

#### PRESIDENTS MESSAGE Kurt A. Thuemmel C.G.C.S.

On July 7th approximately 20 people met in Saugatuck and spent the afternoon fishing on Lake Michigan. This group was comprised mostly of members of WMGCSA and friends, who enjoyed the fishing, along with the comradery the opportunity provided. A number of large fish were caught, including one perch which no one would claim. The lake was calm, the weather pleasant, and I believe everyone had a good time.

The purpose of this charter fishing trip was to provide a little diversion, especially this time of year, from the hectic pace of our jobs.

If you haven't participated in a charter fishing trip, I would heartily recommend it.

Upon returning to the docks, amidst boasting about our catch, I overheard comments pertaining to when our next fishing trip would take place. If you were unable to attend this trip, you won't want to miss the next one. A big thank you to Jeff Gorney for organizing this fun-filled day.

For the last six months your Board of Directors has been studying the financial aspect of running our association. In the near future all members will be notified of a proposed dues increase for next year. Our last increase in dues was in 1982. For the past two years our association has ended each year in the red. I am hoping that each voting member will support the proposed increase in dues at our annual meeting in October in order to place our association on a sound financial foundation. In the mean time, please direct any questions you may have about our association to any Board member or myself. See you at the next meeting.



#### 1986 WMGCSA OFFICERS

Kurt Thuemmel C.G.C.S. President Walnut Hills Country Club, E. Lansing, Michigan 517/332-6060

Roger Barton Vice-President Blythefield Country Club, Belmont, Michigan 616/363-5945

Chris Fochtman Secretary-Treasurer Greenridge C.C., 740 Greenridge Dr., N.W., Grand Rapids, MI 616/784-6597

Keith Paterson, C.G.C.S. Past President Kent Country Club, Grand Rapids, Michigan 616/363-6728

#### Directors

Bill Davis Marywood C.C., Battle Creek, MI 616/962-9784

Bob Hope, C.G.C.S. Kalamazoo C.C., Kalamazoo, MI 616/343-2895

Fred Pastoor Muskegon C.C., Muskegon, MI 616/759-0694

Charles Scott Gull Lake View G.C., Augusta, MI 616/731-4148

Bob Johnson Forest Hills Golf Club, Grand Rapids, MI

Jeff Gorney, C.G.C.S. Grand Rapids Elks C.C., Grand Rapids, MI 616/453-0705

#### **Editorial Committee**

Photographer

.....Charlie Scott 616/731-4148

Bill Madigan C.G.C.S., C.C. of Jackson - 517/787-0650

Kurt Thuemmel C.G.C.S., Walnut Hills C.C. - 517/332-6060

#### **Advertisers**

Please patronize them as they have made this newsletter possible.

Art Hills & Associates Benham Chemical Boylan Sales C-R Grinding Century Rain Aid Ellis Sales Grand Rapids Tree Ideal Mower Sales Keizer Equipment Co. LESCO Lawn Equipment Matthews & Sons Miller West, Inc. J. Mollema & Sons NOR-AM Chemical Co. O.M. Scott Parmenter & Andre Raymer Pump Soderstrom Irrigation Spartan Distributors Standard Sand Turf Chemicals Turf Grass Woodland Tree

#### MEETING SCHEDULE

October 7 Duck Lake C.C. November 8 Kalamazoo C.C. Annual Meeting

Fall Party



"Do I ever complain about your score cards?"

Area Sales Rep

# C & R GRINDING

We specialize in All golf course equipment repairing and sharpening.

> Pick up & Delivery 10 Years Experience

TORO ROSEMAN JACOBSEN HAHN

Complete small engine overhauling and tune-ups.

5082 Page Ave. Jackson, MI 49201 Phone (517) 764-1182 Member Michigan Borders Association Western Michgan G.C.S.A.

#### Executive Director's Report Measuring the Quality Of Life

The concept of the QUALITY OF LIFE is something that we all need to focus on, measure with reasonable objectivity and learn to stay in touch with through the years. Basically, if we don't know where we are at relative to other times and other people - we will be out of touch and will not appreciate what we have.

From many points of view, the Golf Course Superintendent has the very real opportunity to enjoy an extraordinary Quality of Life. Few in today's world can boast of the following: indoor life, outdoor life, the absolute knowledge that he is needed, high visibility with an audience that wants him to succeed and will pay the way. the benefit of an entire industry's research and development efforts, access to a vast university-based educational system, artistic touch, a creative colorful world, fiscal management, engineering, mechanics, thousands of job sites, relative freedom and independence, nature in all its glory and challenge, a profession made for computers, inexhaustible communication opportunities, diagnostic challenge, innovation, access to the game of golf, players who respect the game as a way of life and who have an endless curiosity about what the superintendent does, winter variety, more security than the average American, an expanding earning potential, careers beyond present employment, access to the best business minds in our country, models of success to emulate - in every direction, supportive peers, ample family time, building/construction projects denied others, an industry that can afford all that you are about, leadership, all the pride you can muster, discipline, government interaction, trade associations that care and are learning to deliver meaningful assistance, good friends, architecture, stimulation reading materials, growth and life in its fullest meaning.

Because life does not give guarantees, there is no assurance that all of the above translates well for each individual superintendent and his or her family. Do we see the glass as being "half full" or "half empty?" We, alone control our attitudes and perceptions. My observation is that the superintendent has only just begun to realize and fully appreciate the QUALITY OF LIFE potential that occupies his and his family's every day world.

The complete manager will perform more securely in the company of a club membership full of complete managers. The complete manager will feel secure enough to look outside, appreciate and enjoy the Quality of Life that is available to him in abundance. (JMcL)

#### RESEARCH REPORT Breeding of POA Annua For Improved Cultivars

UNIVERSITY OF MINNESOTA Dr. Donald B. White Principal Investigator

During 1985 new accessions were added to the germplasm collection from Arizona, California, Illinois, Michigan, Missouri, New Jersey, Minnesota and several

# The INDESTRUCTIBLE LAWN by GEOBLOCK

The GEOBLOCK<sub>\*</sub> Landscaping System by PRESTO provides invisible support for pedestrian and vehicular traffic while maintaining a thick cover of grass. The strong, reinforced plastic GEOBLOCK features. . .

- ·Interlocking system for
- maximum weight-load transfer • Easy installation,
- lightweight. . .can be cut with a hand saw
- Resistant to chemicals, fertilizers and
- temperature extremes

Mar Mar Mar

 Two sizes available. . .2" heavy duty use 1-1/8" light duty use FROM THE LEADING GOLF COURSES COMES THE ANSWER TO YOUR LAWN WEAR PROBLEMS

NAME AND ADDRESS OF THE OWNER OF



Michigan TOLL FREE 800/544-9219

European locations.

