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HOLE NOTES

OFFICIAL PUBLICATION OF THE MINNESOTA GOLF COURSE SUPERINTENDENTS' ASSOCIATION
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CHALLENGE OF THE FUTURE

by KEITH SCOTT, CGCS
MGCSA PRESIDENT

This April has definitely opened with an abundant number of challenges for the Minnesota Superintendent. Let's hope with the coming of warm weather and spring rains, most of these problems will resolve.

Many people have inquired about the availability of the booklet titled the "Minnesota Employee Right-to-Know Program Guidelines for Small Employers". These books are available for $11.66 and can be obtained by either calling 612/297-3000 or writing to the Minnesota Book Store, 117 University Avenue, St. Paul, MN 55155. Along the same lines, the Minnesota OSHA poster, titled "Safety and Health Protection on the Job", is required to be posted in ALL work places in a conspicuous place where notices to employees are typically posted. This poster describes employees' protections and obligations under the Minnesota OSHA Act and the Employee Right-to-Know Act. To obtain this free poster call 612/296-4893 or write to the Minnesota Department of Labor and Industry, IMS Division, 443 Lafayette Road, St. Paul, MN 55101.

Our April meeting at the New Prague Golf Club was well attended. Over 90 people heard Dr. Eliot Roberts bring us up to date on the various fertilizers that are available. After lunch, though temperatures were chilly, a few people took advantage of the golf course. Our thanks to Superintendent Bob Adams for hosting this event, to the Turf Supply Company for arranging the educational session and to North Star Turf for a fine equipment display.

For those superintendents who know of a turfgrass student, please make them aware of our scholarship program. Applications must be in by July 1, if there are any questions contact Rick Fredericksen at 612/478-2179. The Herald Stodola Memorial Scholarship Fund was named after a superintendent who gave unselfishly of his time and talent to train young people in the field of turfgrass management.

Hope to see you May 8 at the Edenvale Golf Club.

U of M - WASECA INTRODUCES NEW PROGRAMS

UNIVERSITY OF MINNESOTA
TECHNICAL COLLEGE, WASECA

by BRADLEY PEDERSEN, Associate Professor
Landscape, Nursery and Turfgrass Technology
University of Minnesota, Waseca

This June the University of Minnesota, Waseca will graduate the 17th class. Since UMW's opening, hundreds of UMW horticulture students have entered the work force in Minnesota and across the nation. Many of the Landscape Maintenance graduates are now employed as successful golf course superintendents and in professional positions in other turfgrass related businesses and grounds maintenance operations.

Over two years ago, UMW began taking a closer look at the golf course industry and subsequently the Landscape Maintenance emphasis. The primary reasons for this review were increasing numbers of position announcements, but also the expanding degree of managerial and technical skills that were required of this specialized work force.

The UMW Horticultural Industry Advisory Committee worked with the administration and faculty to further explore the industry and ultimately a decision was made to pursue a major revision of the Landscape Maintenance curriculum to develop a Golf Course and Grounds Management emphasis and a Golf Course and Grounds Mechanization emphasis. UMW is especially appreciative of the liaison work that Advisory Committee members Dale Caldwell, CGCS, Kurt Erdmann, and Fred Taylor did in helping to organize these two new emphases.

Representatives from the USGA and GCSAA were also very helpful in developing the lists of competencies necessary for today's golf course management teams, technicians and course mechanics. These competency lists were eventually formulated into curriculums of existing coursework, redeveloped coursework, and new specialized coursework.

We had several goals in mind as we put the two emphases together. We wanted students to have a blend of Arts and Sciences, Business and Personal Management, Equipment Service and Repair, technical Horticulture, and Turfgrass Science and Management coursework. There are four classes that deal specifically with turfgrass science, management and irrigation.

We wanted a curriculum that would provide part-time and full-time educational opportunities as well as coursework for continuing education units (CEU's). We felt the curriculum should benefit employees already in golf course management and maintenance as well as those students just beginning their educational experience in the turfgrass industry.

We also wanted a curriculum that would maximize the hands-on educational experience available to students in both indoor and outdoor laboratories as well as a one quarter internship. UMW is proud of a newly developed working relationship with the Waseca Lakeside Country Club. Superintendent Ray Bloemke and Assistant Superintendent Robert Panuska have worked with UMW faculty and staff to develop hands-on educational experiences in maintenance, construction, and the development, justification, and implementation of the annual budget.

Finally, we wanted a curriculum that would involve the expertise of many faculty, staff and industry specialists. We have had tremendous participation from the national turfgrass equipment industry and most importantly, the Minnesota equipment and supply distributors. Their support with equipment and parts for the mechanic classes and new equipment for field operation classes is paramount to the success of the emphases. They have been and will continue to be a very important source of guest speakers and demonstrations.

