

Training Makes The Difference

By Tim Doppel

reprinted with permission from "A Patch of Green" August 1992

In the 1990s we have heard a lot about pesticide exposure and how to minimize the risk to employees and others who may come in contact with the pesticides. A recent study at the University of Guelph in Ontario, Canada, looked at the entire spectrum of exposure to pesticides and reported some very interesting results. In a nutshell, everything we have always believed as true was verified, but let's look a little closer at some of the information we now have. The study looked at 2, 4-D exposure by professional applicators. The total exposure was measured, that is how much 2, 4-D these people handled and then how much 2, 4-D was excreted from their bodies over a period of time. Since 2, 4-D and other phenoxy herbicides are such a hot topic with so many people today, this presents some good information with which you should become familiar.

The results found no correlation between how much 2, 4-D was handled and how much was excreted. In fact, the person who was the loader/mixer at the firm actually had a lower excrement level than some of the applicators. The applicators

themselves had all different levels of excrements when they were exposed to virtually the same amount of 2, 4-D.

So what makes the difference? Very simply, it came down to the care taken by the person handling the pesticide. The mixer/loader understood, apparently, that he was handling a more concentrated material and therefore was more cautious. The applicators had varying levels of exposure. Rolling up hoses with bare hands, not using boots or long pants, all increased the amount of 2, 4-D excreted by the applicator. This information backs up a study done at Michigan State University several years ago that showed proper uniforms decrease overall exposure dramatically.

Another aspect of this study looked at exposure to persons who walked on the sprayed turf or who were bystanders to the application. Certainly, these are concerns for everyone who applies pesticides on golf courses. The bystanders had no measurable exposure for 96 hours after the application; and of the persons who walked on the turf, the only ones who

had a measurable response were those in bare feet and shorts who sat on the turf within an hour of the application. Even so, the excrement was below any World Health Association acceptable daily intake levels. The good news here is that if people are wearing shoes (and most of our players do!) then their potential exposure is exceedingly low, if not nil.

The bottom line from this study is that proper training does make a difference. Any time spent teaching our applicators and other employees about the proper use of pesticides and waiting until the applications dry before coming in contact with the turfgrass, will pay big dividends in employee health and safety. One word of warning. Don't assume that your long-term employees don't need the reminders! The MSU study indicated that it was the more experienced applicators who were a bit more careless and had higher levels of exposure. All employees need constant encouragement to work safely and to use the proper safety equipment. As the superintendent, it is your job to be sure they follow directions.

GCSAA Responds to KARE-TV News Story

GCSAA recently responded to a Minnesota television station that aired a two-part news segment attempting to link chemicals used on golf courses to breast cancer.

The station, KARE-TV in Minneapolis, broadcasted a story called "Unseen Hazards" in which a local reporter presented what she and station management considered to be evidence that golf course chemicals induce or cause the spread of cancer.

GCSAA responded with letters to KARE-TV and to senior officials at Gannett Television, the station's owner.

The gist of the association's response was one of disappointment because the materials and information provided by GCSAA were not addressed. The association also strongly assured the reporter and the television station that no scientific information exists connecting golf

course chemicals to cancer.

One of the story's more striking assertions was a University of Massachusetts researcher's claim that the pesticide DDT accumulates in the body's fatty tissues, such as breast tissue — despite the fact that EPA and DDT 20 years ago and it has not been used on golf courses since. The reporter insinuated that other chemicals used on golf courses also tend to accumulate in fatty tissue, which simply is not true. The government's chemical registration process prevents the introduction of such chemicals into the marketplace.

The report also attempted to link golf course management tools to the disease by citing that five members of the Ladies Professional Golf Association Tour and staff have been diagnosed with breast cancer. According to the American Cancer Society, one in nine women in the

United States is expected to contract breast cancer during her lifetime. The five members of the LPGA Tour and staff amount roughly to one in 200, a breast cancer rate well below the national statistic.

The reporter also interviewed a local female golf course superintendent whose family has a long history of breast cancer — eight women in her family died of cancer. According to science, this family history puts her at a much higher risk to be diagnosed with the disease than the general population.

