## THE VIEW FROM CALIFORNIA

## Turf Pest Control And The Environment

**R**OGER N. MUIR, pest control foreman at the University of California at Los Angeles, walks a tightrope between responsible turf-insect control and a growing barrage of questioning from students and others with a concern for the environment.

Muir, who is responsible for both indoor and outdoor insect control at UCLA, is charged with care of the 51 acres of campus turfgrass.

"We can't spray the grass without being questioned," says Muir. "People come up and want to know what we're applying. We're under great scrutiny and, frankly, I'm glad we are. Concern for the environment is healthy and the questioning is a good sign."

Muir, whose six-man staff works under Frank Schacht, UCLA's senior superintendent of grounds, falls into the "concerned" category himself.

"Handling insecticides is a serious business," he says. "Materials have to be chosen carefully, applications must be made only when necessary and then in a precise, careful manner."

In the past Muir has used chlorinated hydrocarbon insecticides (such as DDT) and materials that contained arsenic, strychnine or mercury. Then along came the carbamates and the organic phosphate materials that do a percise job, but don't persist in the environment. He switched to these. Currently his major insecticide is Diazinon.

A turf spraying program is one that requires periodic maintenance programmed against a known budget and available manpower. Muir says that he does not operate this way. "We have neither the staff nor the money for a preventive program," he explains. "When problems develop, we spray."

And problems do develop. Last July, a serious cutworm infestation hit the campus Sculpture Gardens.

"We made two applications of Diazinon, two weeks apart, and controlled it nicely," Muir reports. "The year before, we had bad cutworm problems in the same place. We tried four applications of chlordane, but still didn't get control.

"The cutworm works at, or below, the crown of the grass," he explains. "A cutworm attack results in a general browning out of Bermuda and 90 percent of our grass is common Bermuda, the rest being hybrid Bermuda or dichondra."

Muir has been at UCLA ten years. Six years ago, he received permission to test his staff for cholinesterase levels, an indication of toxicity buildup in the blood. These blood tests are made annually and on new employees when they are hired. "We have never had a level that wasn't normal," Muir says. "Everyone on our staff is a licensed pest control operator. "We won't hire anyone who isn't."

Muir uses Diazinon 4E, an emulsifiable solution which can be used effectively indoors or outdoors. Turfgrass applications are made with a 50-gallon spray rig and a hand wand.

Another Southern Californian who has found the answer to turfgrass insect problems is Joe C. Judd, golf maintenance supervisor for the 12 golf courses of the City of Los Angeles. Judd cares for 144 bent-(continued on page 62)



Rich Eichner, (L) superintendent at Lakeside Golf Course in North Hollywood, Calif., supervises an application of Diazinon 50W, a wettable powder insecticide. Manning the spray rig on Lakeside's 16th green is Eichner assistant Joe Palacios.

grass golf greens, more than a million square feet of bentgrass, which is highly susceptible to the frit fly. This blade-chewing pest, says Judd, "is a pistol of a problem from mid-May to September.

"Frit fly problems develop when daytime and nighttime temperatures remain high," he says. "The frit fly will discolor the turf. It starts on the tips of the grass and works its way down. It can do great damage if it gets to the crown of the grass. It's imperative that we control it."

Like Muir, this golf maintenance supervisor turned to modern methods of insect control. "We sprayed Diazinon AG500 early last summer," he recalls. "We sprayed, waited 11 days, then made a second application." Total number of applications needed was about three or four. Judd has found the material to be compatible with most fungicides, herbicides and other insecticides.

The non-persistence of an insecticide is important to Robert L. Scofield, general manager of Environmental Care, a landscape maintenance firm based in Santa Ana.

Among Scofield's clients is Lakeshore at Westlake Village, a major development northwest of Los Angeles. Concern for the environment is important here. Residents expect good insect control, but they don't want residues to build up. Scofield studied many insecticides available for commercial use before selecting Diazinon. This product did not persist and would not harm the village's lake.

Scofield recalls other customers with insect problems who have been pleased with his control programs. One in particular was a large re-



Robert L. Scofield, general manager of the Environmental Care turf maintenance firm of Santa Ana, Calif., explains how treatment with Diazinon saved this \$15,000 bowling green from a skipper butterfly infestation at a California retirement center.

tirement community in Orange county with a skipper butterfly infestation on a new \$15,000 bowling green.

This 120,000 square-foot green was seeded in Seaside bentgrass late last summer. The skipper infestation began during a subsequent heat wave.

"We made broadcast applications of 14G," says Scofield. "The turf was so young we didn't want to get



Turfgrass problems are different in cooler Northern California where the frit fly is seldom seen, but insect control is important there, too.

Cutworms and lawnmoths were controlled with Diazinon last summer at San Francisco's Sequoyah Country Club by course superintendent Gurmit S. Sandhu.

Sandhu makes applications after aeration and top-dressing—a troublesome time because insects get down into the new holes to lay eggs.

This aeration problem is further echoed by Rich Eichner, superintendent at the plush Lakeside Golf Course in North Hollywood. His course is one of the few Southern California links which has avoided costly frit fly problems. Eichner credits his success to timely applications of Diazinon 50W, a wettable power.

Throughout California, where turfgrass plays an important part in an "outdoor culture," the trend in insect control is to compounds that offer effectiveness and safety without residues. Organic phosphates such as Diazinon are doing the job.