Evaluation of first and second generation selections continued and included a spaced planting in the field of representatives of 145 selections.

Several investigations into stolon propagation and storage resulted in the development for inducing flowering, storage of stolons, and evaluation of rooting habit. Investigations were also initiated regarding the modification of tissue culture for somaclonal variation.

The first field planting from stolons of superior selections was established and the first selections from the FI generation of a 16B clone parent has been identified.

Crossing, selfing, evaluations, selection, seed harvest and data collection continue.

In 1986 we plan to continue research in the following areas:

- 1) Selfing, crossing and selection programs;
- 2) Self-incompatibility;
- Tissue culture including efforts investigating possibilities for somaclonal variation;
- Flower suppression and improved methods of emasculation;
- (5) As activities permit, increase the 16B selection for testing and evaluations at the University of Minnesota and other sites.

**Credit: Hole Notes** 

#### PROGRAMMING N FERTILIZATION TO IMPROVE COOL SEASON TURF Dr. R.E. Schmidt

Associate Professor Of Agronomy

#### IMPORTANCE OF N FERTILIZATION

To obtain a top quality lawn, adequate nutrition must be applied. Of the essential elements obtained from the soil, nitrogen (N), phosphorus (P), and potash (K) are needed in the largest amounts. These, along with calcium (Ca), magnesium (Mg) and sulphur (S) are called major nutrients. Elements required in minute quantities are iron (Fe), copper (Cu), manganese (mn), zinc (Zn), boron (B), Chloride (Cl) and Molybdenum (Mo); referred to as micronutrients.

Nitrogen is the major nutrient required by grasses in largest quantities and provides the most dramatic effects on turf quality. Protein, chlorophyll, amino acids, amides and alkaloids all contain N and all are important constituents of the plants protoplasm.

#### HOW MUCH N IS NEEDED?

Unlike P, K, Ca, and Mg, soil analysis for N has limited benefit in determining turfgrass nutrient requirements. Turfgrass color, density and clipping yields are the best indicator of N nutritional status. The amount of N needed is dependent upon the turfgrass species, soil texture, N source, rainfall or irrigation, and the desired intensity of culture. Yearly N requirements for most cool season lawns range from 2 to 5 lbs. of N per 1000 sq. ft. Fine fescues need less N than Ky bluegrass to maintain satisfactory turf quality. The higher N rates are generally needed for newly established turf areas and the lower amounts are satistactory for mature turf stands.

Sandy soils generally have better drainage than clay soils and, consequently, tend to lose N faster through leaching. Heavy rainfall or irrigation promotes faster turfgrass growth and may increase soil N leaching. Therefore, more N fertility is needed on sandy than on clay soil to obtain similar turf quality, especially when heavily watered.

There is a tendency in recent years to overfertilize lawn turf. This is particularly evident in situations where some lawn service companies have been contracted who program their fertilization to please the customer by making the lawn green after each visit. The short-term effects seem rewarding. However, the long-term effects may be disastrous. An overstimulated lawn may build up a thatch layer which will cause a demise in turf quality. This is especially true if thatch control is not practiced. There is a dire need for lawn service companies to program N fertilization to best benefit the turf and to provide a cultivation program that will limit thatch accumulation

#### N FERTILIZER SOURCES

Source of N fertilizers differ in their release pattern and differ in their rate of providing nutrition to the turf. Nitrogen fertilizers that are readily soluble in water usually provide N quickly to the turf. Urea and ammonium nitrate are examples. Although these sources of N are relatively inexpensive, they are not preferred because of their high salt index which is related to foliage burn. Urea has a lower salt index than other soluble N sources and, therefore, is most often used for turf fertilization when a quickly available source of N is desired.

Generally, those N fertilizers containing large percentages of water insoluble N (WIN), such as ureaformaldehyde, methylene urea and IBDU, release their N slowly to the plant. Since ureaformaldehyde is dependent upon microbial activity, there is very little N made available from this source during cold weather. Most other slowly available N sources do release some N during cold weather.

The N release pattern, or dissolution rate, of sulphurcoated ureas, is dependent upon the type and thickness of the coating surrounding the urea prill. An average dissolution rate for sulphur-coated urea turfgrasss fertilizers would be 20% release in one week. Therefore, most sulphur-coated urea fertilizers are considered intermediate in N release rate.

#### PROGRAMMING N FERTILIZATION

It has been demonstrated that timing of N fertilization directly influences turfgrass quality. Cool season turfgrasses such as Ky bluegrass do best when sufficient N is made available to the plant as the carbohydrates are naturally accumulating in the plane. Carbohydrates (sugars), the plants energy source, normally start accumulating in the fall when foliar growth starts to slow down. This accumulation continues during the winter months until the flush spring foliar growth occurs.

Carbohydrate accumulation is highest when cool season turfgrasses retain their chlorophyll as long as possible into the winter. By providing ample N availability to the turf in late fall, the turf will stay greener longer during the winter and provide early spring green up. Because of the high chlorophyll content, and higher net photosyntheses, more carbohydrates will be realized. Cold temperatures limit foliar growth and respiration, thus the carbohydrates will accumulate rather than be utilized.

Since roots grow at a lower temperature than tops, roots are active in late winter and early spring before the foliage

begins to grow. When ample carbohydrates are present in the plant at this time, root development is stimulated. Once the foliage begins to grow, the roots no longer have priority on the carbohydrate reserves and root development is reduced.

Therefore, it seems logical to apply ample N in the fall to increase carbohydrates and stimulate rooting when most root development occurs in late winter-early spring. A strong root system developed at this time will help the plant survive stress during the summer.

When excessive N fertilizer is made available to the plant in early spring, the foliage is stimulated. Spring stimulated foliage has priority demand on the plant's carbohydrate reserve and root development is limited. The plant is then less able to tolerate summer stresses.

In Virginia we feel it is best to apply the fall N in split applications from September to December and the spring application in late May. The spring flush foliage growth is usually dissipated by mid-May.

#### N EFFICIENCY

Early spring N fertilization is not needed if adequate fertilizer was applied in late fall. Excess early spring N will only reduce rooting and tolerance to summer stresses. Possibly, less total N is needed to provide satisfactory turf quality when heavy fall fertilization is practiced.

