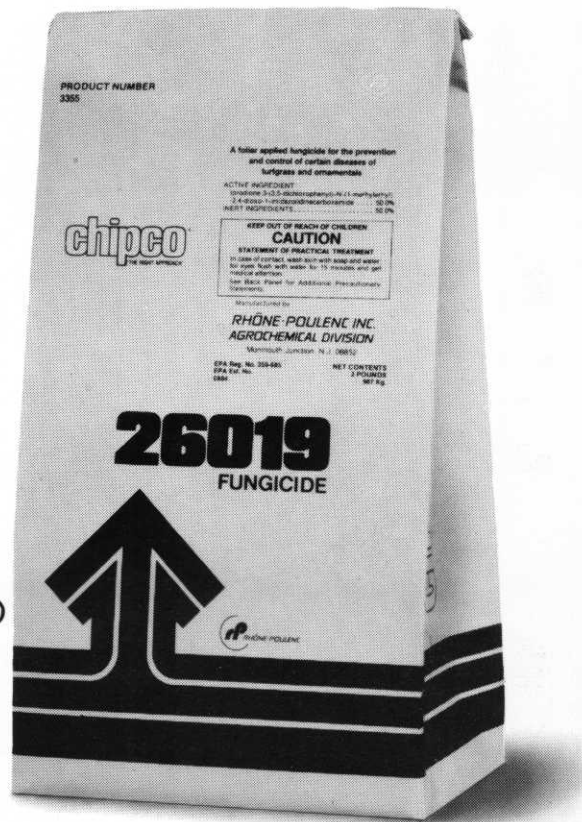


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HOLE NOTES

OFFICIAL PUBLICATION OF THE MINNESOTA
GOLF COURSE SUPERINTENDENTS' ASSOCIATION

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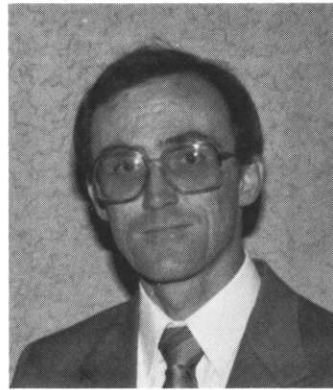
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FROM THE PRESIDENT'S DESK

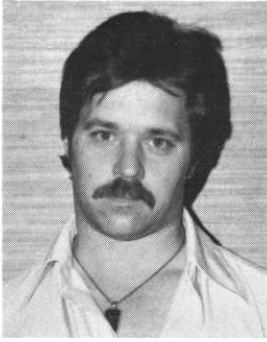
DALE CALDWELL

Dr. Don Taylor is back at the University of Minnesota for the summer. Don is looking to hear from anyone in this area who is practicing an intensive topdressing program (not necessarily sand) and is experiencing an increasing incidence of localized dry spot since starting the topdressing program. Don can be contacted at 373-1259. Feel free to contact Don about this particular problem or any other soil related problem you may have encountered.

I would like to thank all the members, regular and associate and their respective clubs and organizations for their contributions to the research fund this year. The funds are flowing in and appear to be on their way to setting new records again this year. If you haven't made your contribution yet, it's not too late.

The Reuter-Stokes Predictor is in place at the "Big I"...Interlachen. This project is one of many useful and interesting proposals being funded through the research committee. The application of this unit primarily being to predict when the conditions are right for the outbreak of disease in this area. This would allow the superintendent to make this fungicide applications accordingly.

I played golf at the "Violet Vulture" in Cambridge with Doug Mahal, Mike Olson and of course Freddie "Awesome" Anderson. I took my first "whiff" in many years in a futile attempt to reach Doug "Long Ball" Mahal's drive in two. Fred isn't having much luck converting his bentgrass greens to Poa anua. Nice golf course, Fred!



YES! SAND TEES WITH A PURE PERENNIAL RYE GRASS SURFACE

by JOHN STEINER
Superintendent White Bear Yacht Club

The White Bear Yacht Club is a very old Donald Ross Golf Course with a lot of Scottish flare. Unfortunately, at the time it was constructed neither Scotland or the United States had the high traffic present day golf courses have; thus the tee boxes were small and built with the existing soil.

It became obvious to me in the spring of 1979 that with the higher maintenance levels and the ever increasing amount of play, it would be necessary to rebuild our tees in order to produce a high quality turf stand. With this criteria in mind as well as the basic Donald Ross design, I began to investigate my options. After considering a variety of soil mixes, I decided upon an 80% Fine Building Sand, 20% Northern Peat mix.