Once the emphases were developed and approved by the University Education Policy Committee, course descriptions and outlines were reviewed by golf course superintendents from South Dakota and Minnesota. The Minnesota Review Committee currently consists of Keith Scott, CGCS, Andy Lindquist, CGCS, and Randy Nelson, CGCS. This formal review process has proved very beneficial in the continued refinement of both curriculums.

At present there are three individuals in program coordinating roles. Joan Barrett is Business/Industry Program Coordinator at UMW. Joan will oversee the development and scheduling of on-and off-campus technical and managerial coursework for adults currently employed in the turfgrass industry and/or interested in Continuing Education Units (C.E.U.'s). Duane Schindler, Assistant Professor of Mechanized Agriculture will oversee the Golf Course and Grounds Mechanization emphasis. I will be coordinating the Golf Course and Grounds Management emphasis and the UMW/Lakeside laboratory arrangement.

For further information call 507/835-1000. Write Joan, Duane or me; University of Minnesota, Waseca, 1000 University Drive S.W., Waseca, MN 56093.

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THE EXTENSION LINE

Hole Notes welcomes the addition of Bob Mugaas of the University of Minnesota Extension Service as a regular contributor. As Hennepin County Extension Agent, Mr. Mugaas will compile various articles related to the golf field for our information. Bob is an excellent source for answers to many questions on horticultural problems. He may be reached at 542-1420. Written requests should be sent to:

Bob Mugaas
Minnesota Extension Service-Hennepin County
701 Decauter Ave. N.
Suite 105
Minneapolis, MN 55427

This month's articles cover Trees & Stress, High pH soils & flowers and Black Knot of Prunus.

TREES AND STRESS

by CYNTHIA ASH, Assistant Extension Specialist
Plant Pathology, Minnesota Extension Service

Healthy, established trees can recover from the drought of 1988. However, many trees which previously appeared to be healthy were actually under stress from disease, insect, other environmental factors and/or mechanical damage. These types of stress rob the tree of its stored food supply: starch. When a tree is damaged by any of these factors it uses part of its stored food supply to replace lost leaves or branches or heal wounds.

In the meantime the appearance of the tree remains basically the same. However, at some point the stored food supply becomes used up. When this occurs additional stresses result in dieback and, if severe, the eventual death of the tree. During spring and summer 1989, regardless of the weather conditions, many trees and shrubs are going to be in that "stressed" category and others will be beyond that and die.

Watering is very important. Not only do plants need the water but without water they cannot take up the necessary nutrients from the soil. In soils where nutrients may be deficient, fertilization is important especially on young trees and shrubs. An organic mulch (such as wood chips or shredded bark) placed several feet out from the trunk of the tree will help to keep the soil moist, prevent weed growth, and keep the soil cooler. High soil temperature kills plant roots, preventing water and nutrient uptake even when water is present.

HIGH pH SOILS ARE DETRIMENTAL TO DAFFODILS

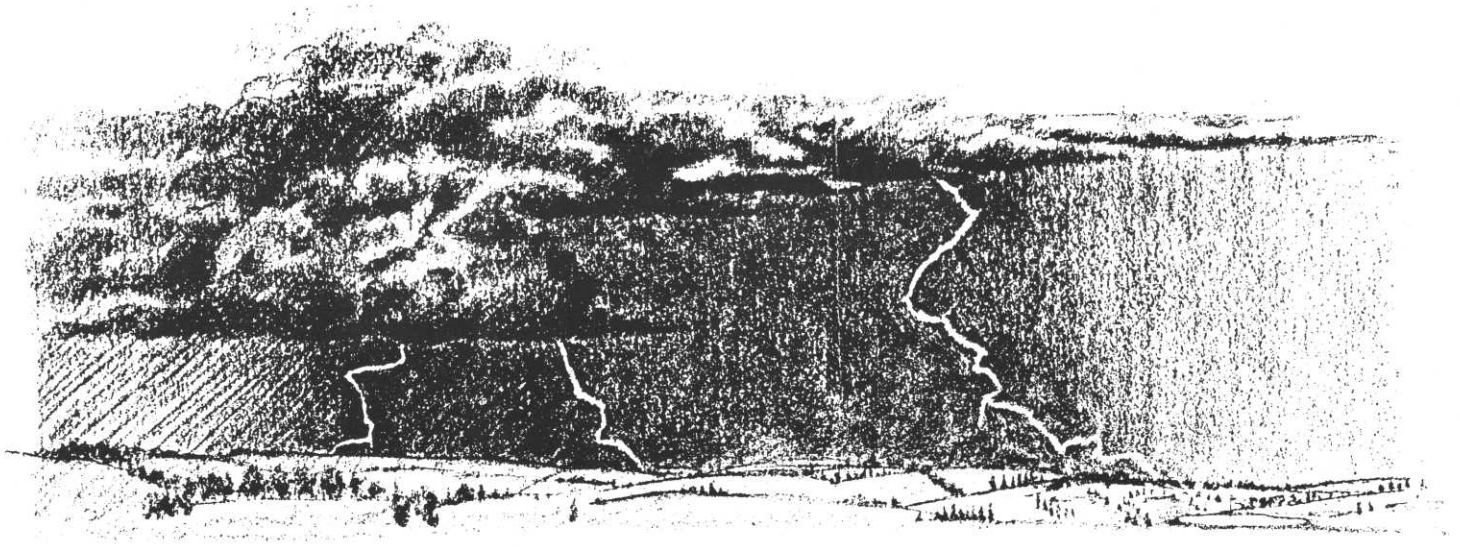
by MARY MAQUIRE LERMAN, Coordinator
Horticulture Programs
Minneapolis Park and Recreation Board