One-half of each plot of a Ky bluegrass N source experiment initiated at Virginia Tech in 1978 was not fertilized after the third year. This provided a means of evaluating the efficiency of different N sources applied under different regimes. Data collected to date suggests that with soluble sources of N, approximately 2/3 of the growth occurring in July is occurring as a result of the fall fertilization program and previously applied Nitrogen. This suggests that only minor amounts of N were lost over the winter and possibly that stored food reserves have a major role in summer growth.

Data collected during 1981 from another Virginia Tech turfgrass experimental fertilizer study confirm that N applied heavily in the late fall generally provided better turf quality than when N was applied heavily in the spring. When pooling the quality ratings for all N treatments for each month, the late fall N regime provided best turf from December to April and again from August to November. Under the spring N regime, the fertilization in April and May produced the best turf quality only during May and June. Turf quality was enhanced in June with the fall fertilization when iron was also applied.

Iron fertilization generally enhanced the overall turf quality regardless of N source, rate or fertilizer regime. However, turf quality was highest when iron was applied in conjunction with the fall nitrogen regime. These data indicate the advantage of iron and heavy fall N fertilization in improving cool season turf quality throughout the year.

Credit: Tech Turf Topics, Virginia Tech, October 1982

Credit: Carolinas Newsletter

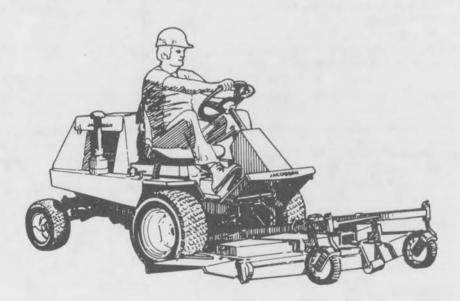


## MILLER WEST, INC. Jung Equipment 274 Mart Street, S Grand Rapids, Mich

274 Mart Street, S.W. Grand Rapids, Mich. 49508 616 — 241-4481

# **OUTFRONT LEADERS**

# Dependable, Out Front Mowing Efficiency from Jacobsen's Turfcats



... Now with a LIMITED TWO YEAR WARRANTY

on Turfcat models GA180, GA200, DW220, DW224, GW224

#### THE PROBLEM OF MOSS AND ALGAE IN TURF

Moss and algae are found in turf areas when conditions are not good for growing dense, healthy turf. Mosses are small plants that have a mass of fine stems. Algae are thread-like green plants that form a thin, dense green scum over the soil surface. Neither moss nor algae are parasitic to turf-grasses. The green scum formed by algae is relatively impermeable and once it dries, if forms a tough black crust.

Factors that favor algae growth are wet, humid, full-sun conditions and compacted, water-logged, fertile soils with this thin, weak turf. Factors that favor moss growth are wet, humid, shady conditions; acidic, infertile, poorly drained, water-logged soils; and areas with excessive thatch and thin, weak turf.

#### CONTROL

The following practices can help control moss and algae growth:

• Maintain good soil fertility — Have the soil tested to determine lime and fertilizer needs.

• Improve drainage — Contour soils that stay moist because of poor drainage so that water drains off the area. In some cases, tile drainage may be necessary to correct wet conditions.

 Increase light penetration and air circulation — Trim lowbranched trees to allow better light penetration and air movement. In some cases, it may be necessary to remove some of the least desirable trees. Areas surrounded by buildings and vegetation with limbs close to the ground require considerable effort to provide adequate air circulation and light penetration. Using a shade-tolerant grass such as Glade bluegrass will help. However, if direct sunlight does not reach the ground during the day, a ground cover may need to be substituted for grass.

• Cultivate compacted soils — Reduce compaction by aerifying with a machine that removes plugs of soil. Drainage in fine-textured soils can be improved by cultivation and the addition of large amounts of organic matter and sand.

Avoid excessive irrigation.

#### CHEMICAL CONTROL

Chemical control of moss and algae is temporary and the problem will recur unless growing conditions are improved. The following may be used to help control moss and algae:

• Formec — Algae may be be controlled by using at recommended rates.

•Zinc — Products containing salts of Zinc, Zineb, LSR and others of this category are undergoing re-registration. Check the label.

Reprinted from: Divot News, Golf Course Superintendents Assoc. - Southern California Chapter



"Too many different people have been telling you too many different things."



2301 W. DEWEY RD. P.O. BOX 451 OWOSSO, MICHIGAN 48867

517-725-7504

FOR ALL OF YOUR FERTILIZER & CHEMICAL NEEDS

EXPERIENCED DEPENDABLE PEOPLE TO SERVE YOU

#### TEE CONSTRUCTION

One of the representatives of the USGA Green Section was making the tour of my course a few years ago and he asked, "How often do you topdress your tees?" I replied, "Almost never, why?" "How did you get them so level," he asked. I replied, "We built them that way."

So for the record, here is the way we built them...all hard work but not very complicated.

Don't handicap your turf growing expertise by locating a tee in the shade where tree roots will invade it (even years from now, you may still be there) or in an area where trees or other features (hills, fences, buildings, etc.) will hamper the free flow of air movement. Conditions may be such that you must build in a *cul de sac*, in shade and right beside a willow just waiting for a tee to eat. Cutting away brush to form air channels, trimming to let the sun in and trenching to cut roots will all help, but, each adverse factor will work against you.

Elevate the tee slightly for drainage and better air movement. Bank run gravel, a **minimum** of one foot should be the base. Don't make the mistake of thinking just any old fill will work; it might, but you need every edge you can get. Use the lightest equipment you can to shape this up into rough grade; a light tractor with a bucket on the front and a blade on the back. Bulldozers do a great job, but tend to pack the mass down, thereby decreasing drainage.

Align the base to the fairway by standing in the middle of the proposed tee and facing a spot about where an average drive should land. Put your arms out, hands shoulder high, palms down. This will give you the angle

#### WINNING PROPOSALS

How well you prepare written proposals may determine the success of your organization and career. Here are some suggested guidelines to help you market your thinking:

\*Begin each new section at the top of the page

\*Be sure that no section is more than three times the number of pages of any other section

\*Place the Table of Contents and a list of exhibits in the front of the proposal

\*Limit lists to no more than six to nine items

\*Include exhibits in the text adjacent to where the exhibit is noted

\* Avoid abbreviations and colloquialisms; write to an uninformed audience

\*Use graphs and charts freely, but make sure they can stand alone

\*Limit sentence length to 30 words and only two ideas \*Balance "we will do" statements with "you will get" statements.

