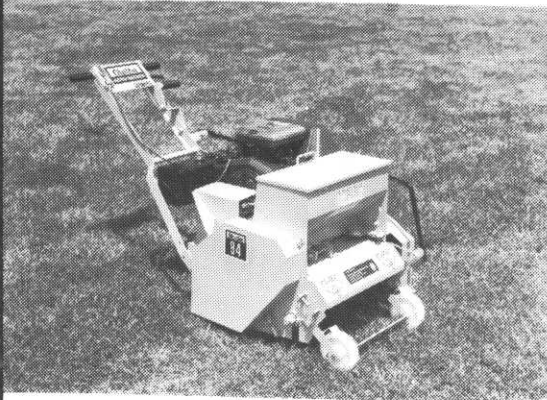




MODEL 67 LEAF & DEBRIS BLOWER
AN ATTACHMENT DESIGNED FOR THE
TORO, GROUNDMASTER OUT FRONT MOWERS

- ATTACHES EASILY TO THE OUT FRONT MOWER'S P.T.O.
- HURRICANE FORCE WIND RELOCATES LEAVES, GRASS & DEBRIS FOR EASIER PICK UP — SPEEDS SWEEPING OPERATIONS
- HANDY DIRECTIONAL CHUTE CONTROLLED FROM THE OPERATOR'S SEAT
- REMOVES MOISTURE FROM GREENS & TEES
- BLOWS SAND & DEBRIS OFF PATHS, FAIRWAYS OR PARKING LOTS

Olathe Equipment for the Turf Care Professional
AERATORS / SEEDERS



**OLATHE MODEL 83
AERO-THATCH BY ITSELF...**

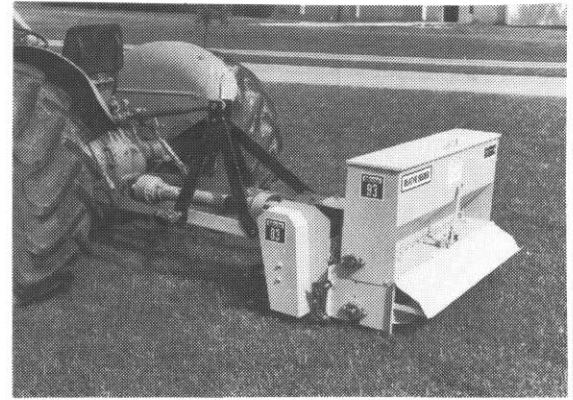
- VARIABLE DEPTH — THATCHES OR AERATES
- 3" CENTERS STANDARD WITH 12 GA., 10 PT. BLADES
- P.T.O. POWERED TO 65 H.P. GEAR BOX WITH 480 CHAIN
- FORWARD OR REVERSE BLADE ROTATION

OR COMBINED WITH THE

**OLATHE MODEL 93
SEEDER...**

- 100 LB. SEED CAPACITY • 3" CENTERS
- GROUND POWERED • VARIABLE SEED CONTROL
- SEED TUBES FOR ACCURATE DELIVERY TO SLIT
- PLANTS A WIDE RANGE OF GRASS & FLOWER SEED VARIETIES WITH UP TO 80% GERMINATION

WILL DO THE JOB FAST!



OLATHE MODEL 83 AERO THATCH

OLATHE MODEL 84 AERO-SEEDER

Olathe
TURF SWEEPERS

OLATHE SWEEPERS sweep grass, leaves, branches, cans, and other debris off turf areas efficiently. We offer P.T.O., engine, and self-propelled units at affordable prices. CALL or Write for our new free brochure.



MODEL 48 TURF SWEEPER

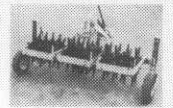


MODEL 65HL P.T.O. TURF SWEEPER

Olathe Equipment for the Turf Care Professional
AERATORS / SEEDERS

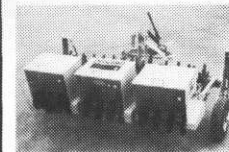
MODEL 685 AERATOR
IS THE CHOICE OF PROFESSIONALS

- TWELVE 70 LB. CASTINGS — ASSURES DEEP PENETRATION IN HARD SOIL
- UNIQUE 1-BOLT LOCKING SYSTEM SAVES TIME
- 3 PT. HITCH STANDARD, UNIVERSAL HITCH AND TRANSPORT KIT SHOWN AT RIGHT
- SLICING OR CORING TINES AVAILABLE