In the past several years I have written an article for the April issues of the Minnesota Horticulturist on our daffodil naturalizing project in the Minneapolis parks. The news has always been good. Unfortunately, this past spring we had some disastrous results at several planting sites. Bulbs that were planted the previous fall in what were considered ideal textural soils failed to emerge. After examining the bulbs last spring and taking soil tests, the information was sent to Dr. Gus Hertogh, a narcissus specialist at Raleigh, North Carolina. His response was that although the soil texture was fine, the pH was too high. In research from the Netherlands, he noted that at pH levels above 7.3, daffodil bulbs often did not develop adequate roots. The bulbs that had been examined from the sites had failed to develop any root system.

It was quite a surprise to find that we had soil pH levels ranging from 7.3 to 8.3 in park areas where construction materials or debris were not involved. We then began a policy of testing all sites for pH prior to planting. Last fall twenty sites were tested. Of those, 15 of the sites had pH readings between 7.6 and 8.0. After consulting with Carl Rosen, Extension Soil Scientist at the University of Minnesota, I assembled the following information to assist in soil pH modification for last fall's planting and replanting efforts. Table 1 below shows the number of pounds of elemental sulfur required per 100 square ft. to lower the soil pH change to occur once added to the soil. Iron sulphate and aluminum sulphate will also lower the pH, but they are 6 to 7 times less effective than elemental sulfur on a weight basis. However, aluminum sulphate is not recommended for lowering soil pH as it has been found to have potentially toxic effects such as restricting root growth at lower pH levels. If you want to lower the soil pH faster than with elemental sulfur, iron sulphate would be the recommended choice as the reaction time for the pH change is usually 2-3 weeks.

Using the table for elemental sulfur, multiply the recommended rate by 7 to calculate the correct number of pounds of iron sulfate to apply. for example, if your soil tests out as a pH of 8.0 and is sandy soil, you must apply 7 x 3.0 (or 4.0) to = 21 lbs. of iron sulfate for each 100 square feet of soil area to lower the pH to 6.5.

Once you have lowered the pH levels, you can help maintain the lower pH by applying nitrogen fertilizers that contain ammonium. Ammonium sulfate is the best acidifying nitrogen fertilizer source and should be applied at label recommended rates.



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If you live in western Minnesota, your pH problem in clay soils is compounded by higher levels of calcium carbonate. This effectively reduces the choice of plants for your garden to those that can tolerate the higher soil pH levels.

In our daffodil planting efforts last fall, we first augured the planting holes. Then iron sulfate was applied with a broadcast spreader over the area prior to planting the bulbs. In this way the sulfur was mixed into the planting soil when the bulbs were planted. Use personal protection when applying iron sulfate as it is a fine dust. A protective dust mask and safety goggles or glasses is needed, and a disposable protective coverall (such as *Tyvek) is ideal. If you don't wear a coverall, be aware that much of your clothing will have rusty stains after washing. Be sure to wash your clothing separately from your other non-gardening clothing.

*The information is given for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement is implied.

Minnesota Nursery and Landscape Association Newsletter, April, 1989.

BLACK KNOT OF PRUNUS

by CYNTHIA ASH, Assistant Extension Specialist Plant Pathology, Minnesota Extension Service

Black knot is a common fungal disorder of wild and cultivated species of plum and cherry. The characteristic symptom is an elongate woody black gall formed on the sides or encircling branches and occasionally trunks of susceptible hosts. Infected shoots may bend and twist at the site of infection giving the stem a gnarled appearance.

