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## **Balancing IPM**

## New products, new pest challenges

There is no substitute for a dedicated There is no substitute for a dedicated superintendent who has intimate knowledge of every square inch of a golf course, points out Dick Bator, golf course turf consultant in Pittsfield, Mass. That goes for insect control, disease controlf and just about anything else you can name. Furthermore, superintendents need assistants who are equally sensitized to details on a course.

Integrated pest management is part of the superintendent's understanding of what makes his or her course react to weather, play and maintenance.

"Only the superintendent can

"Only the superintendent can make the decision regarding what constitutes an acceptable threshold of insect damage for his course" says Bator. Higher

standards and new insects have raised the bar for superintendents. Fortunately, new insecticides have come along just in time.

"With new products that have seasonlong control, we only make one application per year and can skip years while keeping below the threshold."

Ten years ago, superintendents faced fewer severe pests, but had only short residual products to control them.

"By lowering cutting heights on greens and improving maintenance on fairways and roughs, we have opened the door for insects such as the hyperoides weevil and the black turfgrass aetenius," adds Bator.

"Insecticide budgets are much higher than they used to be, but the single application products are less labor intensive."

Biological controls are currently too inconsistent for Bator.

"Slight changes in weather can throw off timing and performance," he says. "Many courses can't risk a failure with the biologicals. They have to be certain they have a handle on insects.Rather than get too distracted by trying to improve the consistency of biologicals, the superintendent should pay attention to the timing of insecticide applications, the pH of water in his spray tank and using irrigation to get the insecticide into the soil."

Bator sees new technology, such as global information systems and mapping as important tools for superintendents to record course history and to alert them about potential problems.

"We need to use everything available," he remarks. "At the same time, we need to understand that this new technology does not reduce the need for superintendents to learn every inch of their courses and how they respond to stress."

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At Columbia Country Club outside of Baltimore, Superintendent Merrill Frank echoes Bator's sentiment that threshold levels in the private club management business are esentially zero. He is extremely happy with the new insecticides.

"We've used Merit for two years with great success," says Frank. "We are trying Mach 2 this year and are considering alternating the two materials in the future."

Prior to the introduction of Merit, Frank did not treat fairways and roughs because the length of control was too short. Now he treats them once a year with the new products and believes that this has improved his control on tees and greens.

Sean Remington at Chevy Chase Country Club employs degree days for control of June beetle, black turfgrass aetenius and the Japanese beetle.

"The time for treatment for aetenius is different than for the beetles," says superintendent Remington. "We work closely with **Dr. Kevin Mathias**, an entomologist in our area."

"I've requested an on-site weather station so we can get better degree day readings. We have been using Merit with excellent results. Using IPM with the new insecticides has been very effective. IPM is one of the reasons to improve our irrigation system."

Paying attention, whether by satellite or by walking the course, is the most important key to insect control, say these superintendents. They welcome new technology, but keep close, personal observation on top of the list.

### In Future Issues

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- Brown patch modeling research
- Mechanisms of disease resistance

# CD-ROM team wins

merican Phytopathology Society members Gail Schumann and Jim MacDonald have received an Award of Excellence from the National Association of Colleges and Teachers of Agriculture, for the Turfgrass Diseases: Diagnosis and Management.

The CD has been available for more than a year, and contains visuals of more than 65 turfgrass diseases and disease agents. "We are very pleased to receive this award from NACTA," says Dr. Schumann, associate professor and turfgrass pathologist at the University of Massachusetts.

"We've had a very positive response from turf managers who use the CD-ROM in their day-to-day operations," says Schumann, "but it is particularly gratifying that our teaching colleagues consider it a valuable instructional program.

"We worked hard to make a user-friendly, interactive program for both students and turf managers."

To order the CD-ROM (\$169 plus \$4 shipping) call APS at 612-454-7250.

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