BY ADDING THE MODEL 1685 SEEDER ... YOU NOW CAN

AERATE & SEED SIMULTANEOUSLY



- NEW INTERMITTANT SEEDING PROCEDURE KEEPS HIGH TRAFFIC AREAS LUSH
- SPECIAL SEEDING DISCS, CHOICE OF SLICING KNIVES OR CORING TINES
- GROUND POWERED TO ALLOW FASTER SEEDING WITH LESS COST
- ALL THREE SEED BOXES ARE SPRING LOADED TO ALLOW BETTER COVERAGE ON CONTIGUOUS TURF AREAS
- FOR BETTER RESULTS USE SLICING BLADES WHILE SEEDING

MTI DISTRIBUTING CO. **TORO**

14900-21st AVENUE NORTH PLYMOUTH, MN 55441 (612)475-2200

1/800-328-3558 OUTSTATE 1/800-362-3665 MN

HOLE NOTES

OFFICIAL PUBLICATION OF THE MINNESOTA
GOLF COURSE SUPERINTENDENTS' ASSOCIATION

EDITOR: WARREN J. REBHOLZ
6550 YORK AVENUE SOUTH
SUITE 402
EDINA, MINNESOTA 55435-2383
PHONE: 612/927-4643

ASSOCIATE EDITOR: GUY R. GREEN

EDITORIAL COMMITTEE CHAIRMAN:
FRED R. ANDERSON

M.G.C.S.A. BOARD OF DIRECTORS FOR 1985:

OFFICERS

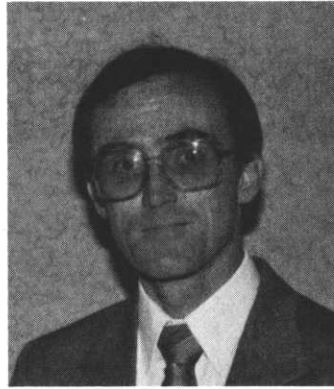
PRESIDENT.....DALE CALDWELL
VICE-PRESIDENT....KERRY GLADER
SECRETARY.....LYLE OLSON
TREASURER.....KEITH SCOTT
EX-OFFICIO.....DONAVAN LINDBLAD

DIRECTORS

FRED ANDERSON	DOUGLAS MAHAL
TOM FISCHER	RANDALL NELSON
SCOTT HOFFMAN	CHRIS HAGUE

THE FOLLOWING IS A LIST OF OFFICE
TELEPHONE NUMBERS FOR THE ENTIRE BOARD:

DALE CALDWELL.....612/544-4474
KERRY GLADER.....612/253-5250
LYLE OLSON.....612/464-3097
KEITH SCOTT.....612/938-6900
DON LINDBLAD.....612/755-2140
FRED ANDERSON.....612/689-3800
TOM FISCHER.....715/259-3926
CHRIS HAGUE.....612/448-3626
SCOTT HOFFMAN.....218/829-2811
DOUGLAS MAHAL.....612/929-1661
RANDALL NELSON.....507/451-4144



FROM THE PRESIDENT'S DESK

DALE CALDWELL

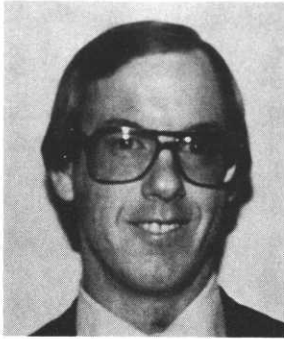
As many of you are no doubt aware by now, the Hazeltine National Golf Club has found and confirmed C-15 bacterial wilt on their putting greens. Hopefully, you are also aware that our guest-member event in September is scheduled to be held at the Hazeltine Golf Club. It has been the decision of the Executive Board of M.G.C.S.A. to retain this event at the Hazeltine site. The fact remains that Hazeltine is one of the ultimate tests of golf in this area if not in the entire country. I'm sure that everyone is still looking forward to playing Hazeltine as much as I am. Chris Hague will no doubt have his course in fine condition despite the unfortunate circumstances.