Credit: Communications Briefings

#### MANAGERS VS. LEADERS

Managers and leaders are different kinds of people. They differ in motivation, personal history, and how they think and act. For executives who want to improve leader-

(Continued on page 20)

for the front edge of the tee. Drive in two stakes, one in each front corner. Do your angle shot again. Repeat again from fifty feet in back of the tee. Go out in the fairway and look back at the stakes from 200 yards. Make any adjustment needed. Drive two stakes in the back corners. Determine size now. A good rule of thumb is to make it twice as big as you or anyone else had planned. If it is too big you need not mow it all as a tee. If it is too small, you get to rebuild in a few years. Make the choice now. Grade the base as close to the finished tee as you can. Put on about one foot of the best topsoil you can get...screened sandy loam if I had a choice. Again use light equipment, even keeping the tractor off the actual teeing area unless it is so large as to be impractical. I am always amazed at how much a few interested hands and the #2 shovel can accomplish. Spread soil with the shovels and use the common wooden hay rake with 2" gap in the teeth to pull a rough grade. Get it shaped up fairly decent and then roll with a light roller - power or hand - our tennis court roller. no water, was just right. Rake for grade - roll again. Do this over and over until the top is level, the banks are gently sloping and there is just a hint of a slope from front to back, and as you stand on the tee facing the fairway an even fainter hint of a slope from your right to your left. This is to insure surface drainage. If, as sometimes happens, the back of the tee butts a slope, make sure no water can be entrapped there. A tile at the low point is good insurance and fairly easy to install in new construction.

At this point I find I get the "Can't see woods because the trees are in the way" syndrome. I've looked so long and hard at the grade level I lose my perspective. The cure is simple - leave the construction until the following day. Sizing it up after an absence of a few hours, the need for corrections will be self evident.

In any given group of ten greensmen, only two, will be able to fine grade a tee to the desired level. The other eight will continually undermine the project unless they are directed by the two who have this born-with skill.

You will find that your most aggressive and intelligent workers have this knack - which is a combination of interest, self-confidence and practicality. After all, it is simply moving the high spots into the low spots until they are both eliminated.

I find that when you think it is finished and the grade is "perfect" you should rake it at least four more times, right side to left, left side to right, front to back and finish with back to front. This should not be an attempt to move the soil, the corrections in this move will be very subtle, gravity and the head of the rake will do it with no effort on the part of the raker. Fertilizer or lime can be raked in with this last grading.

Mason line and a line level is an aid in determining the grade when you start out, but for the finishing touches I discard the cord and rely on the human eye.

For the final step, sod the tee, or rake in the seed.

In summary; do not build-in any problems - build it big enough and avoid shade and tree roots. Provide for air and water drainage. Work on the final grade until you are satisfied then fuss for another hour.

Credit: The Hudson Valley Foreground

#### ANTHRACNOSE CAUSES EARLY LEAF DROP

Are the leaves of your tress turning brown and falling off? According to Kathy Gass, University of Illinois Horticulturist in Cook County, what you are seeing is probably a fungus disease called anthracnose. Affected leaves have brown, irregular spots. Quite a number of diseased leaves fall to the ground with a few infected leaves remaining in the tree. Usually not all the leaves on the tree will be seriously infected with the anthracnose fungus, comments Miss Gass.

Many gardeners are noticing anthracnose for the first time and are surprised to hear that the disease appears nearly every year. Usually the fungus is not obvious because it attacks in early spring when the leaves are very small.

Anthracnose is a disease closely related to weather conditions. It occurs in cool moist weather. Spring this year started out warm and dry. The anthracnose fungus occured later this spring due to temperatures in the 50's and 60's accompanied by high humidity conditions late in May. We normally experience this weather in early spring, thus the fungus usually attacks small leaves. Since this weather occurred later, we are now seeing the disease on the larger, full grown leaves.

Control of anthracnose is not very succesful and usually not necessary. You may spray trees that are affected every year with a fungicide if you wish , but the time to spray is in early spring, before bud break. This is a preventative measure. Treatment now will not control fungus since the infection has already taken place. Severely infected and defoliated trees will put out a new set of leaves, so you do not need to worry that your tree is going to die.

The early leaf drop from the anthracnose problem may make it seem like fall, but never fear. Hot summer weather is around the corner and your trees should soon look none the worse for the experience.

Credit: The Bullsheet



that salesman for me."

armenter & Andre STOCKING THESE FINE PRODUCTS FOR PROMPT SERVICE STANDARD GOLF PBI GORDON PAR AIDE AQUATROLS DU PONT AQUASHADE NOR AM (Acti Dione) RAINBIRD RHONE-POULENC (Chipco) NELSON DACONIL 2787 PVC PIPE & FITTINGS WEST MICHIGAN DISTRIBUTORS OF MILORGANITE FERTILIZER PHONE (616) 458-1546 1042 MICHIGAN ST., N.E. • GRAND RAPIDS, MICHIGAN 49503 • P.O. BOX 2411

#### DEALING WITH DIVOTS by Patrick M. O'Brien Agronomist, Mid-Atlantic Region, USGA Green Section

What to do about divots? This is one of those little things that every golf course superintendent must contend with but can never overcome.

Small wonder! The National Golf Foundation reports that the average seasonal daily play on an 18-hole courses. That adds up to a lot of divots and a lot of repair work.

When golf was young, the teeing ground was a small area. Since there was not a great deal of play and the tees were mowed by hand, a good grass cover was possible. But in time, as the number of golfers increased, good grassy tees became more difficult and more costly to maintain. The only answer to the problem lies in larger tees and a constant divot repair program.

Next to providing a level stance for the golfer, size is the most important tee consideration. Without enough ground, grass cannot recover from heavy divoting and traffic. Luckily, it is easy to calculate how much area is needed. For par-4 and par-5 holes, 100 square feet of usable area is required for every 1,000 rounds of golf annually. For par-3 holes, 200 square feet is needed. Tees meeting these general guidelines will have a better chance of keeping a dense cover throughout the playing season. This is an important consideration for anyone planning to rebuild old tees or design new ones.

The use of fast growing grasses on tees with divot problems is another aid. In northern climates, some favor Penncross bentgrass, while others prefer improved perennial ryegrasses. In southern areas various burmudagrass and zoysiagrass varieties are the choice. Obviously, there are growth rate differences, even among grasses of the same species. For example, the faster growing Vamont burmudagrass is preferred over the slower growing Midiron bermudagrass for tees where these varieties are adapted.

