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HOLE NOTES
Facts About Sexual Harassment

Sexual harassment is a form of sex discrimination that violates Title VII of the Civil Rights Act of 1964. Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature constitutes sexual harassment when submission to or rejection of this conduct explicitly or implicitly affects an individual's employment, unreasonably interferes with an individual's work performance or creates an intimidating, hostile or offensive work environment.

Sexual harassment can occur in a variety of circumstances, including but not limited to the following:
- The victim as well as the harasser may be a woman or a man. The victim does not have to be of the opposite sex.
- The harasser can be the victim's supervisor, an agent of the employer, a supervisor in another area, a co-worker or a non-employee.
- The victim does not have to be the person harassed but could be anyone affected by the offensive conduct.
- Unlawful sexual harassment may occur without economic injury to or discharge of the victim.
- The harasser's conduct must be unwelcome.

It is helpful for the victim to directly inform the harasser that the conduct is unwelcome and must stop. The victim should use any employer complaint mechanism or grievance system available.

When investigating allegations of sexual harassment, EEOC looks at the whole record: the circumstances, such as nature of the sexual advances, and the context in which the alleged incidents occurred. A determination on the allegations is made from the facts on a case-by-case basis.

Prevention is the best tool to eliminate sexual harassment in the workplace. Employers are encouraged to take steps necessary to prevent sexual harassment from occurring. They should clearly communicate to employees that sexual harassment will not be tolerated. They can do so by establishing an effective complaint or grievance process and taking immediate and appropriate action when an employee complains.

Filing A Charge

If you have been discriminated against on the basis of sex, you are entitled to a remedy that will place you in the position you would have been in if the discrimination had never occurred. You may be entitled to hiring, promotion, reinstatement, back pay and other remuneration. You may also be entitled to damages to compensate you for future pecuniary losses, mental anguish and inconvenience. Punitive damages may also be available, as well, if an employer acted with malice or reckless indifference. You may also be entitled to attorney's fees.

Charges of sexual harassment may be filed at any field office of the U.S. Equal Employment Opportunity Commission. Field offices are located in 50 cities throughout the United States and are listed in most local telephone directories under U.S. Government. Information on all EEOC-enforced laws may be obtained by calling toll free on 800-669-EEOC. EEOC's toll free TDD number is 800-800-3302. This fact sheet is also available in alternate formats, upon request.

MEMBERSHIP REPORT

NEW MEMBERS—JULY 13, 1994

Gerard (Jerry) Daniel
452 Evergreen Rd., Hanel, MN 55340

Kirk Duken
500 Evergreen Rd., Hanel, MN 55340

Stan Johnson
5130 Oak Lake Rd., New Hope, MN 55428

George Kindead
165510th Ave. NE, Blaine, MN 55449

Michael Kusheier
P.O. Box 850, Grand Marias, MN 55604

Nick Larson
710 Arrowwood Ln., Alexandria, MN 56308

Randall Mihlberg
18105 Texas Ave., Prior Lake, MN 55372

Dave Ramsay
400 Evergreen Rd., Hanel, MN 55340

Mickey Santer
P.O. Box 270, Aven, MN 56310

Jason Splantner
1597 80th St. E., Inver Gr. Hts., MN 55077

NEW MEMBERS—AUGUST 8, 1994

Rodney Hanson
4700 Palmgren Ave., River, MN 55374

Tug Henged
Rt. 1, Box 361, Fillager, MN 55447

Craig Paikman
Rt. 1, Box 77A, Akeley, MN 56433

Wayne Wenscheid
18560 Chippendale Ave., Farmington, MN 55020

RECLASSIFICATION—JUNE 13, 1994

Todd A. Domine
Frickel G.C.

Scott Eden
Terrace G.C.

Mark Storby
Hastings National G.C.

Gary Watschke
Sustainable Turf Inc.

Dick Grundstrom, Membership Chairman
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Newest member of Toro's proven cutting unit family, the Guardian® 72" Recycler is a commercial unit innovatively designed to save time and cut without discharge to create a safer mowing environment.
Fertigation

Applying Liquid Fertilizer Through The Irrigation System

By Thomas Parent
River Oaks Golf Club

Fertigation is the application of liquid fertilizer through the irrigation system. It allows for the application of micro quantities of low-cost nutrients on an as needed basis.

Maybe because fertigation sounds too good to be true so few golf courses are fertigating in the northern states. In the summer of 1992 we installed a small metering pump for wetting agents and ferrous sulfate. As the effect of iron and sulfur have such a dramatic color response, we felt this would be a good test of our irrigation system’s distribution.