This year much of the proceeds from this event will be contributed to turfgrass research. This is something we have been trying to set up for the last two years. It is rather ironic that this first year of designating proceeds to research, that this problem of C-15 decline has become evident at the Hazeltine National Golf Club, the site of the event.

This tournament is to be named the Harold Stodola Research Tournament. This is to honor one of our local former superintendents who is legendary not only in this area, but nationally as well. Harold is a former superintendent at the Mendakota Country Club, Keller Golf Club, Tucson Country Club and Firestone Country Club. He was president of our national organization, G.C.S.A.A. through the war years of 1941-1945.

FOR SALE

7 GANG (SPARTAN) PARKMASTER 1978 4300
hours. Good stock left on reels. Call
890-5303.



LIGHT-WEIGHT FAIRWAY MOWING

UPDATE AT INTERLACHEN

by DOUG MAHAL
Superintendent Interlachen Country Club

Our light-weight fairway mowing program began early in the 1984 season. Previously, we had heard about the incredible results obtained with the triplex cutting units on fairways and wanted to learn more about it. We conducted a survey of 17 private country clubs in the country we knew were already on the program to get a true idea of what was involved and to get the full picture right from the horse's mouth, the superintendent. We found through the results of this survey that all the clubs noticed an increase in bentgrass populations even after one year. Most of the clubs also found it necessary to reduce their fairway acreage to make the effort more manageable. Over half began using less nitrogen, less water and some even less fungicides, all at a smooth, clean 3/8" to 3/4" cutting height. These were some of the things we were looking for in our fairway program—being able to apply less water and nutrients over less acreage, reducing compaction and spin-out damage caused by the tractor units, and to increase our bentgrass population. After in-depth discussion with our board, we decided to try the program over a three-year period and analyze the results vs. expense at that time.

Our first chore was to decide on the best type of mowing equipment for our conditions. We considered our topography, soil type, desired quality and maintenance factors. We looked at the 5-gang, wide 3-gangs and finally the triplex greensmower. During the time we were demonstrating all these various pieces of equipment, we found no other unit with quite the cutting quality, maneuverability, simplicity of operation and light-weight as the triplex greensmower. Our choice was to purchase

six units in order to complete a fairway cutting in six hours or less.

Our next chore was to determine when and how often to cut, and at what height. I have always thought, agronomically speaking, that it is best to cut when the leaf surface is dry - in the afternoon or early evening. I think the cutting quality is better and the dry conditions make scattering of clippings easier. One only need throw the clippings at an angle into the wind and the breeze will help disperse them. Coupled with the drier turf and the fact that here at Interlachen we have limited play beyond 6:00 p.m., cutting is begun at 3:00 and concludes approximately 8:30. This gives us a couple good hours of uninterrupted cutting time. We determined that 1/2" cut to be very adequate to hit from and the membership found that height very pleasing visually. Three cuttings per week, Monday, Wednesday, and Friday worked out well. I send cutters out in tandem, which gives a very desirable 10' stripe and also reduces the boredom an operator may experience from a continuous 5 1/2 hour cutting. When hiring operators, I looked for people who only desired part-time employment and had no other jobs. On a few occasions during the season whether it be for special events or due to rainy weather, we are obliged to cut on odd days or during morning hours. It became quite important to us to find employees with a flexible schedule. As I mentioned earlier, we are removing clippings and scattering them in the roughs. An original thought was that the clippings would really begin to pile up and start to produce some pungent odors. We have not found that to be the case at all if they are well scattered.

Improving turf quality generally requires some kind of sacrifice. We've made several on our fairway program, most being financial. The mowing process alone requires 5 1/2 times more man hours. I found it necessary to put on a part-time mechanic assistant just to keep up with the increased load. Initial machinery costs are actually about the same as the self-contained tractor/gang units but the machinery life is about one-fifth that of these larger units. We've discovered that we must perform some routine maintenance on the greensmowers after each cutting.

Continued on page 5



Flexible flyer

Float over fairways, trim around traps
with the Jacobsen HF-5

Hop into the comfortable cockpit of the HF-5. And take off to new heights in lightweight mowing efficiency.

Float over fairways on big Soffrac tires — just 8 lbs. p.s.i. ground pressure. You'll get precision mowing with a lot less compaction.