Using this media, I was able to curb compaction and increase water infiltration while still keeping the tee boxes consistent with the Scottish design. Besides a soil mix, I had to consider a seed mix that would stand up to heavy play, a short mowing height and a variety of climatic conditions. The seed mix decided on was a straight Perennial Ryegrass 40% Delray, 30% Pennfine, 30% NK 200. Manhattan II was incorporated into the mixture last year because of its Rhizome development. This mixture would give us a superior establishment rate which we also thought was quite important.

The tee building procedure is listed in chronological order:

1. Remove pop up irrigation head.
2. Plow existing tee under and increase size and/or shape slightly.

3. Set subgrade with 2% grade from front to back. Subsurface drainage lines were installed only on the practice tee.

4. Cover tee area with top mix to a depth of 8-12 inches.

5. Rough grade top mix with box blade and set 2% grade, (front to back) with engineer's level.

6. Hook up a sprinkler and hose system to a nearby quick coupler and water pack for 20 hours (10 hours per night).

7. Check for low spots and reset grade where necessary. Water pack tee one more night.

8. Set final grade with hand rakes, shovels, engineers level and sand traprake. Replace pop up irrigation head at this time.

9. Distribute Milorganite at a rate of 25 lbs. per 1,000 sq. ft. Incorporate this into the tee with sand trap rake.

10. Seed the tee three different directions with rotary type spreader at a rate of 20-25 lbs. per 1,000 sq. ft. Incorporate the seed into the tee with sand trap rake and roll it.

11. Keep the seed moist and when it begins to germinate, spray for damping off organisms.

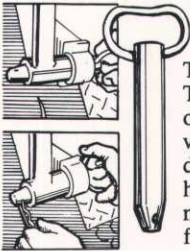
12. This tee can be put into play about twenty-one days later.

We maintain our tees at 1/2 inch cut and mow three times a week. It was necessary to elevate our fertilizer levels on the sand tees. We irrigate when necessary but never have to syringe the sand tees. Diseases are controlled when active, usually Pythium or Rhizoctonia. Divots on the practice tee and the par 3 tees are seeded once a week with the same seed and top mix.

In four years since the start of the project, we have seen no winter injury to the ryegrass. The sand gives an excellent surface with firm footing and the rye gives us a dense cover with excellent wear tolerance.

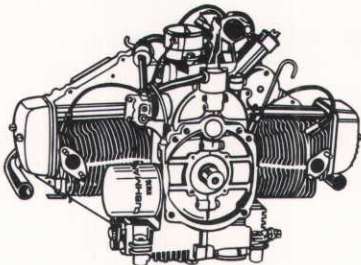
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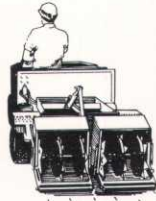
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LIGHTNING AND YOUR AUTOMATIC IRRIGATION SYSTEM

by MAURICE ANDERSON
Superintendent Greenhaven Golf Course

We at Greenhaven, Anoka had our new Toro VT3 irrigation system installed in the summer of 1982. We started installation the 24th of June and finished in late August.

The installation of the system went very well with little disruption of play and turf. They proceeded with the installation in phases working on one nine at a time. The first phase included tees and fairways on the front nine. This took approximately nine days. The next phase included the front nine greens which took about three days. Once the front nine was completed, the system was charged and the old system was abandoned. The same procedure was followed for the back nine. Up to this point we were running the system manually. The last phase included hooking up the electricity, adjusting

controllers and testing the automatic controls.

We ran the system automatically for two months in the fall of 1982 with absolutely no problems.

The next summer went fine until about July when a severe thunderstorm with numerous ground lightning strikes rolled through Anoka. Despite the fact that we had both our 24V and 120V electrical component protected with state of the art lightning protection we incurred a good deal of damage because of the closeness of the lightning strikes.

Lightning hit a tree off the seventh tee, followed the ground to a sprinkler head on the tee, went through the wiring system knocking out virtually all satellites on the front nine and half of the back nine as well as the master controller! The lightning actually blew the sod off an area of the fairway approximately one foot wide and 40 feet long. We had sod hanging from the trees!

Although most of the damage was corrected immediately some components within the



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system continued to fail for the next three to four weeks. The reason for continued failure is some components are weakened by a severe strike but do not fail until they are used for a period of time.