The reporter tried to add credibility to her claims by noting that the female superintendent was avoiding contact with golf course chemicals, although the superintendent said she was avoiding many different things that have been linked — fairly or unfairly — to cancer. She said
(Continued on Page 29)

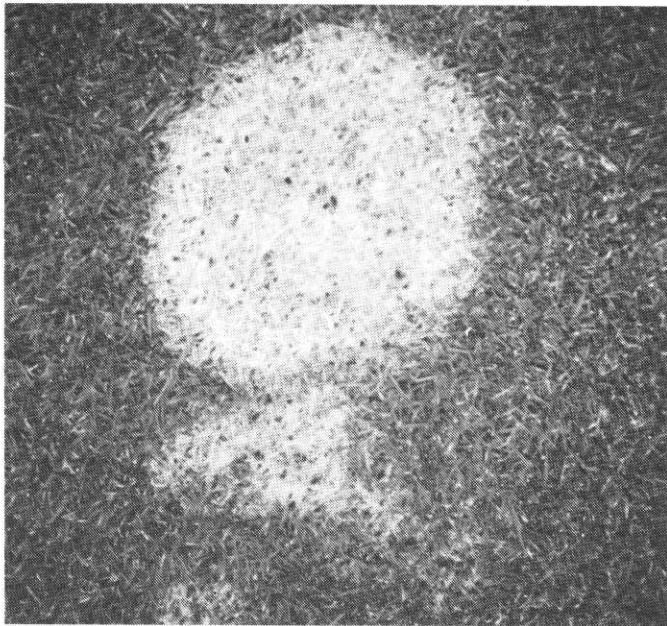
An Alternative for Snow Mold Control

With fall upon us, we again think about winter and the process of winterizing our spray equipment. However, before this can be done, we must consider the application of a fungicide for snow mold control.

In areas of permanent snow cover, gray snow mold or typhula blight caused by *Typhula incarnata* or *Typhula ishikarensis* is a very destructive disease of turfgrass. Susceptible turfgrass species are bentgrass, annual bluegrass, fescues and perennial ryegrass.

Although permanent snow cover on the ground for several months is necessary for the typhula blight to develop, other conditions that stimulate cover, such as leaves, mulch, and desiccation covers, can cause the same effect.

The gray snow mold fungus can grow at freezing temperatures. Growth and infection of the turfgrass are generally between 30°F and 50°F. Gray snow mold is worse when snow falls on unfrozen turfgrass that has not been hardened by frost. However, when snow occurs on frozen ground, the disease usually develops only in the spring when the snow melts.



When the snow melts in the spring, the typhula blight fungus can be seen with the naked eye as sclerotia. These spores will eventually dry up and no longer be visible. The sclerotia is the dormant stage of this disease, and is how the typhula blight fungus oversummers. These sclerotia are resistant to warm temperatures and the fungicides used in a summer spray program. In the fall, the sclerotia will swell, germinate and produce spores under cool, wet weather.

Pink snow mold, *Microdochium nivale* (formally *Fusarium nivale*), is also a devastating turfgrass disease in regions that have long periods of cool wet weather or frequent snow falls and melts. This disease organism does not need a permanent snow cover to germinate and infect the turfgrass. Pink snow mold can be observed in the late fall through spring if weather favors germination and growth of the spores.