Good tees, regardless of the grass species, absolutely require very close attention to fertilization rates, irrigation needs and pesticide protection. These needs are even greater when cutting heights are lowered and grass clippings collected. Many tees have become an intensive management area.

Although there are no set rules for divot repair programs, the greatest hope of all remains with the golfer himself. If every golfer would only repair his own ball marks and replace his own divots, the nation's golf courses would be conspicuously improved and noticeably less expensive to maintain. Proper etiquette calls for this, but too few hear the call. Surely, if golfers would limit their practice swings to off-tee areas only, a tremendous leap forward could be made.

The practice of placing topdressing containers on par-3 tees has made a small comeback in recent years after being commonplace in the 1920s and 1930s. A few clubs use the topdressing containers as tee markers and some have also included small topdressing containers on every electric golf cart. Each container holds the divot topdressing mixture, seed and a scoop. The scoop is used to place topdressing over the scar left if the divot is destroyed.

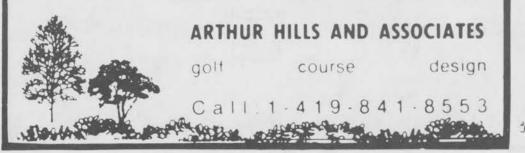
The self-repair approach, unfortunately, receives only mixed reviews. Many golfers are apathetic. Agronomically, it doesn't take long for the seed to germinate in the mix and the helpful golfer may find a mass of vegetation in the container. One solution is to place the seed in a dispenser, like a salt shaker, to keep it dry and prevent germination. But each new step in the self-repair process only seems to complicate and discourage its use even more.

The best approach to divot repair is a regular program by the professional grounds staff. The professional staff is more proficient than most golfers in judging how much topdressing to place over an old divot hole. Usually, doing the work once or twice a week is enough if the tees are sufficiently large. Most often, one or two crew members apply the divot mixture by hand to the injured areas. The next step is to smooth the area with a shovel and then off to the next tee. Devoting time to divot repairs pays dividends. The golfers, too, become more conscientious about repairing injured turf when they see that the professional staff is devoting time to it.

The divot mixture used by the professional staff is usually one of seed, soil, and/or sand. Seed germination of cool season grasses will readily spread in pure sand and rapidly cover without the need of additional seed and soil.

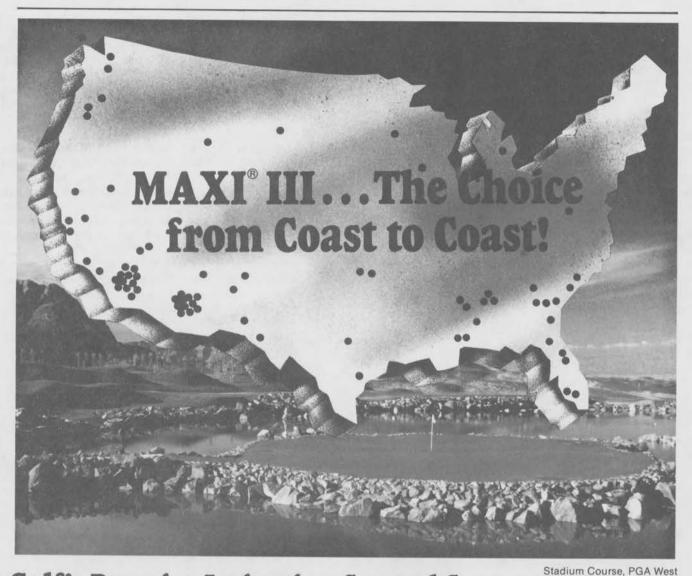
Good tees and a dense, uniform turf cover undeniably add to the enjoyment and attractiveness of every golf course. Good tees don't just happen. They must be of adequate size, have the proper grass, and follow a conscientiously planned management and divot repair program. Good tees cost money. The enjoyment they bring and the impression they leave make it all worthwhile.

Credit: USGA Green Section Record





"Careful of that bunker."



## **Golf's Premier Irrigation Control System**

Repeatedly the choice of the world's leading architects and superintendents, MAXI® III from Rain Bird is recognized as golf course irrigation's most exciting and versatile

computerized control system.

Sophisticated. Reliable. Powerful. MAXI® III offers state-of-the-art irrigation technology. An IBM computer, too. Not to mention the ability to handle a wide range of important functions. Lighting—security—and a host of other necessary operations.

Legends in the making—the great golf courses of tomorrow are being built today. And MAXI® III is there!

Controllers. Rotors. 50 years of golf course irrigation experience.

Rain Bird — the choice from coast to coast



RAIN BIRD

Michigan TOLL FREE 800/544-9219

#### A USEFUL TECHNIQUE IN SAND BUNKER RENOVATION

by

#### James T. Snow, Director Northeastern Region USGA Green Section Record

Sooner or later, every golf course superintendent is faced with rebuilding sand bunker edges and banks that have deteriorated through excessive sand buildup. One of the most critical steps in this process is establishing a welldefined border that gives the bunker its final shape and aesthetic appeal. When the sand bunker is on a relatively flat plane, strips of plywood or metal sheeting work reasonably well in establishing these edges. This method doesn't provide enough support, though, where large, elevated capes and mounds are involved.

At the Winged Foot Golf Club in Mamaroneck, New York, Bob Alonzi has developed a technique for rebuilding the banks around the large, caped sand bunkers that eliminates the problems associated with plywood or metal strips. Thinking back to his days spent filling sandbags in the Army, Bob came up with the idea of filling mediumsized burlap bags with soil and using them to form the perimeter of the new capes and mounds.

Using the burlap bags in this way has many advantages. The bags form a solid, stable edge, yet they can be moved and molded to provide the precisely desired effect. Once the bags are in place and the soil has been used to backfill behind and between them, sod can be laid on the soil and directly over the bags to establish the capes and mounds. Because the burlap is porous and biodegradable, turfgrass roots grow through the burlap and become established in the soil below, and ultimately the burlap will decompose. Thus, there is no need to use artificial support such as plywood strips or metal sheeting for establishing the bunker edges, and there is no need to remove them later. Once the sod is in place and the roots have become established, the job is essentially finished.

In using this procedure, Bob suggests that the sod be brought down directly over the rounded edge of the bag. Final edging can be done when the sod becomes rooted and well established. He also suggests that this technique can be practical for a variety of other uses on the golf course, including landscaping hard-to-work slopes, building retaining slopes for ponds, for outlining walkways, etc.