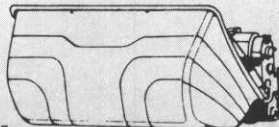
Make tight turns easily with Jacobsen's compact design. Hydraulic power steering with adjustable tilt wheel keeps you in command.

Match mowing speed to terrain

conditions with a variable hydrostatic foot treadle.

Change tractor speed or stop with a touch of your toe.

And check out these top-flight features: super durable polyethylene/aluminum grass catchers; heavy duty hydraulic reels; reversing reels for backlapping; handy lever selection of 3, 4 or 5 gang mowing; choice of 6 or 10 blade



reels; fuel efficient 4-cylinder diesel engine; and a low maintenance design.

So pilot the HF-5 yourself. It's the flexible flyer from Jacobsen.

Lease and finance plans available. Jacobsen Division of Textron, Inc. 1721 Packard Avenue Racine, WI 53403

J-64

**YOU SAY WHERE AND WHEN !
WE'LL DEMONSTRATE-CALL (612)484-8411
R.L. GOULD & CO. / 3711 LEXINGTON NO. / ST. PAUL, MN**

The units were just not designed to cut rougher terrain found on fairways so we frequently must repair broken reel spider welds caused from nicking sprinkler heads and drain covers. Another drawback is the fact that instead of having one operator and one machine in the middle of play, the membership must now contend with six operators and six machines. Having the additional cutters also necessitates more supervisory time and mileage.

But the real bottom line is, does the program work? We've seen a surprising increase in our bentgrass population even after a year and a half. I can see patches up to 6000 sq. ft. in size of virtually pure bentgrass I hadn't seen previously. Much of that bent may have been there as individual plants or small plant groups but since beginning our light-weight mowing, these small spots have coalesced into very large areas. Another benefit has been that I can hire less skilled operators due to the ease of operation of the triplex units and the limited training time required to learn the machine. High school students are very trainable and don't need the "hard knocks" experience on their resume. We've obviously seen less compaction, which I think is the single most important factor of the whole program. We now have the capability to cross-cut fairways in three or four directions with ease. We've virtually eliminated the long grass that used to form in the subtle hollows and around old sunken tile lines and drains. As with most of the other clubs using the triplex for fairways, we did reduce our acreage from 32 to 27 and found it essential to cut back on our applications of nitrogen and water. We can still keep the turf healthy without accumulating all those clippings. Our members appreciate the drier 1/2" cut because they can hit the ball farther due to increased ball roll. Because of the maneuverability we now have, the opportunity exists to create very appealing, strong contours, which previously would have been difficult to cut with the 20' tractor unit. We've added much to the visual appearance of our fairway lines with this program.

As suggested earlier, we've made several sacrifices to obtain a quality 1/2" cut but these benefits I've discussed far outweigh the sacrifice.

I've generally touched on the past and present programs used here but what of the future? As I said, the triplex greensmower looked like the best unit for us at that time, but, as these machines wear out (about two more seasons) we'll again be looking for just the right unit. A great amount of research and development has been done as of late on the larger 3-gang and especially the hydraulic 5-gang units. Perhaps the changes in cutting quality and maneuverability make these machines the best choice for us today. We'll also be looking for a more durable unit requiring less routine maintenance and reel repair. As our bentgrass populations continue to increase, our nitrogen, water and even fungicide usage will drop. I'm sure we'll have to begin a stringent fairway verticutting program as time passes. The bent is very vigorous at 1/2". I think it is safe to say, there will never be another 8,000 Lb., 22' wide self contained tractor unit on Interlachen fairways again. The program is expensive but without doubt, the playability, eye appeal, durability and over-all improved health of our fairway turf is easily worth the expense, especially if one is trying to manage the seemingly ever-present, ever-popular species, *Poa annua*.



VANDALISM AT THE GOLF COURSE

by JOHN NYLUND
Superintendent Braemar Golf Course

Braemar Golf Course is a public facility in southwest Edina. It's a very busy course and also very accessible to vandalism. We all have our problems with vandalism of all forms. Sometimes very serious and sometimes minor. This particular incident happened on the night of June 25th.