Fungicide treatments used for snow mold control are longer

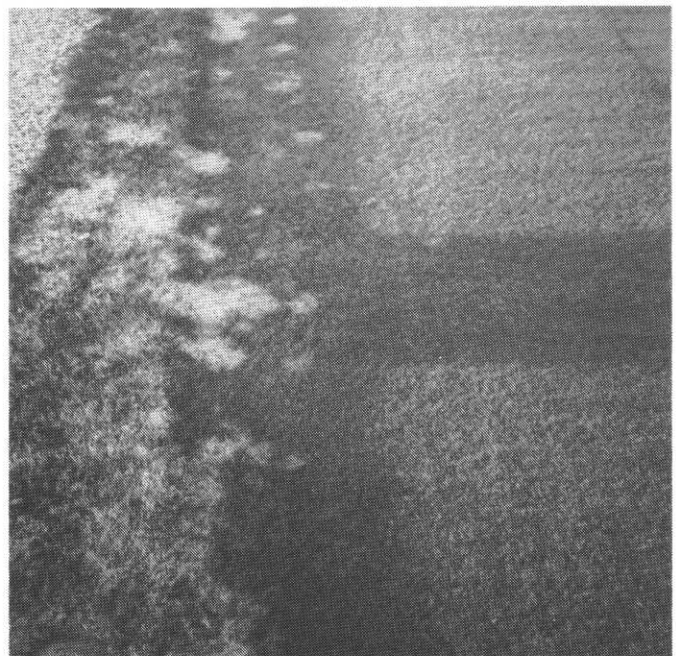
lasting than similar treatments made to control summer diseases. This is because in snow mold applications the fungicides are not removed through mowing as the turf grows. Single applications usually provide winter long control providing that permanent snow cover is maintained until spring. Mid-winter thaws can dissipate fungicide efficacy due to exposure to sunlight, wind, and rain and can also accelerate snow mold growth. If a thaw occurs, a second fungicide application is recommended to maintain turf protection until spring greenup.

Cultural management of these diseases should always be considered in a control program. Be aware of conditions that favor disease development in the late fall and winter months, such as poor drainage, excessive thatch, high nitrogen fertility and high relative humidity. Remember, both gray and pink snow molds can occur in the same location.

Chemical control of gray and pink snow mold can be achieved with a tank mix combination of CHIPCO® 26019 (FLO) + Daconil 2787® Flowable at 8 + 8 fl. oz./1000 ft² or the CHIPCO® 26019 (WP) + Daconil 2787® Flowable at 4 oz. + 8 fl. oz./1000 ft². This tank mix application should be timed close to the first snow cover. A second application should be applied to the turfgrass when a mid-winter thaw occurs. Use 2 gallons of water per 1000 ft² as a carrier.

Both CHIPCO® 26019 and Daconil 2787® have activity on the gray and pink snow mold organisms. However, a combination of the two products results in increase control of these diseases. In regions of the United States that experience only pink snow mold, CHIPCO® 26019 (FLO) alone at 4 - 8 fl. oz. or the wettable powder formulation at 2 - 4 oz./1000 ft.² will provide very good disease control.

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Treated vs. untreated. Lakewood Golf Club in Oscoda, Mich., April 1990.