#### LESCO . . . for all your turfgrass needs.

As a major manufacturer, formulator and distributor for the green industry, LESCO sells a complete line of fertilizers, control products, grass seed, equipment, replacement parts and a wide assortment of tee markers, flags, sandtrap rakes and other golf course accessories. Whatever you need for turf maintenance, call LESCO first — toll-free.



616-842-5180

		C	CANDARD SAND CORPORATION DRESSING SAND 2150
USA Sieve 20 30 40 50 60 70 100 140 200 270	MM .84 .60 .42 .30 .25 .21 .15 .10 .07 .05	% Retained .0 .6 4.6 28.5 23.6 24.3 17.6 .8 .0 .0	<ul> <li>Meets USGA specfications</li> <li>Consistent Quality</li> <li>Lab Reports with Every Shipment</li> <li>Michigan's Largest Topdressing Sand Supplier</li> </ul>
PAN			Standard Sand Corporation P.O. Box 290 Grand Haven, Michigan 49417 Jim Kalsbeek, Sales Manager

#### **USGA SETTLES SUIT**

The United States Golf Asociation has reached an out of court settlement of an anti-trust suit originally filed by Polara Enterprises, Inc. in 1978. The settlement amount is \$1,375,000.

The suit involved a golf ball developed by Polara claiming aerodynamic characteristics that caused the ball to self correct in flight so as to limit hooking and slicing. Accordingly, the USGA refused to approve the ball for use in USGA competitions and established a new standard to deal with this aerodynamic problem. Since this standard has been established, 25 brands of balls have been removed from the list of approved balls.

Reasons for USGA's settling were basically twofold: first - the judgement will permit the USGA to continue to make and revise specifications for equipment with the Rules of Golf: and second - USGA's total legal costs to date within the suit had risen to \$1.7 million.

The case and settlement leaves some doubt regarding USGA's future ability to preserve the best interests and true spirit of the game of golf - as well as the integrity of the game's many golf courses.

Credit: Tee to the Green

FISHING TOURNAMENT YOU SAY!



What do people in the golf business know about Great Lakes fishing? Nothing really, except which charter service to use. Dave, Jim and the rest of the guys at the "Best Chance" charters provided everything necessary for a great day. In all, five boats were used and Mother Nature gave us super weather. All we had to do was show-up, pop-a-top, and reel 'em in. And reel them in we did!

Believe ir or not, all of these fish were caught by the guys who participated in the W.M.G.C.S.A.'s first fishing tournament. The only person I know of who did not catch a fish was John Gilson, and his picture shows why. John, you have to pay attention when the first-mate is telling you what to do.

The first prize, a \$25.00 gift certificate, was won by Mike Pifer from Scott Lake Country Club, with a 18-1/2 pound salmon. I hope everyone enjoyed themselves as much as I did - and let's do it again.



#### THE INSURANCE CRISIS FOR PESTICIDE USERS

As you are all aware, risk liability insurance for certain businesses, occupations, and services is becoming increasingly difficult to obtain, if even available at all at any cost. The following article, reproduced in its entirety, describes the current crisis surrounding this issue. The article, which appeared in the Winter 1986 issue of The Bottom Line, is entitled "Insurance Crisis Deals Touch Hand to More Than Just Pesticide Users.'

If you're a pesticide user who finds comfort in numbers, then take heart - the insurance industry is not singling you out. Though you may have lost your pollution liability insurance, you are not alone.

Actually, your marker - pollution risk liability - is currently one of the eight most difficult markets to insure, according to the Wall Street Journal. The others include liquor liability, day- care centers, medical malpractice, high-limit coverage for industrial firms, asbestos removal from schools, commercial fishing and boat coverage, and municipal liability. The cost of policies available throughout 1985 rose 300 to 500 percent while coverage lessened, according to various industry journals. Now, insurers claim they have no choice but to exit the pollution liability market for 1986.

Across the industry, pest control operators, aerial pesticide applicators, utility right-of-way managers, arborists, lawn care companies, and even government agencies face the dilemma of paying for sky-high insurance policies or operating uninsured. Pollution insurance policies, which usually covered only "sudden or accidental" claims, have received broad interpretation by the courts resulting in large awards and high costs to insurers.

The Wall Street Journal estimated that the surge in suing has driven up the average product liability award from \$345,000 ten years ago to \$1.07 million. As the companies pay greater amounts for defense, insurers believe the only solution is to raise premiums and take fewer risks.

The National Pest Control Asociation estimated in another Wall Street Journal article that 450 of the nation's 9000 pest control concerns will have gone under in 1985 due to rising insurance costs and oppressive

lawsuits. Homeowners are suing exterminators to collect damages for illnesses or deaths allegedly caused by the pesticides used. Even when the pest control companies win, the insurers lose - they foot the costs of the defense, which can easily add up to \$100,000 a lawsuit, according to William Savich, an Atlanta insurance broker specializing in pest control companies.

Lawn care operators have encountered equally unpleasant insurance situations. Several states require operators to submit proof of pollution liability insurance in addition to proof of financial responsibility for general liability before licenses can be obtained. The alternatives are to seek an almost unobtainable, high-priced policy, operate in violation of the law without insurance, or don't operate at all.

Some operators who apply pesticides aerially, both for agriculture and rights-of-way, have been grounded by their insurance problems. Many large forestry companies require aerial applicators to carry their own insurance policies - which cost the applicators several hundred thousand dollars.

In 1986, some expensive policies will be available on a "claims made" basis, but they provide limited coverage at best, and only for the specific time period that the policy is in effect.

Insurers say recovery time will bring the industry policy prices back into balance. New techniques for moderation out of court will play a key role in reducing the burgeoning amount of legislation and the unreasonable amounts of jury awards. In the meantime, those who want insurance will have to pay dearly for it.

These suggestions may leave pesticide users frustrated, but as one industry expert said, "In increased professionalism through applicator training will be a key in turning the risk perceptions around.

"Better training, which will result in fewer claims through misapplications, coupled with a good public relations campaign, will demonstrate the industry's professionalism to the policy writers," he added. Credit: The Bottom Line, Winter 1986

DOW Chemical Co.





