

Training Makes the Difference In Use of Pesticides

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 pheonoxy 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. Roll-

ing 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 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. —Tim Doppel (A Patch of Green)



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