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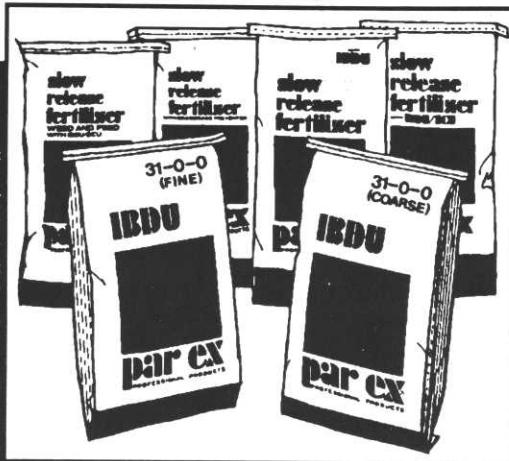
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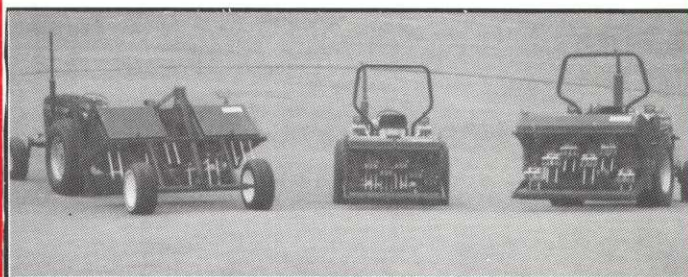
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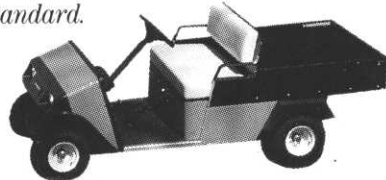
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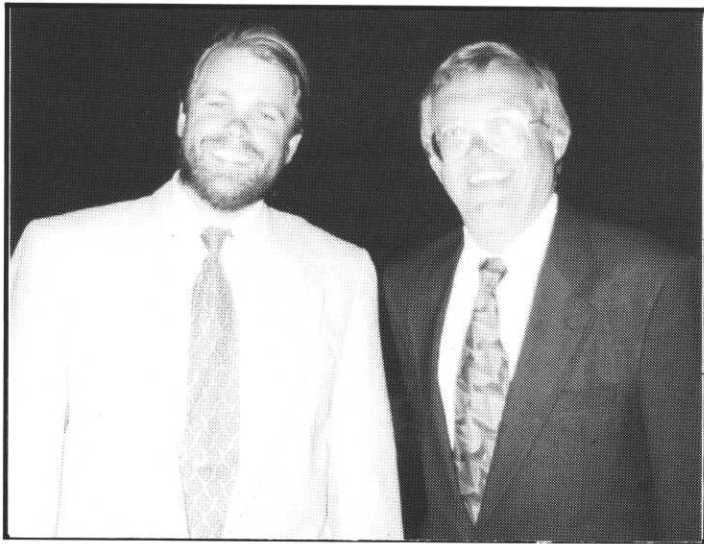
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Minikahda & Elk River Teams Win Stodola Scramble

To Ultra-Fine Golf Courses hosted the 1992 edition of the Harold Stodola Research Scramble. The sites were Wayzata Country Club, groomed to exceptional shape by James Lindblad, CGCS, and Rolling Green Country Club, manicured by Pat Walton.

The day began as a cloudy, rainy day, but by the time 11:00 rolled around the skies cleared and sun shown thru to give all competitors a perfect day for golf.

Chairman Greg Hubbard, CBCS and Co-Chairman Bill Whitworth, had everything well in hand to insure a smooth running, well-organized event. When all was said and done, and after an extremely good evening meal at Wayzata C.C. the results went like this.



HAPPY HOSTS: Pat Walton and Jim Lindblad.

