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7/80
Environmental and physical stress are generally most severe during the month of July. And because the stress on the grass plant is so severe, many cultural and disease problems will begin to appear. Nearly every year the last week in June and the month of July turfgrass quality deteriorates.

In order for an infectious disease to occur, there must be a susceptible host, a disease causing organism, and environmental condition which are favorable for infection. The first symptom of disease may be leaf spots, thinning or discoloration of the turf, or small areas of dead plants in various turfgrass areas. Allowing a disease to proceed uncontrolled, severe damage to our turfgrass quality will occur.

Irrigation, mowing, fertilization and a sound fungicide program will prevent most of our turfgrass problems.

I have noticed some dollar spot activity at our course. Proper identification is most important in controlling any turfgrass problem. Alerting our maintenance personnel to report all changes in the appearance of our turfgrass area is very beneficial.

The entire membership thanks host superintendent, Jerry McCann, Jerry's wife, Carol, and the entire McCann family for a wonderful day of golf and relaxation. Also it was generous of you to allow us to use your carts at no cost. The course was in excellent condition and the experienced man cutting fairways kept all of us moving. Thank you very much.

I hope to see all of you July 14 at the Braemar Golf Course for our annual picnic sponsored by M. T. Wiley and host John and Lesley Nylund.
SPRAYER CALIBRATIONS

BY O. W. (RED) KROMER

The application rate of a sprayer is determined by:
1. Nozzle size
2. Fluid pressure to the boom
3. Rate of travel

For a new machine, it can be assumed the nozzles and guage are accurate. For a used machine with used nozzles, the first thing to check is the width of the spray fan from the nozzle to determine if it will give proper coverage. With the nozzle about 20 inches above the ground, the outer edge of the spray fan should hit the ground approximately below the adjacent nozzle. With a correctly designed nozzle, this will then give a uniform spray application. The next thing to check with used nozzles is the rate of discharge. Using water in the sprayer, catch the spray from one nozzle for one minute. You can measure this with a gallon can or you can weigh it (water weighs 8.4 pounds per gallon) and compare this with figures on the nozzle table. If the rate is somewhat greater than the rate on the table it is possible the gauge may also be reading incorrectly. Use a new nozzle and test. If its discharge compares with the nozzle table, you know the gauge is probably O.K.

Used nozzles that discharge more than their rating can be used if the fan angle is satisfactory as mentioned above. However, you have to take into account the additional discharge in your application calculations. Nozzles with check valves have to be operated at a higher pressure to obtain their rated discharge. If the check valve closes at 5 pounds, then you have to set your system pressure 5 pounds higher than the chart pressure.

You are now ready to calibrate or checkout the complete machine. Fill the tank to the top with water - turn on the boom and spray over a distance of 40 rods (660 feet), previously measured distance, at the speed you intend to travel (4 M.P.H. if you used this speed in your calculation). Again fill the tank to the top, measuring the amount of gallons put in. This can be done with a 5 gallon bucket or an old water meter. Now you can calculate the rate of application in gallons per acre with the following formula.

\[
gallon\ per\ acre = \frac{\text{gallons used in 40 rods} \times 66}{\text{boom spray width in feet}}
\]

Boom spray swathe width is equal to the distance in feet between the end nozzles on the boom plus one nozzle spacing in feet. For example, a 13 nozzle boom with 20 inch nozzle spacing would have 12, 20 inch spaces between nozzles or \(12 \times 20 = 20\) feet between the end nozzles on the boom. To this must be added the extra width of the spray pattern of the end nozzles or \(\frac{20}{12} = 1.66\) feet. The boom spray width therefore is \(20 + 1.66\) or \(21.66\) feet to be used in the above formula.

If the rate is higher than you want, you may decrease it by driving faster or using a smaller nozzle. Reducing the pressure would also reduce the application rate slightly but would also affect the fan angle which might be undesirable. Speed of travel has the greatest effect on application rate. For example, if you are applying 12.9 gallons per acre at 30 pounds pressure and 4 m.p.h., increasing your speed to 6 m.p.h. will apply \(33 \frac{1}{3}\% \) less or 8.599 gallons per acre. Conversely, if you want to increase the application rate you may drive slower or use a larger nozzle tip or both, if necessary.

Increasing the pressure will increase the application rate slightly. But also has the undesirable effect of producing smaller droplets in the vapor size range which do not hit the target but drift off and evaporate or cause damage to susceptible vegetation. As travel speed has the greatest effect on application rate it should be checked occasionally.