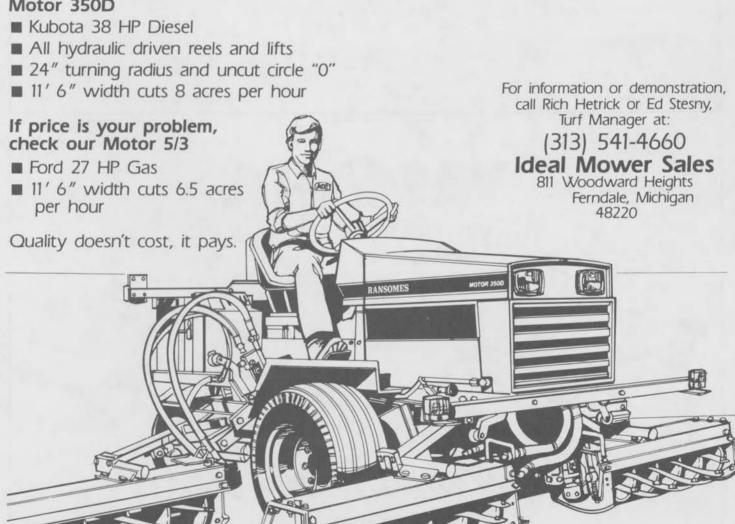
# Nothing cuts like the Ransomes 5 gang reel team

Fast-cutting, diesel-powered, all-hydraulic systems save time and money.

#### Motor 350D

RANSOMES

BOB-CAT



Special leasing terms available

# SODERSTROM IRRIGATION, INC.

We specialize in golf course irrigation pumping plants. Complete installation, conversions and service. We handle the complete line of Toro Irrigation Equipment.

Call us for any information on the above services, FREE estimates.

3560 - 13 Mile Road Sparta, MI 49345

(616) 874-9086

(616) 887-8141



#### **REPRIMANDING THE WRONG** WAY

Every seasoned manager knows the two cardinal rules of chewing out a subordinate: do it in private and avoid personal attacks. In the heat of a reprimand, however, even battle-tested executives have been known to run into trouble for one or more of the following reasons:

1. Failing to Line Up Facts - relying on hearsay comment or general impressions will only invite emotionladen rebuttals and resentful counterattacks.

2. Reprimanding While Angry - the more angry you are, the less objective you will be - and the less effective your reprimand. Delay your confrontation until you can be sure you will not be adding to the problem.

3. Being Vague About the Offense - make certain the person knows exactly what the charge is - EARLY in the discussion. Do not try to soften the impact to the point where you fail to advise the individual about what is wrong - he or she deserves this courtesy.

4. Failing to Get the Other Person's Side of the Story - always give subordinates the chance to explain what happened and their reasons for behaving as they did. There may be extenuating circumstances to take into consideration.

5. Failing to Keep Comprehensive Records - the better your documentation, the more even-tempered and productive the reprimanding session will be.

6.Harboring a Grudge - once you have handed out the reprimand and administered any sanctions, do not carry around any hostilities. Let the employee know that you consider the matter a closed book that everyone learned something about - and act accordingly.

7. The Wrong Time of Day - when you reprimand someone, try to do it late in the day so the person can have time to adjust privately at home before reporting to work the next day.

A safe rule to follow is to treat others with the same courtesy, respect and authority that you would appreciate and expect yourself, if positions were reversed.

> Credit: Prentice-Hall, Inc. / Working Smart and Learning International, Inc.

DISTRIBUTORS OF **PROFESSIONAL TURF & NURSERY SUPPLIES** LAWN & GARDEN SUPPLIES **GREENHOUSE & HORTICULTURAL SUPPLIES** J. MOLLEMA & SON, INC. 1530 EASTERN AVE SE GRAND RAPIDS, MICH 49507

GORIS B. PASSCHIER **Turf Specialist** 

PHONE 616-245-0533

# **Rubigan** controls dollarspot on greens, tees, and fairways, and you get more for your money.

- Extended dollarspot control for 10-14¢ per 1,000 square feet per day of control.
- Broad spectrum fungicidal activity.
- Tank-mix flexibility.
- Low use rates less storage and handling.
- Poa annua management program to increase the populations of desirable turfgrass.

Rubigan, the fungicide of choice for turf managers. Call me to order Rubigan today! Rubigan\* (fenarimol, Elanco)



BENHAM CHEMICALS

24800 N. Industrial Drive Farmington Hills, MI 48018 1-800-482-6520

Sales Rep: Jerry Makarewicz

ELANCO

## INTRODUCING THE NEW TORO GREENSAERATOR



## GET IN 18 HOLES IN THE TIME IT TOOK YOU TO DO 9

SPARTAN DISTRIBUTORS, INC. 487 W. DIVISION SPARTA, MI 49345

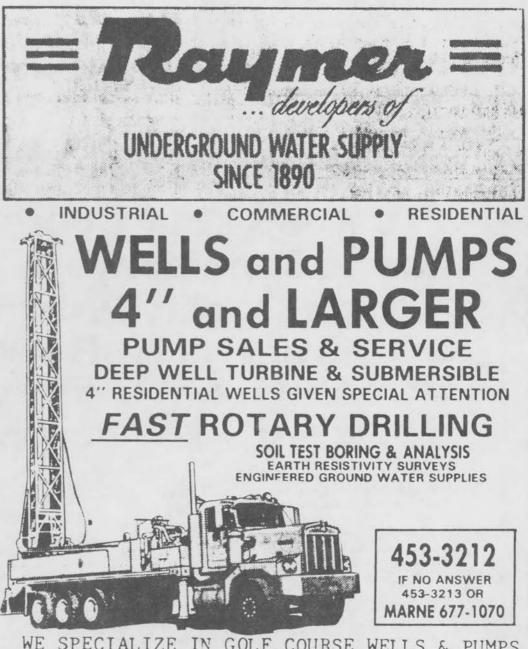
PH: (616) 887-7301



THE PROFESSIONALS THAT KEEP YOU CUTTING.







#### LIGHTNING ALERT

During the past 25 years, 114 golfers have been killed and another 312 injured by lightning. The worst states for golfing fatalities are Michigan (12), Pennsylvania (11) and New York (8).

The reasons for the high death toll among golfers are obvious - they're frequently caught on fairways by fastmoving thunderstorms carrying or riding within metal.

When lightning starts crackling nearby, follow these safety rules: (1) put down your clubs and get away from them; (2) take off your metal spiked shoes and get out of the golf car; (3) if you are playing in a group, spread out several yards apart to reduce your target visibility; (4) stay away from open water, isolated trees, telephone poles and metal fences - all of which are frequently hit by lightning; and (5) should you feel your hair standing on end, it means that lightning is about to strike in the immediate area - drop to your knees and bend forward, but don't lie flat on the ground because the ground conducts electricity.