New infections of black knot occur in the spring during wet periods on new growth or at wounds. This infection can occur in as little as 6 hours when the temperature is 21-24 C. Infection continues to occur during the summer but at a much lower level. Infections which occur in the spring may be slightly visible by fall as swollen cracked stems. The infection is put on hold during the winter but continues the next spring with the development of an olive green color to the knot and the release of spores during wet periods. Approximately two years after the initial infection the knots are hard and black in color. If the stem is not killed the knot can become perennial.

Susceptible plants should be inspected in late winter for swollen and galled areas. These should be removed at least four to five inches below any sign of infection and destroyed. Several inspections during the spring will aid in removing any infections which were missed. A dormant application of lime sulphur following late winter pruning will reduce the amount of overwintering inoculum on the plant and further reduce the possibility of spring infection. (Dormant applications are applied after pruning but before bud break. The day temperature should be in the forty degree range and the night temperature should not fall below freezing.) Regular fungicide applications can be used to increase control during the growing season but should be considered as a third line of defense after pruning and lime sulphur application.

JERRY ANDERSON AND GENE REITER TO RETIRE

by THOMAS H. BROWN, CGCS
Editor, *DAKOTA TURF PRO'SE*

Jerry Anderson, A Sioux Falls, South Dakota native, will be leaving Dakota Turf Supply Inc. this spring after serving the golf industry in South Dakota for 29 years. Dakota Turf Supply Co. originated in 1050 as a partnership. The partners were Cliff, Bea and Lonnie Anderson. It became a corporation in 1962. Jerry entered the company in 1960 and traveled as a salesman for 16 years. In 1962 he became vice-president of the corporation. In 1976 he left his sales position and moved into the office. When Lonnie passed away in 1982 he became president of the company and remained so until February 6 when the company was sold to Gary Viger and Bob Beck.

Dakota Turf received Jacobsen's Distributor of the Year awards in 1976, 1977, 1982, 1983 and 1984. They were recognized for outstanding service by Jacobsen in 1978. Cushman has awarded them sales awards for 1978 and the years 1981 through 1988. Dakota Turf has been the only turf supply company in South Dakota since 1950.

Jerry has been married to his wife Margaret for 30 years and has 3 sons. Steve and Brian are employees of Dakota Turf and Travis is a student at Lincoln High School in Sioux Falls.

On to the good life, (L to R) **Margaret & Jerry Anderson and Irene & Gene Reiter.**

Jerry received an outstanding service award at the annual meeting of the South Dakota Superintendents Association in March. We thank you for your contributions to the golf industry and to golf course superintendents throughout this area.

Gene Reiter, the Dean of Golf Course Superintendents in

South Dakota, will retire June 16. Gene, a native of Sioux Falls, was born in 1924. His career in golf began after a three year hitch in the navy in World War II, marriage to Irene in 1947 and two years at Sioux Falls College. In 1950 Gene signed on as a crew member at Minnehaha Country Club under Charlie Stringham and Don Rodvold. In 1953 he became the assistant to Cliff Anderson who at that time was a well known and highly respected superintendent in South Dakota. Gene's education in Golf Course Maintenance grew rapidly and in 1956 he became the superintendent at Minnehaha Country Club.

Gene has helped Minnehaha to gain the reputation as the best maintained golf course in the state and one of the top clubs in the midwest for the past thirty-nine years. It has been his experience in maintenance and construction that has earned him great respect in the state and made him the one to call when a course needed help with turf or construction problems. He has helped many courses in eastern South Dakota at one time or another and really enjoyed lending a hand to superintendents and greens chairmen with dead or troubled greens. He has also been involved with the construction of many of the nine hole golf courses in the area. The first was in Parker, So. Dakota in 1963. Gene and Ed Livingston, the golf pro at Minnehaha, teamed up to build a course. Gene then became involved with the FHA when they began a program to fund golf course construction for small communities. The courses started being built in the early sixties, one right after the other. During the years 1963 through 1972 he was involved with the design and construction of seven golf courses in eastern South Dakota. In the early seventies the government stopped this program. In 1975 he undertook a major project at Brookings, where they remodeled a existing 9 hole course and added another nine to make a championship caliber course. Five years after completion brookings hosted the SDGA Medal Play Championship and the following year the SDGA Match Play.

Gene has been a member of the Minnesota GCSA for 33 years and a member of the USGA Green Section for 30 years. He has also been a member of the Advisory Board of the Southeast Area Vo-Tech for 8 years. His most memorable year came in 1985 when he became, in March, the first President of the South Dakota Golf Course Superintendents' Association. Forming the SDGCSA was one of Gene's life long goals. In May he was elected to the South Dakota Golf Association's Golf Hall of Fame and a well deserved place in the history of golf in South Dakota.

Gene has not just been taking care of a course all these years, but is an avid golfer as well. In 1965 he was one of the top 32 qualifiers in the state Match Play Championship. After playing in many tournaments during the