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BUNTON
LAWN-TURF EQUIPMENT

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- The Revolutionary NEW Sprayer
- Self Contained - 160 Gallon
- Four Wheel Stability & Less Compaction
- 16’ or 22’ Boom
- Unique Design Allows the Spray Pro to Become A Utility Vehicle to Handle Most Any Job.
This can easily be done if the 40 rods (660 feet) distance is laid out in an area to be sprayed and permanent markers are put in flush with the ground so they will not affect mowing, etc. The operator can then time himself through this measured distance each time he sprays. By comparing this time with the time from the calibration calculations, he will know if he is on target for travel speed.

It is also advisable to occasionally measure the amount of chemical and water mixture used in this distance to find out if the application rate has changed due to nozzle wear or pressure changes. A chemical and water mixture may also have a different application rate than water so this should be checked after calibrating with water and before applying the mixture.

**CONGRATULATIONS. CARLOS!**

Carlos G. Stimson, superintendent of Brookings (S.D.) Country Club, Route 4, Lake Campbell, has been designated a Certified Golf Course Superintendent by the Golf Course Superintendents' Association of America.

Stimson, superintendent of the Brookings course since March 1975, received the honor at a May 10 new members party at the club. The award was presented by Green Chairman Bill Parriot.

Carlos and his wife, Jean, live at Route 4, Brookings. They have a nine month old son, Christopher.

In order to become certified, an applicant must be currently employed as a golf course superintendent with five years' experience and a Class A member of G.C.S.A.A. for two years. He also must pass a rigorous six hour examination testing his knowledge of the rules of golf, practical turf management, plant protectant chemicals, business administration, personnel management and the history, ethics, purpose and procedures of G.C.S.A.A. and his profession.

The certification program was instituted by G.C.S.A.A. in 1971 as a means of recognizing outstanding and progressive superintendents. More than 500 G.C.S.A.A. members are now entitled to use the letters "CGCS" after their names.

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continued from Page 3
RYAN Greensaire II.
The total greens care machine.

• Relieves compaction
• Leaves turf ready for immediate play
• Uniform penetrations on 2" centers
• Easy to operate
• Ryan dependability

Golf course greens are subjected to more abuse than any other turf area of a course. Every time golfers, caddies or maintenance crews walk across a green, they inhibit the root system's ability to absorb water and fertilizer by compacting the soil.

To combat this common, yet serious problem, Ryan Turf-Care has engineered a self-propelled aerator especially for greens care.

The Greensaire II is versatile, offering four sizes of tines ranging from 1/4 to 3/8-inch in diameter. This allows proper aeration any time of the year and under varying soil conditions.

The tines of the Greensaire II penetrate the turf up to three inches deep on two-inch centers, removing up to 36 cores per square foot. And the Greensaire II is a time-saver on the job. It's capable of aerating up to 8,000 square feet per hour, covering a 24-inch swath. An optional windrow attachment makes core cleanup quick and easy.

Aeration with the Ryan Greensaire II should be done once in the fall and once in the spring. However, greens that are frequently used or easily compacted may require aeration up to six times a year.

CORE PROCESSOR
To speed up the job of core removal from the turf, and to provide an easy method of top dressing, the Ryan Core Processor is the answer.

The Core Processor attaches exclusively to the Greensaire II. As the cores are ejected, the Core Processor catches them and separates the soil from the thatch and plant material. The good soil is sifted back onto the green, providing top dressing, while the leftover material is deposited in a big, 2.3 cubic foot debris catcher.

Using the Core Processor with the Greensaire II lets you aerate, top dress and collect thatch, all in one pass.

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MEMBERSHIP REPORT

The following individuals were approved as members during the June meeting at Daytona Golf Club:

- Jeff Buettner, Class A, Bemidji Town & C.C.
- James Hoffman, Class B, Benson Golf Club
- Gary Kingsbury, Class B, Lakeview Municipal Golf Club, Mitchell, South Dakota
- Tedd Evans, Class BII, Brookings Country Club
- Joe Wollner, Class BII, Terrace View Golf Club, Mankato
- Tim Schwietering, Class D, Woodhill Country Club
- Don Olson, Class F, Tree-Tran, Inc., Columbia Heights

Classification change was given to Orlin Quast, Elk River Country Club. Orlin's class was changed from BII to B.

Thirty-three new members have been added to our association during 1980. The success of our organization depends upon member participation. Please help your association grow by passing along the enclosed membership application form to a superintendent who is not a member of our association. Help him fill it out and bring him to our next meeting. We will not be voting on new members at the July or September meetings but we will at the August and October meetings.

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*HEFTY Diesel & Gas Tractors
*DAVIS 500 Golf Cars
*KWH Blowers & Mist Blowers
*TEX. REF. Tire Seal
*WD-40 Preservative

KROMER CO 3455 County Road 44, Mound, Mn. 55364 TELEPHONE 612-472-4167

Steve Young presents reclassification certificate to Orlin Quast of Elk River Country Club.