E SPECIALIZE IN GOLF COURSE WELLS & PUMPS 3311 3 MILE RD. NW • GRAND RAPIDS





(Continued from page 8)

ship skills, noting a few of these distinctions may help:

- \* Leaders question established procedure and create concepts. They inspire people to look for options. They are concerned with results. Managers, on the other hand, limit their choices to established organizational goals, policies and practices. They are concerned with the process.
- \* Leaders seek risks, especially where rewards seem high. They dislike mundane tasks. Managers, in contrast, have a strong instinct for survival and will tend to minimize risk taking. They can tolerate practical work.

Most important of all, a leader's effectiveness comes from his or her focus on human relationships. A leader will find it easier to develop loyalty within a staff than a pure manager.



# To Keep Your Course In Classic Condition, Use These High-Quality Products from NOR-AM

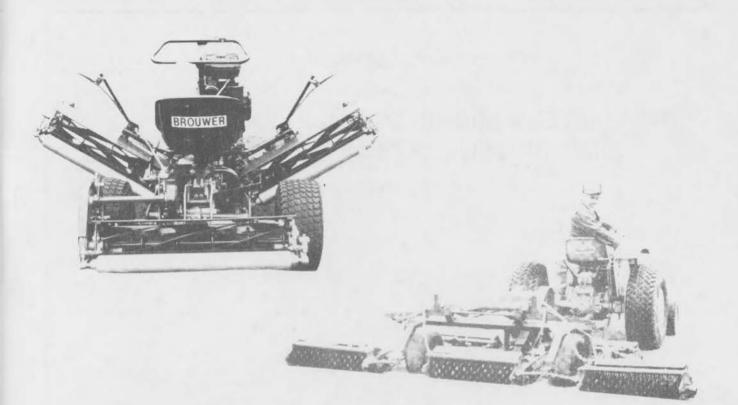
- •NITROFORM' SLOW-RELEASE NITROGEN Releases by slow bacterial action to provide consistent 38% nitrogen.
- •TURCAM' INSECTICIDE Controls a wide range of turf and ornamental pests.
- PROGRASS HERBICIDE Controls certain annual grasses and broadleaf weeds in ornamental turf.
- DELTIC\* INSECTICIDE Gives fast knockdown and long-term control of fleas, ticks and other pests.

- ACTI-DIONE' TURF AND. ORNAMENTAL FUNGICIDES Controls a broad range of diseases on turf grasses and ornamentals
- ●BANOL<sup>™</sup> TURF AND ORNAMENTAL FUNGICIDE
- Controls pythium and phytophthora • PROXOL '80SP INSECTICIDE Controls white grubs, sod webworms, cutworms and armyworms in fine turf.



Wilmington DE 19803 THE FAIRWAY CLASSICS to keep your course in top condition

DON MASKE, District Manager Specialty Chemicals Group RESIDENCE: 541 Heritage Lane, Lockport, IL 60441 (815) 838-8164



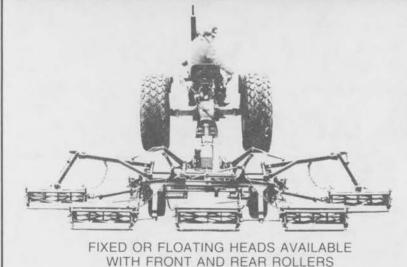
## **KEIZER EQUIPMENT CO.**

2122 Turner, N.W. Grand Rapids, MI 49506 364-7031 Bus. Toll Free 1-800-442-2684

#### **Brouwer Equipment Bush Hog Mowers** Ex Mark Mowers F.M.C. Sprayers Honda Engines Ransome Bobcat Mowers Vicon Fertilizer Spreaders

Tractors International Case Allis Chalmers Kubota







EASY TO TRANSPORT

- · Positive drive with no wheels and gears.
- · Simple hydraulic lift design.
- Available in 3-5-7 gang models.
  Choice of 4-5-6-7 bladed reels.
- · Produces a consistent uniform cut.
- · Available in hydraulic or standard lift.
- Economical to buy and maintain.

APPLICATION FOR M	EMBERSHIP
WESTERN MICHIGAN	GOLF COURSE
SUPERINTENDENTS	ASSOCIATION
(A NON-PROFIT MICHIGAN	CORPORATION)
Date, 19	
□ Class A \$30.00 □ Class B \$20.00	Class D \$35.00 🛛 Honorary
Name(First Name) (Middle) (Wife)	(Last)
(R.F.D. or street and number)	(Residence Phone No.)
(City or Post Office)	(State) (Zip)
Name of club or employer	
Address	
Business Phone No.:	Residence Phone No.:
Exact title of your present position	
EXAMPLES: (Sup't. of Grounds) (Sup'tManager) (Su	p'tPro) (Ass't. Sup't.) (Other)
I have been employed at my present position for follows: (Please state type of work engaged in)	years. Prior to this I had been employed as
Send my mail to:  Home address	Business address
Each application MUST be signed by two Class A me to reliability of the Applicant.	embers of the Association who will certify as
Attested Address	
Attested Address	
Applicant's signature	
PLEASE RETURN COMPLETED FORM TO THIS ADDRI	ESS





### WOODLAND TREE SERVICE, INC.

3520 Wilex S.W. Wyoming, Michigan 49509

HAROLD POSTMA

**BILL DREWS** 

Phone (616) 538-4030

## IMAGINE A GOLF COURSE WITHOUT TREES



### PROTECT YOUR AVAILABLE TREES THROUGH

Proper Care Lightening Protection Large Tree Pruning Tree Removals

Distributors for: Mauget Tree Injectors & Terra-Sorb Moisturizer

Mauget Tree Injectors control Dutch Elm Disease, Bronze Birch Borer, Diplodia Tip Blight on pines, Cytospora Canker on Spruce and nutrient deficiencies.

FOR MORE INFORMAION CALL Bob Kelly Home:(616) 453-6652



For demonstration call:

## Lawn Equipment Corporation (313) 348-8110

46845 W. 12 MILE ROAD NOVI, MICH. 48050 P.O. BOX 500 (313) 348-8110

Roseman Hydraulic Driven Reels, Lift & Fold

4 Blade Rough Mowers or 6 & 8 Blade Fairway Units

If we may be of any further assistance, please do not hesitate to contact us.

'WESTERN VIEWS' 17501 · 148th Street Spring Lake, MI 49456

Bulk Rate U.S. Postage PAID Permit #981 Spring Lake, MI

QUIPMEN

DR. RICHARD E. SHAPIN MSU LIBRARIES MICHIGAN STATE UNIVERSITY EAST LANSING, MI 48823