Wayzata Country Club Results

Gross Division

TEAM MINIKAHDA

Doug Mahal, Bill Jenkins, Jim Jennings & Mike Brower . . .59

TEAM MONTICELLO

Rick Traveer, Dan Frie, John Code & Mark Frie61

TEAM WESTFIELD

Richard Kolter, Mike Gostomski, Bill MacAskill & Dennis Cleveland61

TEAM LAKE CITY

Cliff Reynolds, Jim Huettle, Mark Kennedy & Bob Seberg61

TEAM ROLLING GREEN

Pat Walton, Paul Luchau, Bob Thaemert & Bruce Sanders61

TEAM WAYZATA

Jim Lindblad, Dave Gray, Mike Sill & Gary Nutt62

Net Division

TEAM RUM RIVER

Jim Sinkel, Steve Odegard, Scott Liestman & Skeeter Lane57.8

Rolling Green Country Club Results

Gross Division

TEAM ELK RIVER

Jon Varty, Chuck Tuthill, John Bleyhl & John Hopko61

TEAM STONEBROOK

Tom Haugen, Duane Slaughter, Murali Srinivasau & Tom LaDoucher61

TEAM SILVER BAY

Norma O'Leary, Mike O'Leary, Ray Pederson & Marshall Pederson62

Net Division

TEAM PEBBLE CREEK

Cary Femrite, George Peterson, Mike "Ike" Albus & Joe Buege57.3

TEAM PURPLE HAWK

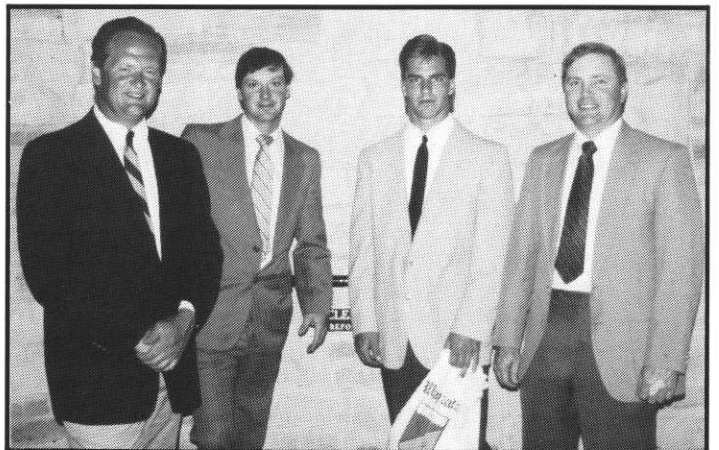
Ron Noyce, Jeff Anlauf, Tom Lentz & Steve Kast58.5

TEAM ALEXANDRIA

Bill Feriancek, Rick Feriancek, Len Feriancek & Grant Torfin58.7

TEAM CLIFTON, TE AL.

Don Egeberg, Paul Diegnau, Chuck Egeberg & Dale Parske58.9



FIRST PLACE (gross) AT ROLLING GREEN: (l to r) Chuck Tuthill, John Varty, John Bleyhl and John Hopko

TEAM TSCTMPFGCC

John Wiley, Tom McCann, Dale Wysocki & Larry Vetter59.2

TEAM MADDEN'S

Scott Hoffman, Pat Morstad, Todd Dominae & Gordy Purmont59.3

TEAM TARTAN PARK

Randy Allen, Ed Peterson, Dan Meier & Lowell Reicks59.6

TEAM HASTINGS

Tom Feriancek, Dave Lunde, John O'Connor & Barney Bartholomew59.9

Snow Mold Fungicides To Test Before Mercury Ban

By Dr. Ward Steinstra, University of Minnesota Department of Plant Pathology

The testing season last year was not very informative due to the early snow-fall and then having to wait for the sites to melt open. Disease pressure in the Metro area was slight-to-none, and at the test site in Stillwater untreated plots had only 8% disease.

A few plots had 1, 3 or 6% disease, but a true evaluation of product performance was not possible when all products had essentially no disease.

Results from golf courses suggested that most people had fairly good control with the programs that were used. Chloronab at 2 oz., with PCNB at 2 oz. performed well at Duluth, and I expect several golf superintendents should continue to try this combination.

Other products that show some promise are Daconil, 26019 and Vorian. The application of these products alone is not recommended, as by themselves the level of control was not satisfactory, except at 16 fl. oz. of Daconil (a 7% disease score was good in this one year). The tank mixes of Vorian and PCNB or PCNB with Daconil or 26019 and Daconil resulted in good control at one site in one year.

Suggestions for you to try, not recommendations are:

- 26019 And Daconil at 4 fl. oz. plus 8 fl. oz.;

- Vorian and PCNB at 2-3 oz. plus 2-6 oz. A high rate of PCNB did not increase disease control.

- Daconil and PCNB at 6-8 oz. plus 4-8 oz. Again the higher rate of PCNB did not increase disease control.

A combination of Vorian and Daconil was less impressive. While disease control is one factor to consider, another is the regrowth of turf in the spring. The turf appearance was judged as "good" in the following treatments: Caloclor alone, Caloclor plus Chloronab plus PCNB my standard treatments and in Daconil plus PCNB. Turf appearance was "ok" in the following treatments: Vorian plus PCNB, 26019 plus Daconil and in some experimental products.

Your own results on your course may be a very important factor in your decision on what to use in 1994. Test plots will gain be set out, and the results will be available, but I do suggest that you try some of the possible treatments yourself.

GCSAA Response—

(Continued from Page 21)

she was taking extra precautions because of her genetic predisposition to the disease, not because she thought the chemicals induced it.