Over the winter of 1993/1994 we decided to install a full scale fertigation system at River Oaks Municipal Golf Course. To the best of our knowledge there were no golf courses using fertigation in the state of Minnesota other than for wetting agents and minor nutrients. On paper, it looked like this system would save our course between $10-15,000 annually. The City Council agreed to transfer $5,500 from our existing fertilizer budget to pay for the installation. After a great deal of research we installed our system in mid-May.

A fertigation system can deliver the amount of nutrient that the grass plants will use over a short period of time. This minimizes volatilization and leaching and allows the turf manager great control over turf growth and color. Being able to deliver frequent small quantities of fertilizer eliminates the fluctuations of growth associated with granular fertilizers. Extended periods of rain do have a minimal effect on color and growth. This, however, can be corrected in one or two days of fertigation. The key is to have sufficient fertilizer pump capacity to apply .5 to 1 oz. of nitrogen per/Msqft in a normal irrigation cycle. In addition to environmental advantages and greatly improved turf quality are the economic advantages.

A fertigation system allows the use of water soluble agricultural grade fertilizers. We use a mixture of prilled urea, stabilized urea and ammonium sulfate as a nitrogen/sulfur source. Potassium nitrate and ammonium polyphosphate (liquid) are used for Potassium and Phosphorus sources. Most of these products constitute a large percentage of slow release mixtures and are twice the analysis of a prefabricated system on an untested procedure, we assembled our system from local suppliers. You can save considerable amounts of money by doing this, but it is more difficult. A fertigation system does require a state approved check valve, a $50 permit and a system inspection, which includes a facility inspection as well. We spent a total of $6,000 on our system which included, metering pumps, proportional control systems, bulk tanks, containment, check valve, electrician costs and permits. If you do not have a flow meter which generates an electrical signal your system will cost around $550 more plus installation. A single pump system could be installed for $3,400.

With the system in place for half a season, it has far exceeded our expectations. With the money saved on fertilizer (Continued on Page 35)
Fertigation — (Continued from Page 34)

we have been able to pay for the system and experiment with some of the new bio/humate products on the market with good results. Last year we spent $26,000 on fertilizer. This year we anticipate spending around $8,000 for N, P, K, S & Fe and minors.

There are some drawbacks to this system. All areas of the course are fertilized equally if watered equally. We manage our fertigation to the greens and supplement other areas as needed. Except for tees and a few fairways that were behind on nutrients, this approach has worked very well. A major irrigation leak could be a problem if you are fertigating at a very high rate. However, small leaks are easily detected due to the presence of fertilizer in the irrigation water. If you have water, hazards which receive irrigation water this could become a problem. Some sprinkler heads may need to be moved or converted to part circles. In most cases the cost for this should be easily defrayed by fertilizer savings as would any system upgrades to provide uniform coverage. With a double row irrigation system we have found no detectable variation in color or growth due to coverage. If your irrigation system can maintain reasonably healthy turf in semi-drought conditions, a fertigation system could work for you. A fertigation system can save time and money, promotes healthier turf and is environmentally friendly.

LOST

PING EYE 2
RED DOT 3-IRON

The 3-iron was lost at the MGCSA Championship at Wayzata C.C.

Contact: Jim Johnson
Rich Springs G.C.
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and the distributor nearest you.
9. What kinds of training and education do superintendents and golf course applicators have?

Golfers are often surprised to find that most superintendents have college degrees in agronomy, horticulture or a related field. Because it’s important to keep up-to-date with new information and technologies, the majority also attend continuing education programs offered by universities and associations like GCSAA. Superintendents are widely considered to be among the best-educated and most judicious users of pesticide products. The vast majority of superintendents are using integrated pest management practices to ensure that both the turf and the environment stay healthy. Applicators are also trained and licensed by the state. A recent study indicated that nearly 100 percent of GCSAA-member courses had at least one licensed applicator on staff (despite the fact that it isn’t necessarily required in some states). This confirms a high degree of compliance and concern about safe and proper usage of chemical tools.

Anyone with a question about golf course pesticide practices is encouraged to talk with their local superintendent or call the GCSSA at 913/841-2240 to find out more.
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Expanded Hours
The GCSAA has expanded the business hours at the Lawrence office to better serve member needs. The new hours are 7:30 a.m. to 5 p.m. (Central Time).

Upcoming
1994 MGCSA Monthly Meetings

Mon. Sept. 12
(FULL)
STODOLA RESEARCH SCRAMBLE
Hazeltine National G.C.