Seven college students were bored at 2:00 a.m. and made the mistake of talking about

their vandalism plans while they were at an area gas station. The gas station attendant is an avid golfer and overheard their plans for Braemar that evening. When they left he phoned police who were at the course before the vandals arrived. With lights out and car hidden, one partolman was waiting by the clubhouse. The vandals arrived and parked away from the clubhouse and proceeded to throw accessories from the course in the lakes and do damage to greens and tees. The lone policeman hearing that many vandals on the course called for reinforcements from Eden Prairie and Bloomington which borders our course. They also had police dogs.

Eventually the vandals got to the clubhouse area and wrecked a refreshment stand, tried to break the golf cars out and set off the alarm in the pro shop. When that went off all seven scattered different directions. To their unfortunate surprise the place was surrounded. Some went to their car and were immediately apprehended. Others were chest high in muck in the swamp, hiding. The dogs had no problem with them.

Needless to say, the vandals were flabergasted by all the excitement that evening. They were booked and charged with destroying public property and attempted burglary. They were all members of a U of M fraternity who wanted to outfit their residence with tee markers, ball washers, signs, etc.

I have to believe these young men have learned a lesson and will refrain from any further golf course vandalism. Our congratulations go out to the young man at the gas station and the police for the fine teamwork that evening. The newspaper also did its part to publicize the event and, hopefully, will deter future night time vandalism.

CONGRATULATIONS TO THE FOLLOWING NEW MEMBERS;

Lowell Blom, Class E, Anoka Vo-Tech; Richard Robinson, Class E, Anoka AVTI; Mike Davies, Class B, Ridgeview Country Club; Michael Netzel, Class A, Northland Country Club; Glenn Oliver, Class A, Lester Park Golf Course; Carter Wagner, Class F, Elanco Products Co.; Stephen Salmon, Class F, S and S Sales; Keith Stachowski, Class BII, Goodrich Golf Course; William Larson, Class BII, Minneapolis Golf Club; and Patrick Walton, Class BII, Golden Valley Country Club.

A 4-STROKE OF GENIUS.

Never has a golf car answered so many needs – course profitability, player comfort, power and performance, ease of maintenance, sensitivity to the golfing environment. Yamaha engineers achieved it all with the new G2-A5 Gas Car, ideal for fleets. They went beyond the golf car industry, specifying materials and designs from fuel-concious automobile engineering.

- Overhead Valve engine.
- Uses 20% less gas than competing 4-strokes.
- Low torque engine.
- New lighter centrifugal clutch.
- Quiets noise level to a whisper.
- engineered for your profitability.
- Two year warranty.



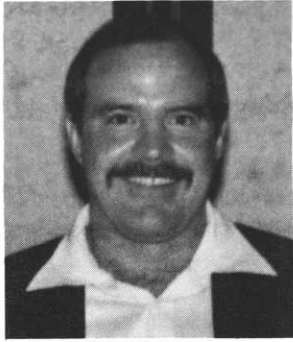
GOLF CAR MIDWEST

BURNSVILLE & ORTONVILLE, MN

Call Toll Free 800-328-6665

In Minnesota 800-352-2779

YAMAHA



EDITOR'S CORNER

FRED ANDERSON, JR.

Another month has come and gone. This can only mean winter is getting closer and time to get reacquainted with friends and family again. Most of us get so involved with our golf course operations in the summer months that we many times overlook and don't give equal time to our families and friends. I feel that this is one of my weak areas and I'm sure many others have the same weakness. Why don't we try and strengthen this area.

Our July meeting held at Northland Country Club, Mike Netzel, host superintendent, was well attended. With a great golf course, a fine slate of speakers and of course being able to get away from the heat and play golf in the "air conditioned" city, however, it was probably the hottest its been in Duluth in 2 years. I understand some of the new young bloods shot quite well at Northland. Randy, you'd better be sharp on August 12 at Island View.

Thanks go to Mike Netzel and the Northland staff for making our day enjoyable, also to Randall Nelson for continuing to arrange speakers for our meetings, to Turf Supply Company for providing Dr. David Wehner, U of Illinois, and his talk on "Understanding Plant Stress", and Kaye Corp. for providing Mr. David Legg, Ranson Corp., and his talk on "Lightweight Fairway Mowing". Thanks also goes to Mrs. Leo Feser for contribution to the Research Fund and last but not least are last months HOLE NOTES writers, John Steiner, White Bear Yacht Club; Maurice Anderson, Greenhaven Golf Club; and Tom Haugen, Brayton Chemicals, Inc.