All went well until August 1984 when once again a severe storm hit our area. This time one of our satellite controllers took a direct hit thoroughly destroying it and virtually knocking out our entire system.

Fortunately, the bulk of the damage was repaired in a few days and we were fully working again. A few lightning damaged components still need repair which we will do this winter.

The repair costs to the system ran approximately \$2,000 to \$2,500 on each occasion. However, prior to the second lightning strike we purchased an insurance policy in the amount of \$130,000.00 for a total annual cost of \$250.00 that protected us against damages such as the lightning. The policy has proven to be a good investment.

We continue to look for other ways to

protect our system from lightning. Toro has proposed a method for improving on our lightning protection system. However, at this point in time it does not appear to be cost justified.

Other than being subject to lightning damage we have found the Toro VT3 system to be most reliable. We have had no other major problems. There is the usual maintenance that has to be done that is true with any of our tools. We are very happy with our system and the coverage we have. The programming system does everything it is designed to do.

We must all understand that lightning is a part of Mother Nature and there is nothing we can do to prevent it. We need to deal with it and particularly those of us with the newer sophisticated electric and "electronic" type irrigation systems.



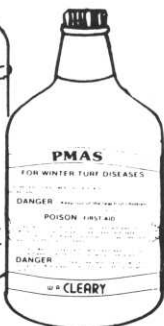
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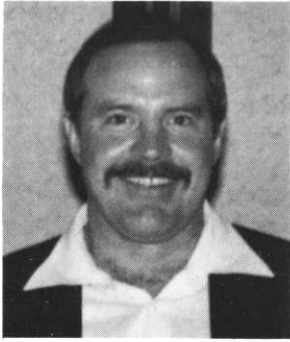


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EDITOR'S CORNER

FRED ANDERSON, JR.

Well, here it is the middle of June and it's turning out, so far at least, to be a golfers delight. We haven't had the typical spring, early summer weather with 3-5 straight days of rain. It's been great for early season course work and finishing past projects, but it's nice to have some down days in which to get caught up on equipment maintenance and finishing those low priority tasks that keep getting shelved.

Speaking of weather it was absolutely perfect for the second annual Minnesota Green Industries Expo held at Anoka Vo Tech, Rum River campus. For those members in attendance, the M.G.C.S.A. didn't have as many there as we could have, were treated to a vast array of turf equipment, chemicals and other related turf items. For those unable to attend the G.C.S.A.A.'s National Show, this turf expo would then be the place to go. You're able at the turf expo to actually test the equipment you might be interested in purchasing. The individual that has spent countless hours working for the success of the turf expo idea is Keith Scott. A great amount of thanks goes out to you. Through the M.G.C.S.A. members attending the turf expo shows the other associations the concern and need we have in continuing

to keep current with new turf innovations, be it equipment, chemicals or fertilizer. Plan to attend the 1986 Minnesota Green Industry Expo. The G.C.S.A.A. has announced a mid-year turfgrass conference and show for September 19-24 in Indianapolis, Indiana at the Hoosier Dome. Seven seminars and 60,000 sq. ft. of exhibitions will be there to keep interest high. If interested, contact the Marketing and Sales Department, G.C.S.A.A., 1617 St. Andrews Drive, Lawrence, Kansas 66044.

I would like to thank Tom Natzel, Burl Golf Club, Joe Thein, Bartley Supply for their contributions of an article to the HOLE NOTES. By the way, I could still use more articles for the HOLE NOTES from some superintendents. Do to lack of any questions, the Answer Man Section will be discontinued.

Don't forget to check your flyer for the July 8 meeting at Northland Country Club, Duluth, Mike Netzel, host superintendent. Speakers, equipment and a great golf course will be there so plan on making it. Remember everything breaks toward the lake.

FOR SALE

Village Green Public Golf course has the following items for sale: 1 (one) Wittek Range Ball Dispenser, good condition; 1 (one) Wittek Super Club Washer; 10 (ten) Moody Model "MA" Rainmaster 24 Volt Electric Irrigation Controllers. Contact Jon Heimsness, Superintendent of Village Green Public Golf Course, Box 779, Moorhead, MN 56560, Phone 218/299-5365.

