

## Director's Column



### What's New in I.P.M.

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After recently attending an Integrated Pest Management fact gathering forum I am able to provide an I.P.M. update and offer some of my personal views as well. What brought my attention to the popularity of I.P.M. was the landscapers discussing bids on jobs where prospective customers requested I.P.M. procedures. We as golf course superintendents must also become familiar with I.P.M. practices and procedures.

What is Integrated Pest Management? It is a system, or process in selecting and using pest control alternatives that will keep pests below a damaging level while avoiding adverse affects to humans, animals, and the environment. Chemical suppression treatments are made when monitoring has indicated that the level of damage will be unacceptable asthetically, and economically.

Actions to be taken by the property manager are as follows —

1. Identification and knowledge of the pest and controls.
2. Monitor levels of pests and keep records of activity.
3. Determine acceptable injury level.
4. Determine action to be taken keeping in mind pests response to variables such as weather.
5. Treatments are made which are least hazardous to man and the environment.
6. Evaluate I.P.M. approach and make adjustments as new methods for control become available.

The more familiar I become with I.P.M. the more I realize that golf course superintendents have been using some of its procedures for years. Some examples are — light weight mowing to reduce *Poa Annua*. Spot spraying trouble areas instead of the fence to fence approach. Judicious use of water. Use of more disease resistant trees and grasses. Concern for employee safety during chemical applications. Generally we use all factors possible to promote vigorous plants which can ward off attacks of insects, fungi, and weed invasion.

One example of I.P.M. at work is in the area of soybean production. A soybean plant resistant to Roundup (glyphosate) is being developed. To control weeds the entire field is sprayed with Roundup and all vegetation is killed except the resistant soybean crop. The positive action taken is that the Roundup is less hazardous to the groundwater and the food chain than other herbicides presently available.

I.P.M. is not a cure all but a positive step which requires monitoring, record keeping, and evaluation. Also it is important to pass on useful information to our peers. If we take positive steps in chemical safety perhaps the government will not step in and force us to use what we already have and need to survive with in this business; and that is good common sense.

## 1987 Review and 1988 Preview of Turf Insects and Control

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### 1987 Situation

The pest growing season was unique in that the above average temperatures accumulated heat units until insect development in July and August was about 19 to 20 days ahead of a normal schedule. *Ataenius* grubs, if a problem, hatched in late May and damage appeared by mid June. Black cutworms on the other hand were delayed as the adult moths didn't fly into Illinois in April but did arrive later to lay eggs in bentgrass turf. There has been a light to moderate population of Japanese beetles infecting turf as grubs from Lake Bluff on the north boundary proceeding downward along the earth side of the state to Paris. The heaviest populations have been Iroquois County around Sheldon and Watseka. In 1987, the numbers of adults greatly increased and tree defoliation occurred. Eggs were laid in July and grub damage appeared in August.

Annual white grub beetles emerged in late May to lay eggs in late June and grub damage was apparent in August. High populations of grubs — 40 to 50 per square foot — were not uncommon. These grubs fed on bluegrass roots from August until early November. Skunks and raccoons further added to the damage by turning over grub infested sod to feed on the grubs.

### Control Results

Effective control of black cutworms was achieved by sprays containing either Dursban, Proxol, or Dylox. Repeated generations every five weeks required additional treatments. Grub control was much more complicated. Insecticides applied for control of *ataenius* grubs, Japanese beetle larvae, and annual white grubs included Oftanol, diazinon, Turcam, Proxol, Dylox, Mocap, and Sevin.

Since 1983 when Oftanol received a state label for use on turf insects, this insecticide performed well as a soil insecticide to control grubs. Less than normal control occurred in 1986 and again during 1987 on some golf courses. In other instances control was similar to results of 1983 through 1985. Diazinon was labeled at a 20 percent reduction in 1987 compared to previous years. The new rate reduced control results in some instances or lengthened the time period between application and acceptable control. Turcam, Proxol, Dylox performed if the applied spray was not allowed to dry on the grass foliage. Granular Dylox and Turcam was applied with good results. Mocap granules were used for grub control on some courses. Sevin as a spray was applied for grub control in some locations.

In grub control trials applied in small replicated plots Oftanol controlled grubs in some instances and not in others. Diazinon and Oftanol required three weeks after application for satisfactory control. Proxol and Dylox required less time for grub control. Turcam and Mocap were intermediate in time required for control results. Sevin is not a new product by the LS formulation is relatively new and is being promoted for grub control. Plots results were variable at the eight pounds active ingredient per acre.

### Preview of 1988

First, there will be no new insecticides for use on golf courses

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