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Contact:

COLBY PIONEER PEAT CO. Box 8 Hanlontown, Iowa 50444
Phone: 515-896-2155
I HEREBY APPLY FOR MEMBERSHIP IN THE MINNESOTA GOLF COURSE SUPERINTENDENTS' ASSOCIATION:

PLEASE PRINT OR TYPE

NAME ___________________________ AGE ___ SINGLE ___ MARRIED ___

HOME ADDRESS _____________________ HOME PHONE: A/C ___ WIFE'S NAME ______

CITY ____________________________ STATE ____________ ZIP _________

CLUB ____________________________ WORK PHONE: A/C ______

CLUB ADDRESS ____________________ CITY ____________ STATE __________ ZIP __

SEND MAIL TO HOME ADDRESS ( ) CLUB ADDRESS ( ). PLEASE CHECK ONE.

SEND 1 ___ 2 ___ 3 ___ COPIES "HOLE NOTES".

ARE YOU WILLING TO JOIN THE NATIONAL ASSOCIATION IF ACCEPTED? YES ___ NO ___

MY PRESENT POSITION IS

LENGTH OF SERVICE IN PRESENT POSITION _______________________________________

I AM APPLYING FOR CLASS: PLEASE CHECK ONE.

$25.00 CLASS A SUPERINTENDENT FOR THREE YEARS OR MORE.

$25.00 CLASS B SUPERINTENDENT MORE THAN ONE YEAR BUT LESS THAN THREE YEARS.

$25.00 CLASS BII SUPERINTENDENT FOR LESS THAN ONE YEAR OR AN ASSISTANT SUPERINTENDENT.

$15.00 CLASS C STUDENT

$15.00 CLASS D TECHNICIAN

$35.00 CLASS F ASSOCIATE MEMBER OR OWNER

AMOUNT ENCLOSED: $ _____________. ONE YEAR'S DUES MUST ACCOMPANY THIS APPLICATION

I PROMISE TO OBSERVE AND ABIDE BY THE BYLAWS OF THE ASSOCIATION.

DATE ______________ APPLICANT'S SIGNATURE __________________
APPLICATION MUST BE SIGNED BY TWO CLASS A MEMBERS OF THE MINNESOTA GOLF COURSE SUPERINTENDENTS' ASSOCIATION TO CERTIFY RELIABILITY OF APPLICANT. THE INDIVIDUALS ATTESTING THIS APPLICATION MUST BE WILLING TO LEND VERBAL SUPPORT TO THIS APPLICANT.

ATTESTED ____________________________ ATTESTED ____________________________

ADDRESS ____________________________ ADDRESS ____________________________

SHORT RESUME OF YOUR PREVIOUS OR PAST EMPLOYMENT:

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

YOUR MEMBERSHIP APPLICATION WILL BE PROMPTLY PROCESSED BY THE MEMBERSHIP COMMITTEE. YOU WILL BE CONTACTED BY THE MEMBERSHIP CHAIRMAN.

__________________________________________________________________________

(OFFICE USE ONLY)

APPROVED BY:

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

DATE: ____________________________

CHECK: AMOUNT $ __________ NUMBER ________

BANK: ____________________________
Communications, Credibility and Fairness

Morale problems such as absenteeism, turnover or poor level of performance can be closely related to your employees' sense of whether or not they are being treated fairly. Even if their jobs are less than satisfying, studies show that people will often put up with unpleasant duties as long as they feel that their organization makes an effort to treat them fairly, gives them the sufficient job-related information and makes them feel a part of the overall operation.

One of the primary factors in employee morale is the manager's credibility. The more your employees believe you and support you, the more effective you will be as a supervisor. In a way, it's similar to having a good reputation in that it must be earned and continually maintained.

Consistency is one of the marks of a good manager. People like to know that you will respond to them tomorrow the same as you did yesterday. It is also important that you avoid treating one employee more favorably than another. It is only human that you like some of your people more than others, but don't let your personal tastes affect the quality of your management. Favoritism shows up first in this area of personal attention, and your people will pick up on it quickly.

An effective manager also keeps a close rein on his emotions. Losing your temper rarely solves a problem, and most employees work best when their surroundings are not in an uproar.

Broken promises can do more to dampen morale than anything else. Do things when and how you say you will and follow through on your plans and programs. Even though your people might understand that it's not always your fault when things don't work as planned, you should avoid making promises unless you know you can deliver.

Be available to your employees for advice and help. People appreciate a leader who will take the time to work with them in solving problems and providing support. Be even-handed in giving coaching, guidance, praise and personal favors.

No matter how good a supervisor you are, sooner or later you will have to discipline an employee. Make sure your discipline is both appropriate and consistent. The punishment must fit not only the violation but also the circumstances and past record of the offender, and it must be enforced each time there is a violation.

Reprint "FORE FRONT"