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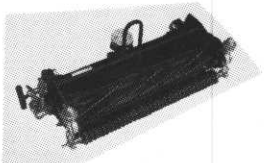
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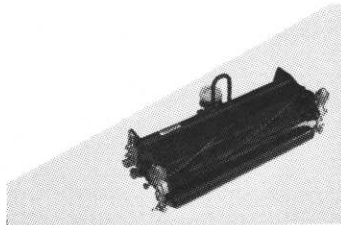
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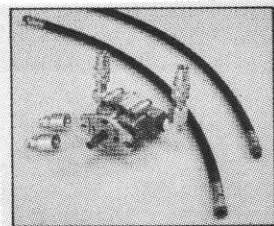


GREENS REELS

New



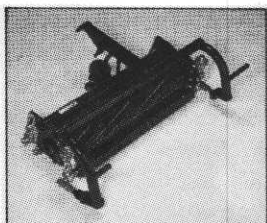
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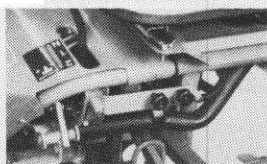
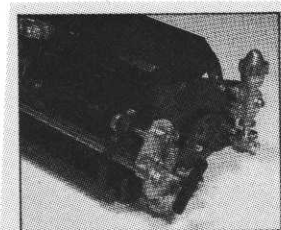
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Quick Height-of-Cut Kit allows 6 cam setting by flip of a handle, each altering H.O.C. by .100 inch, total range of 1/2 inch above base setting of cutting unit.



Reel Shut-Off Kit

Allows operator to shut off one or two reel assemblies when cutting around greens.

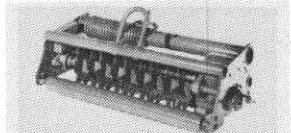


New Greensmaster 300

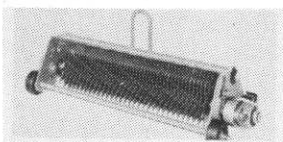


Rear Roller Cleaner Kit

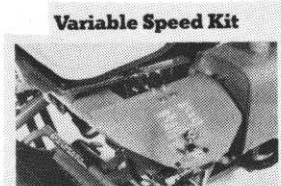
Spring-mounted to assist in keeping rear roller free of grass buildup.



Toro's special profile-tooth blades spike cleanly without ruffling turf so greens are playable immediately after spiking. An adjustable transfer spring brings weight from the traction unit to bear on the reels 57" spiking width to achieve the maximum penetration of 1/4".

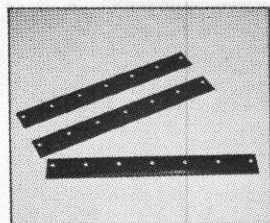


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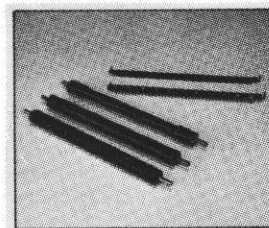
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OFFERS NEW IMPROVED
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University of Minnesota Technical College, Waseca improves course offerings for turfgrass students.

The mission of the University of Minnesota, Waseca is to train students for mid-management, semiprofessional positions in the broad field related to agriculture. One of the first programmatic areas developed was the Horticultural Technology program.

The Horticultural Technology area currently consists of two majors: Landscape-Nursery Technology and Floriculture, Greenhouse and Garden Center Technology. Each major contains three emphases or areas of study. Students enrolled in Landscape-Nursery Technology may choose from Landscape Design, Landscape Maintenance or Nursery Production. Students in Floriculture, Greenhouse and Garden Center Technology may enroll in Retail Floriculture, Floriculture Production or Garden Center.

The horticulture curriculum ensures development of competencies not only in technical horticulture, but in business management, sales and related education. Each emphasis is composed of five separate course groups: College Requirements, Division Requirements, Major Requirements, Emphasis Requirements and Electives.

Horticulture faculty and staff with the help of the Horticultural Technology Advisory Committee and the UMW Educational Policy Committee have recently completed a major review of curriculum content for several of the horticulture emphases. College and division requirements remain the same but several changes were made in major and emphasis requirements.

Those changes of most importance to the turfgrass industry are in the Landscape Maintenance emphasis. The signals we have been receiving from the industry indicates a need for broader background for the landscape students. Almost every employer through campus interviews and position announcements reflects this point of view. Golf courses, municipal parks and lawn services expressed a desire for their employees to have some basic background in all aspects of landscape maintenance even though the primary areas continued to be cultural and chemical turfgrass management.