Don Lindblad is requesting a first call of names for nomination for directors of M.G.C.S.A. Please send names to Don at Majestic Oaks.

Our annual superintendents tourney has all the making for a great time; good competition; speakers; a putting contest and of course Island View Country Club, Mark Poppitz, host superintendent, guarantees good weather so plan on attending. Remember go west on Highway 5 off of 494 through Victoria, 3 miles out turn right at Lakeside Ballroom, continue until "T" go right, then right at first road on the right, follow to course. Make sure you get there early enough for tee assignments for the 12:30 shotgun.

RESEARCH UPDATE

by SCOTT HOFFMANN and KERRY GLADER
Co-chairmen Research Committee

With record numbers of golf clubs and associate members responding through generous contributions to our research fund we have been able to continue to expand our research efforts.

We would like to at this writing provide the membership with a brief update of 1985 research projects, followed this fall with a detailed account of receipts and expenses. Research project results are due November 15 of each year and will be published in the HOLE NOTES as we receive them.

1985 Research Projects:

1) Poa Stress Management, Dr. Donald White, University of Minnesota. This is a continuation of a project started in 1984. It includes studies of a) growth regulators; b) seedhead control; c) triplex mowing of fairways. Dr. White welcomes inquiries about these projects and we encourage you to either phone him or better yet set aside a time to visit with him personally.

2) Summer Patch Control, Dr. Joseph Vargas, Michigan State University.

3) Turfgrass Competition, Dr. A. Douglas Brede, Oklahoma State University. This is the first year of a three year committment by the MGCSA. The project involves research into successfully overseeding bentgrass into Poa annua.

