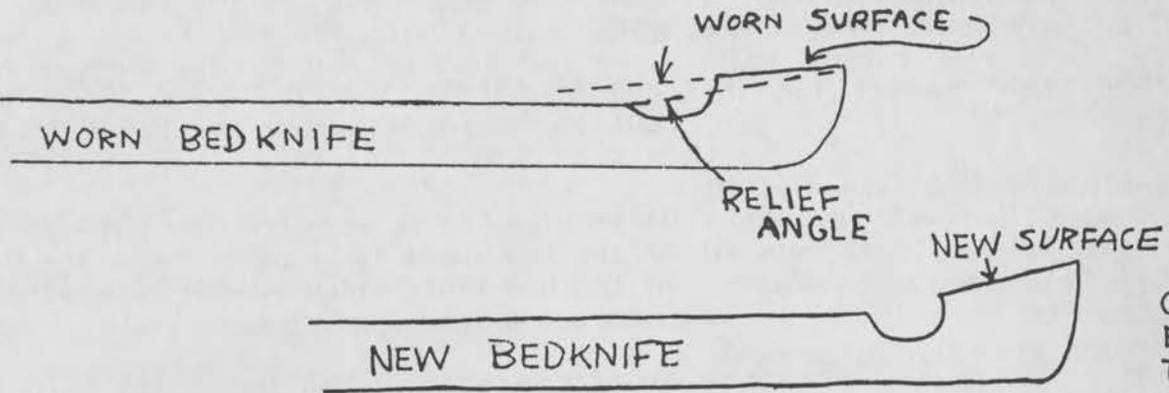
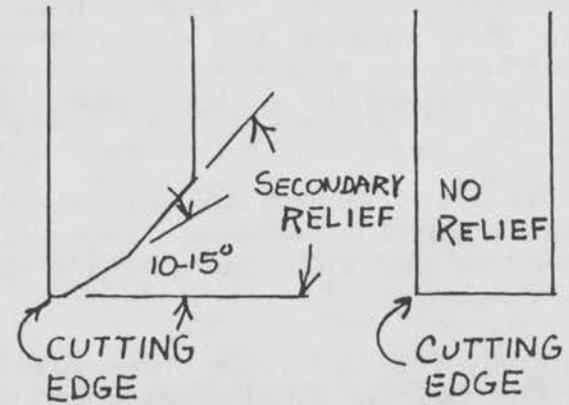
BED KNIFE GRINDING

How the bed knife is ground does make a difference in overall performance of your cutting unit. When grinding (sharpening) a worn bed knife, always make sure that the relief angle is taken from the existing worn surface, 5° is usually adequate.

Grinding a new bed knife is very simple. After mounting the knife to the bed bar, a few passes are necessary to make sure the cutting edge is true before installation into the cutting unit. Follow the existing angles since relief has already been ground in at the manufacturer. Changing the relief angle is unnecessary and results in shortening the bed knife's useful life.

In a nutshell, spin grinding does have its place when used with RELIEF. It has been proven as an excellent way of truing a reel (when proper set up is used). Relief is important for prolonging cutting unit life right down to the bearings and seals. Relief is and always has been a necessary part of PROPER mower maintenance. Shortcuts taken in this area will mean higher costs in the future. Don't settle for half the job. Insist on relief.

INCORRECT DOUBLE RELIEF GRIND **INCORRECT FLAT GROUND**



GRIND AT EXISTING ANGLE TO TRUE TOP SURFACE - DO NOT CHANGE RELIEF.

Credit: Minn. "Hole Notes"

Robert McElheny, Board member has moved to Mitchell Creek Golf Club as golf course superintendent. Rick Ransburg has moved from Crystal Downs Country Club assistant superintendent to the same position at La Jolla Country Club, La Jolla, California. Mark Skope has replaced Rick at Crystal Downs as assistant superintendent. Ray St. Amour has moved from Roger City C.C. to Antrim Dells as golf course superintendent. Bob Grimm has moved from Twin Birch G.C. to Wilderness Valley as golf course superintendent. We would like to publish all moves in our northern Michigan area if you will please inform our editor, Tuck Tate.

New members coming aboard since our last meeting are Ty Conklin, John McGregor, Kevin Morrison and Pete DeRuiter. We want you all to give them a big welcome. Mike Libby is also new Super at Roger City Country Club.

First Call For Nominations



Robert W. Osterman, CGCS, Chairman of the Nominating Committee, is requesting nominations for the offices of President, Vice-President and Director. All GCSAA Affiliated Chapters and members of the Association are urged to submit nominations for these very important positions. Explanations of qualifications, terms of office and responsibilities of the GCSAA Executive Committee have been sent to all chapter secretaries. Additional copies are available from GCSAA Headquarters upon request.

All nominations must be received by September 1, 1985, and must be sent to Committee Chairman Osterman at the following address:

Robert W. Osterman, CGCS
GCSAA Headquarters
1617 St. Andrews Drive
Lawrence, KS 66046

Members of the Nominating Committee are:

Leonard Berg, CGCS	Robert Randquist	James Ross	Dean Watkins
Village Green Woodridge	Southern Hills G&CC	215 Mary Alice Drive	1002 Mt. Vernon Road 3
1575 West 75th Street	P.O. Box 702298	Los Gatos, CA 95030	Hurricane, WV 25526
Woodridge, IL 60517	Tulsa, OK 74170		

Every member of our Association should be wearing shirts with our new and beautiful emblem embroidered on it. These shirts are now selling for only \$15.00 which is less than the cost to our Association and below wholesale. They come in four different colors and Tom Reed carries them in his truck as well as bringing them to our meetings. Being a member of a professional Association is a must today in this professional world and we should display our emblem whenever possible. Join the ranks and help our professional image, NOW.

Details on the benefit day for the Michigan Turfgrass Foundation at Crystal Downs Country Club will be in our next news letter as this letter must go to the printer before the benefit takes place. Everyone that is a participant or donor will be contributing to the organization that funds almost exclusively, all turfgrass research in Michigan. If you are in the green industry, you should be a member of The Michigan Turfgrass Foundation, any contribution to them is fully tax deductible.



The best angle to approach a problem is probably the try angle.



PLEASE GET YOUR POSTCARD IN THE MAIL SO WE CAN INFORM McGUIRES