Those competencies most frequently sited were identification, growing, design and maintenance of woody and herbaceous plant materials. Basic accounting procedures and business practices also surfaced as important for all aspects of landscape maintenance.

With these goals in mind, courses in the landscape major requirements were increased for all landscape students. These major requirements now include the following:

- AgAc Principles of Accounting I
- Hort Deciduous Woody Plants
- Hort Evergreen Woody Plants

continued on page 11

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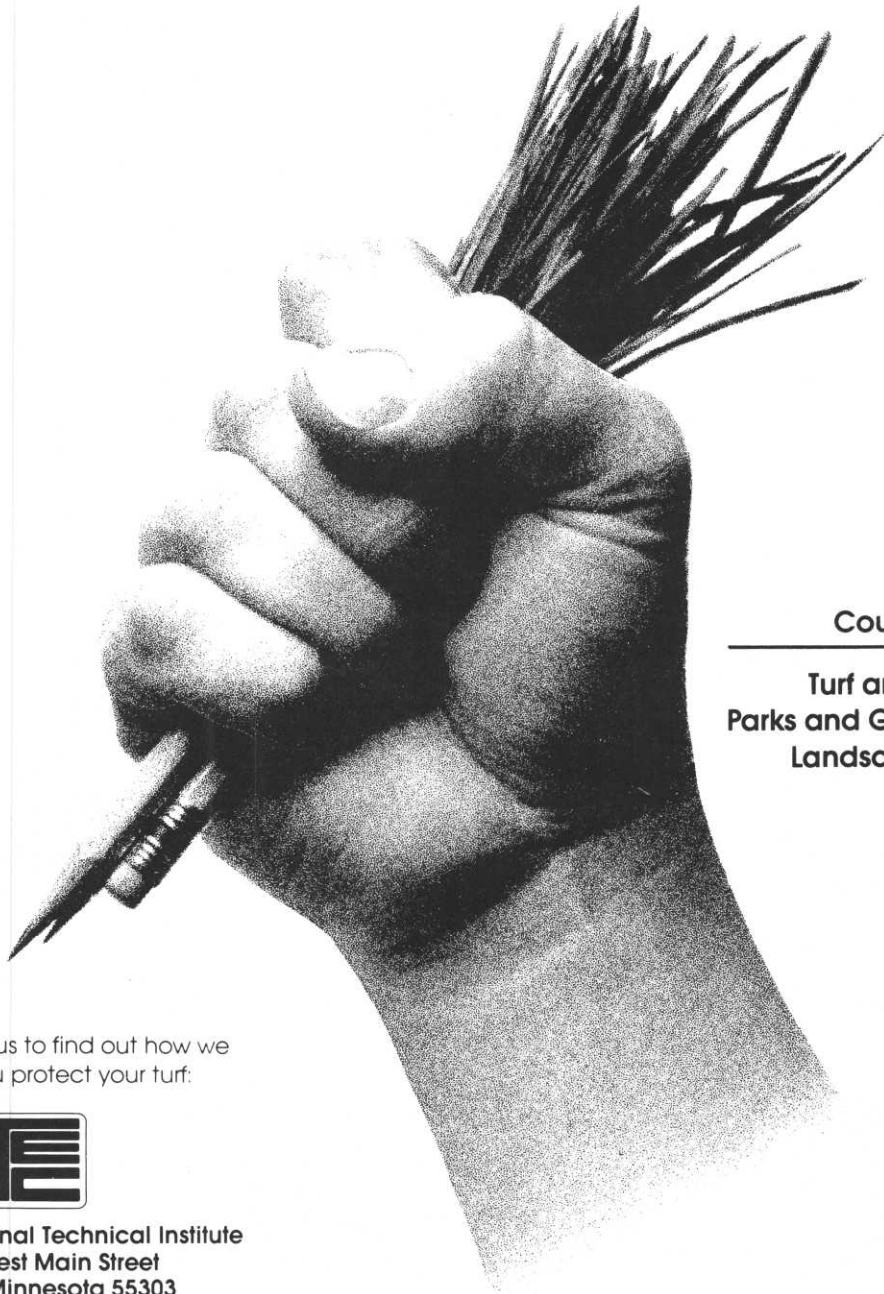
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and two year Horticulture Technology programs have been designed with you in mind. Our programs are flexible, allowing you to send people for training during the off season, and have them back using what they've learned to help you when you need them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



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