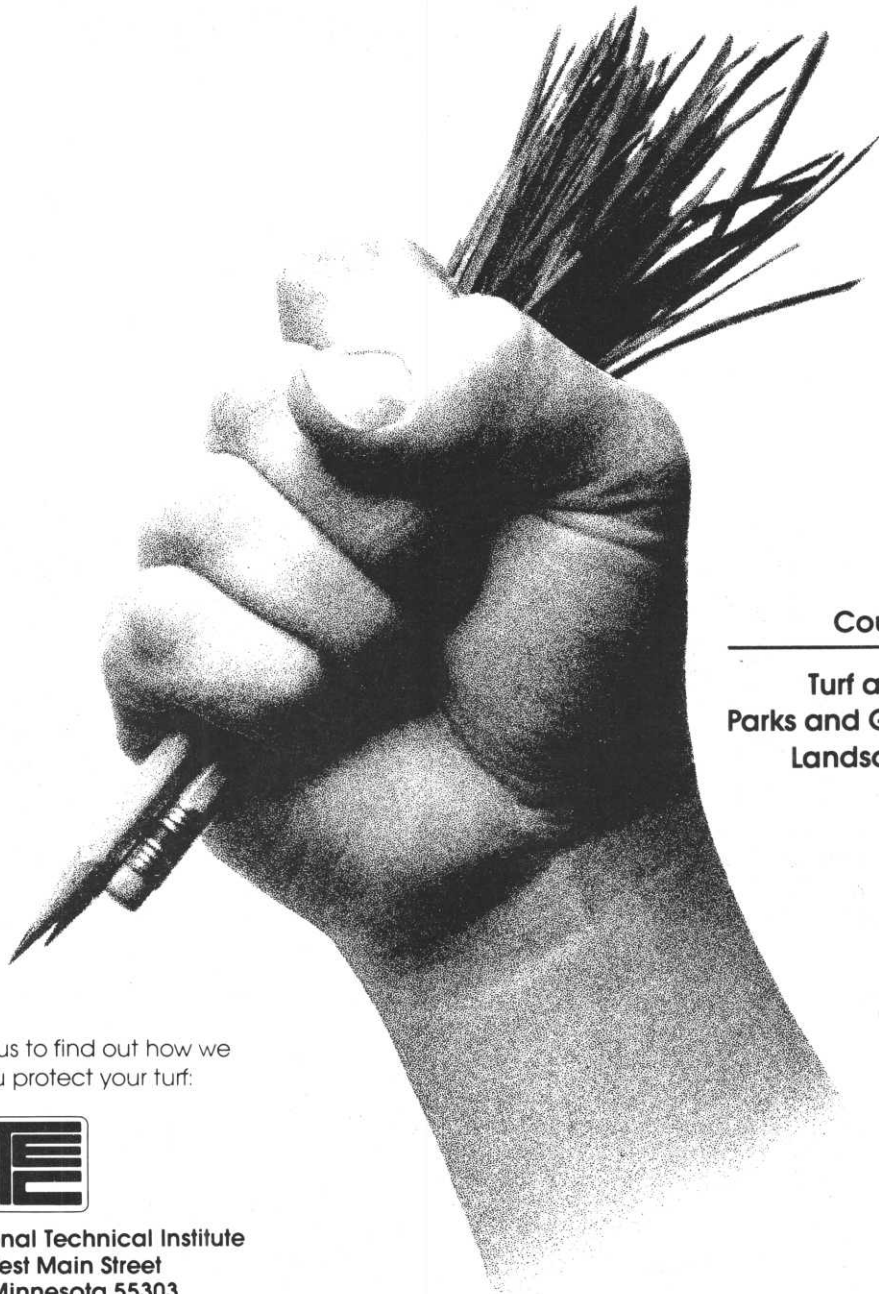
Continued on page 12

OUR STUDENTS CAN HELP PROTECT YOUR TURF.

When it's your job to make sure that what's green stays green, time is in short supply. The last thing you need are maintenance crew members who need training. Your crew must not only be hard working, but also knowledgeable. With the pressures you face daily, you can't spend a lot of time training.

That's where we can help. We're Anoka Vocational Technical Institute, and our one

and two year Horticulture Technology programs have been designed with you in mind. Our programs are flexible, allowing you to send people for training during the off season, and have them back using what they've learned to help you when you need them most. And, when they complete our course and get their diploma, they're ready for even more responsibility in years to come.



Course Offerings

**Turf and Golf Course
Parks and Grounds Maintenance
Landscape Technology**

Call or write us to find out how we can help you protect your turf:



Anoka Vocational Technical Institute
1355 West Main Street
Anoka, Minnesota 55303
(612)427-1880

ANOTHER VIEW

LIGHTWEIGHT MOWING OF GOLF COURSE FAIRWAYS

RANSOM CORP.

Lightweight mowing of golf course fairways has been one of the most controversial subjects raised at recent golf superintendents meetings. Most superintendents are waiting to see more evidence on the benefits of lightweight mowing before considering a change. Although there is certainly no consensus in favor of lightweight mowing, the number of courses switching is significant. The topic certainly deserves further review.

When discussing lightweight mowing, one is usually referring to five or three reel unit mowers in which the cutting units are an integral part of the tractor. This is contrasted with the seven reel unit which can often be attached to an independent tractor. The small three gang units (triplexes) will weigh as little as 700 pounds, the five gang units will weigh approximately 3000 pounds while the independent tractor units may exceed 6000 pounds. With a range of lightweight units weighing from 700 pounds to 3000 pounds, the superintendent obviously has a larger decision confronting him than only whether to convert to lightweight fairway mowing. He must also decide how light.

To obtain a better understanding of this movement to lightweight mowing, information was gathered from conversations with superintendents in various parts of the country who have adopted these methods. Although the information does not offer an absolute answer to the argument, it may help us to understand the pro's and con's of the method.

Our information indicates that the main areas of the continent concerned with lightweight mowing and/or the picking up of fairway clippings are those with cool seasons although compaction on fairways can certainly be a

problem on any golf course. Specifically, great interest in lightweight mowing can be found in the Midwest, some Eastern states, the Pacific Northwest, Southern Ontario and Quebec. A major portion of the playing surface on the courses in these areas contains *Poa annua* grass. Since the grass is shallow rooted, the high temperatures and low rainfall of the summer months often cause a summer 'wilt'. It is believed that lightweight mowing reduces compaction on fairways enabling the grass to develop a better root structure allowing greater resistance to this 'wilt'. It is also believed that the removal of clippings further aids the resistance by reducing a build-up on 'grass insulation'. This insulation helps retain the summer heat which can be detrimental to the grass.