Mon., Oct. 10
Minneapolis Golf Club

Wed.—Fri., Dec. 7-9
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HOLE NOTES
A Whole Lot More Than 6-2-0!

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<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Percentage</th>
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<tr>
<td>COPPER</td>
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</tbody>
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PGA Senior Tour Battles It Out at Bunker

With perfect weather as a backdrop, the Senior PGA Tour stopped off at what can be considered one of the toughest sites on the tour: Bunker Hills Golf Course in Coon Rapids.

Certified Golf Course Superintendent Jim Nicol had the golf course in tournament condition for the Senior PGA. Greens were rolling true with a stimpmeter reading of 10' 6". Tees were located on level and well-turfed areas, and the fairways just don’t get any better.

With the change in date from early June to mid-August taking place in 1994, that thought alone could cause a Golf Course Superintendent to lose some sleep. However, the 18-hole track was completely ready for the return of yesterday’s golf champions.

Praising Bunker Hills, 1994 Burnet Champion Dave Stockton said, “The weather was perfect, the golf course was in perfect shape.” Stockton’s comments complemented Tournament Director Hollis Cavner’s statement that Jim Nicol is “the best at what he does, giving us a super golf course.”

With the weather being perfect and the golf course in such perfect shape, one wonders what’s next for the Grounds Department at Bunker Hills Golf Course.

— Dale Wysocki

1994 Burnet Champion Dave Stockton, left, with host superintendent Jim Nicol, CGCS at Bunker Hills.
in July and early August, opening the door for creeping bentgrass which is known to be more tolerant of high temperatures. Our measurements of soil temperature in greens has shown that the root zone can become significantly hotter than air temperatures during sunny mid-summer afternoons. A day in the low 90s could result in soil temperatures near 100°F in the root zone. Lethal temperatures for many plant species including annual bluegrass are known to be in the 105-110°F range. It is conceivable, therefore, that high temperature stress could be responsible for the mid-summer decline of annual bluegrass in greens.

Our population counts since 1988 on a mixed annual bluegrass-creeping bentgrass green lend some support to both theories (biological vs. environmental control of the annual bluegrass decline). The very hot years of 1988 and 1989 produced the most dramatic mid-season reduction in annual bluegrass. The record cool years of 1992 and 1993 produced the smallest declines.

It would appear, therefore, that temperature is related to the extent of the population fluctuations. But, the fact that the annual bluegrass population still declined in the record cool years when temperatures didn't approach high stress levels seems to indicate that the reproductive cycle could also be a controlling factor.

We monitored the vigor of individual annual bluegrass plants throughout the growing season during this same period, and found that their root systems deteriorate and the number of tillers per plant decreases in conjunction with the mid-summer population decline. Root tissue appears to degenerate and rot away, which is consistent with high temperature damage. At the same time, the node at which tillers are joined degenerates and tillers separate. Later in the season as the annual bluegrass population recovers, new root tissue is produced, and a flush of new tillers occurs at nodes higher up the plant.

As somewhat of an aside, it is interesting to note the apparent relationship between the late-season resurgence of the annual bluegrass population and core aeration. Notice the dramatic increase in annual bluegrass illustrated in Figure 2 in the fall. Ecologically, conditions are perfect for annual bluegrass growth following aeration. Soil on the green surface is exposed. Resources for growth are immediately available. Competition from neighboring plants is at a seasonal low. A large fresh seed bank is waiting. Temperatures and moisture are optimum for germination and seedling development. Common sense would indicate that core aeration, which relieves the turf of a season's worth of compaction, gives a significant advantage to the annual bluegrass population. Techniques for alleviating compaction and their effects on the species composition of a green is an area worthy of further research.

There are interesting questions related to the activity of the creeping bentgrass population while the annual bluegrass population is in decline. Is the creeping bentgrass released by the annual bluegrass retreat, or is the competitiveness of the creeping bentgrass during mid-season responsible in part for the annual bluegrass decline? In other words, does annual bluegrass set the pace and creeping bentgrass respond to the opportunity created by its mid-season decline, or does creeping bentgrass exert its strength in mid-season exacerbating the condition of the annual bluegrass? It is helpful to visualize a golf green as a dynamic miniature ecosystem that is subject to a continuous push and pull from the unique biology of the individual species and from the environment, which includes the stresses imposed by man. In that light, the green becomes a very complex system influenced by many factors simultaneously. Mathematically, the combinations of influences are almost limitless. It's easy to see, therefore, why managing greens is not as straightforward as the casual observer might think!

Research on the ecology of annual bluegrass in golf courses continues at the University of Minnesota with the goal of improving its control or its cultivation.