

Being environmentally aware: A complex challenge for turf managers

By Dr. STEPHEN S. ADAMS

Beginning with the publication of Rachel Carson's *Silent Spring* in the 1950s, the state of the environment became a widespread social concern and the environmental movement has grown rapidly since that time, propelled by enormous political power. The resulting government and community regulations that are intended to protect the environment also impact the lives and livelihoods of nearly everyone in the United States. Golf course turf managers are no exception.

Being environmentally conscientious presents a complex challenge for turf managers: From one perspective, players demand smooth playing surfaces that are lush and free of weeds. At the same time, governments and communities apply pressure to restrict use of herbicides. Turf managers are caught in the middle. Unfortunately, their situation will become even more challenging within the next four years.

The federal government is requiring re-registration of a variety of

commonly-used turf pesticides by 1997. Registering a pesticide for initial sale is a very expensive process, and some manufacturers may opt halt production rather than face the enormous expense of maintaining a registration. That means there may soon be fewer pesticide options to fight diseases, insects and weeds.

The good news is that the herbicide industry has recently begun developing and marketing new weed control products that have maximum effect on target species with lower environmental impact. Testing indicates that these compounds should pose little or no risk to humans and animals.

In today's state-of-the-art research laboratories, it's now possible to not only identify, but also "engineer" chemicals with exceptional efficacy and increased safety.

Making slight changes in the chemical structure of the compound, or its formulation can broaden the targeted weed spectrum and reduce effective use rate. More stringent testing aimed at earlier identification and removal, or further testing, of questionable compounds helps to minimize environmental impact and



Dr. Stephen S. Adams

reduce health risk to humans and animals.

NEW WEED CONTROL OPTIONS

These advanced research techniques benefit golf course turf managers by providing them with a new class of turf herbicides.

For example, in the South and some areas of the Southwest, weed control is especially challenging because higher temperatures and longer growing seasons make weeds very persistent and difficult to control.

Common weed problems in southern states include crabgrass, spotted spurge, goosegrass, common purslane and oxalis. Because these and other weeds must be controlled for a longer growing period, a common practice in the past has been to make several preemergence herbicide applications for season-long control, using products that are applied at rates of several pounds of active ingredient per acre.

Now, good results have been reported with newer herbicides such

as dithiopyr and proflam, which provide season-long control of crabgrass and other problem weeds with one application at rates less than one pound ai/A.

In the case of dithiopyr, turf managers also have the flexibility of selecting either a preemergence or postemergence application for crabgrass control. That postemergence capability is useful for managers who wish to ensure that a weed problem exists before making a herbicide application.

Another environmental benefit of some of the newer herbicides is that they offer a broader spectrum of grass or broadleaf weed control than some products used in the past — with lower use rates. For example, isoxaben controls about 70 species of broadleaves at three-quarters a pound of ai/A, whereas older products require much higher rates to control a fraction of those species. That feature allows turf managers to reduce pesticide use by applying one product that will control several weed species, rather than using two or

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Dr. Stephen S. Adams is Dithiopyr technical manager for Monsanto Company.

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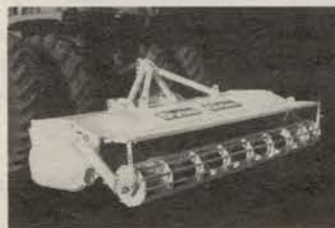
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order. He adds that more people would buy Dyna-Drives if they could see them in action and that architects, engineers and designers should specify them. We appreciate his honesty.

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three different products for the same level of control.

LOW ENVIRONMENTAL RISK

In addition to low-rate effectiveness and application flexibility, the newer herbicides often also offer the important environmental benefit of low soil mobility. Many of these newer chemicals bind tightly to soil, and are extremely resistant to vertical leaching into ground-

water and horizontal movement into surface water.

Although groundwater and surface water concerns are influencing turf management decisions nationwide, water protection is an especially hot topic in the Midwest and Northeast, where lakes and streams are common. Choosing pesticides with minimal soil mobility is one of several steps that turf managers in those regions are taking to protect the environment.

Another measure taken to avoid contaminating water supplies is to leave "buffer zones" adjacent to lakes and streams. This is especially important where turf managers plan to use insecticides, which often have high horizontal mobility. Rather than applying pesticides up to the edges of lakes or streams, a strip of turf is established where no pesticides are applied. The buffer zone

helps prevent horizontal movement of pesticides.

Among the least expensive and most effective ways for golf course managers to reduce water contamination from pesticides is to avoid upwind application close to lakes and streams. (Pesticides should never be applied in winds that exceed 5 miles per hour.)

SAFETY TRAINING AVAILABLE
Environmental protection

and worker safety are important objectives in any industry, and pesticide manufacturers and golf course managers continue to be proactive in these vital areas. Manufacturers and sales teams commonly offer golf course turf managers and their employees training in the use of low-risk products and proper application procedures. Advice on developing an environmentally conscientious approach to herbicide use is only a phone call away.

For more information about maintaining healthy turf with minimal environmental and applicator risk, contact your manufacturer's sales representative or pesticide supplier and ask for instructional materials and training programs.

Environmental protection is an important objective, but with the low-risk weed control products available today, maintaining healthy turf need not be a difficult challenge — no matter who's examining your turf management practices.



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Phillips comment

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together the context: Poor Tom Marzolf, an architect with Fazio Golf Course Design, was trying to explain how the sheer number of fine courses in North Carolina make it competitively impossible to take an environmental stand. He was *encouraging* the state to set standards for everyone, in order that a few aren't penalized for doing the right thing.

And nobody I interviewed can figure out where Harvey came up with the bird song reference. According to Todd Miller, executive director of the NCCF, the subject did not come up in any detail during the conference. The issue wasn't mentioned in either the *Morning Star* or the *News & Observer*.

It would be easy to blame the local newspapers or the Associated Press for Harvey's misrepresentations. However, this was clearly Harvey's baby. In fact, the *Morning Star* praised the golf industry for its cooperation at the symposium in an editorial published March 31.

Paul: Forget the rest of the story. We'll get it elsewhere.