In the Pacific Northwest, where high amounts of rainfall cause the fairways to become soft and more likely to be damaged by heavy machinery, the use of lightweight equipment appears an obvious choice.

Further elaborating on the benefits of lightweight mowing as presented by the superintendents:

1. REDUCED TURF DAMAGE/ COMPACTION

Since the small triplex unit can weigh one-ninth that of the heavy tractor units, compaction is substantially reduced. Even the use of the five gang, which can weigh one-half that of the tractor unit, will reduce compaction. The smaller units will also reduce turf damage in undulating fairways because of their inherent ability to follow the terrain more closely. In addition, the smaller units have power drive to the reels which do not rely on draw bar pull as do ground drive or trailing type and thus the tractor drive wheels are less likely to 'spin out' on a slope or in a wet spot.

2. PRECISE MOWING/CLEANER CUT

The power driven reel can be speeded up or slowed down to obtain the clip rate required for the job. They can usually be reversed for back-

lapping, to insure the blades are sharp at all times. The units are narrower because the drive wheels are eliminated and so the mowers can go down into the hollows and yet not scalp over the mounds. One word of warning however, not all machines have a floating head which limits them to the smoother or level style of fairway. A floating head is one which follows the contours of the ground independent of frame work or the position of the tractor unit.

3. ABILITY TO MOW IN DIFFERENT DIRECTIONS/ CROSS MOWING

The smaller unit is more maneuverable and can cut against the 'grain' which is caused by only cutting in one or two directions. Cross mowing helps the grass stand upright and insures the same length thereby eliminating the unfair lie in the middle of the fairway.

4. ABILITY TO COLLECT CLIPPINGS DURING THE MOWING OPERATION

Some lightweight machines can be fitted with grass catchers or baskets. Clipping removal is said to lower the temperature of the ground surface by eliminating the 'siilage effect', (the decomposition of the clippings which generate heat) relieving stress during periods of high temperatures. Collecting clippings also removes the *Poa annua* seed heads, which over a period of time may reduce the *Poa* and increase bent grass which, due to its better root structure, is more tolerant to heat.

Several superintendents who pick up clippings have reported that they have found it unnecessary to syringe when clubs around them have. In addition, they report that the population of bent grass has increased significantly.

Continued on page 11

TURF SUPPLY COMPANY CAN FURNISH THE FOLLOWING SPECIALTY ITEMS

MANGANESE: Chelated 6% derived from Manganese Glucoheptate, applied at 2-3 pints per acre.

IRON:

Ferrimec— 6% Iron, 4% Sulfur and 15% Nitrogen. Ideal where high phosphorous fertilizers inhibit iron utilization.

Agri-Plex Fe. 8% Iron, 5% phosphorous and 8% Potash. Iron is chelated and the rate is 1½ pints per acre.

Iron Sulfate- 20% Iron soluble salt. Ideal for lowering pH in spray solutions.

BOV-A-MURA: Natural organic activator, supports the growth of Micro-organisms that decompose organic matter and become antagonistic to certain disease organisms on roots. Sprayable Liquid.

SAND AID: Contains 58.6% Carbohydrates made up of Alginic Acids, undefined sugars and Methylpentosans. Used as topdressing on sand greens.

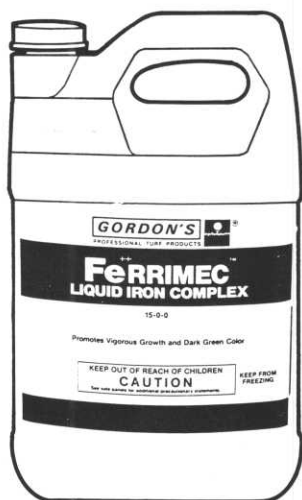
WETTABLE SULFUR: 90% formulated for use in water as a spray.

PANASEA: Liquified sea plant extract.

SUL-PO-MAG: Greens Grade; 22% Potash, 11% Magnesium, and 22% Sulfur.

SULFATE OF POTASH: 0-0-50 Greens Grade, Low Salt Index.

16-0-24: Greens Grade Fertilizer—IBDU with 8.0% W.I.N. plus Sulfur, Iron and Manganese.



TURF SUPPLY COMPANY

2970 Dodd Road
St. Paul, MN 55121
(612) 454-3106