

# 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  
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## 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—

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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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