Others interviewed — regardless of their pesticide knowledge — repeatedly used terms such as "scary" to describe their feelings about golfing on and around golf course pesticides.

"Our side" of the story; relating the fact that no scientific data link the chemicals to the disease, appeared briefly toward the end of the segment, which likely had already panicked viewers unnecessarily.

Scott Austin from the Minnesota Golf Course Superintendents Association appeared very briefly, and only a small fraction of his comments were used. Austin did an outstanding job of addressing the issue during his brief appearance.

GCSAA feels this type of reporting is not responsible journalism. GCSAA staff worked at length with the television reporter, providing her with background information and materials in hopes that it would be used to provide a balanced treatment of the subject.

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EDITOR'S CORNER

By Dale Wysocki
Faribault Golf & Country Club



Once again it seems that the question I hear most often is "When is *Hole Notes* coming out?" This question comes mainly from the members on the East Side of St. Paul. *Hole Notes* is mailed out Second Class and in four bags with the zip code prefixes 550, 551, 544 and out-state. It is not unusual to hear that Rochester and Mankato have received their *Hole Notes* before the East Side of St. Paul (551). The solution to the problem? Mention to your local postmaster that there is a problem with delivery and ask him/her to possibly investigate the situation.

* * * *

A couple of items that came out of the MGCSA Amateur Championship at Midland Hills Country Club. Due to a scorer's error Tom Kientzle of The Pines at Grand View Lodge is the winner of the First Flight. Jim Manthis, the PGA Professional at Midland, notified me of the error and has gone to the extent of sending a gift certificate to Tom. Jim is a fine gentleman and a true professional in every sense of the word.

Accidentally, I had forgotten to thank R&W Golf and Utility Vehicles for providing the beverage cart at Midland Hills. Thanks to Bruce Spiers for supplying the complimentary beverages; they were very much appreciated.

* * * *

With the Annual Meeting approaching fast, it's time to mention some of the changes coming. On Wednesday, November 18, there will be an awards luncheon, scholarship recipients will be recognized, the James R. Watson Award for journalism will be handed out and the Distinguished Service Awards will be presented.

The Annual Banquet will have the K-FAN man, Minnesota's answer to Peter Jacobsen, none other than **Guy Green**, with his partner **Greg Harrington** and their own special brand of comedy. Guy is probably the only entertainer who can really relate to the jobs that we possess.

* * * *

A close acquaintance wanted to know why I refer to Golf Course Superintendents as Golf Course Managers? The jobs we do, regardless of what golf course we are at, is that of a manager; we practice Intelligent Plant Management, Fiscal Management, Personnel Management, Irrigation Management; basically everything we do is manage. Granted, a lot of us practice with "hands on" management, but it is still managing. Sooner or later we all will be recognized as Golf Course Managers. However, it will be up to us as individuals to show to the golfing public that we are true professionals.

* * * *

When checking your mailbox, make sure that the DONATION REQUEST to the MGCSA RESEARCH FUND gets sent to your club's Board of Directors. With the expiration of

mercurial-type fungicides rapidly approaching, it makes sense to help contribute to find a substitute for winter patch diseases.

Part of this donation also goes to the Baker Park Leachate Study. Please make sure that the DONATION REQUEST get the proper attention.

* * * *

What will you remember the most about the summer of 1992? Will it be the cool temperatures, lack of summer disease pressure, frost on Father's Day, snow on Memorial Day? The summer of 1992 will be remembered as a year when all Golf Course Managers did their jobs extremely well, especially with a little help from Mother Nature.

* * * *

What is success? When do you know you have achieved success? We are all successful! Look at the conditions of our golf courses. Baron Pierre de Coubertin stated that, "Success is not a goal, but a means to aiming higher still." The 1992 golf season is almost over and some are making plans not just for 1993, but 1994 and 1995. Every year we set goals and surpass the goals we set, then again we set goals and surpass them. Constantly we are always aiming higher. Remember, effort is the greatest joy.

— Dale Wysocki
Editor



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