

### RESEARCH

# New paths being explored by USGA's Green Section

PEBBLE BEACH, Calif. — Coordinating scientific literature relating to golf course management and educating the public about the benefits of golf are two primary research programs to be undertaken by the United States Golf Association (USGA) Green Section.

A research firm working with USGA to determine what issues the organization ought to be addressing recently released its findings. It called for heightened awareness in five environmental areas:

- water management issues;
- the impact of soil, nutrient, and pest management measures on golf courses that are already established;
- the impact of construction and erosion control;
- alternate methods of pest and disease control; and
- developing pro-active approaches to the benefits

of golf.

Speaking at the 44th annual meeting of the American Society of Golf Course Architects, USGA northeast region director James T. Snow said, "We decided that the most important thing to do was to put out a manual that describes things already known about the best practices for minimizing the effect of golf course management on the environment."

Snow, who will take over for retiring USGA National Director William H. Bengeyfield, said the organization will generate a 150-page technical manual that is to include all peer-reviewed scientific literature on the effects of pesticides, fertilizers, turfgrass and golf courses on the environment. A smaller manual for the media will be coordinated as well.

The second phase of the



**Snow: says USGA will be looking into alternative methods of pest control for golf course membership**

research program will examine the fate of pesticides in the turfgrass environment. The research report showed that there's much less information available about this subject than other areas, said Snow. "Our research is to be done in three or four areas of the

country. Based on that, maybe we can develop a good modeling system to tell us how certain groups of pesticides move within a certain soil profile."

Also, USGA will develop a manual for alternative pest control. "Biologicals are one area, but we're also talking about mechanical and cultural, maintenance, pest-resistant grasses and investigate newer methods of pest control on golf courses," said Snow.

He added that the USGA, like the GCSAA, wants to look at the benefits of golf courses on our lives and our environment, based on scientific data.

Snow added the USGA Green Section is committed to continuing its relationship with the GCSAA, including work on pest-tolerant and salt-tolerant grasses, water use and funding for environmental issues. □

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# New uses for triazole fungicides found

BLACKSBURG, Va. — Triazole fungicides and other bio-stimulants containing cytokinins have demonstrated an ability to "keep grass plants younger," says Dr. R.E. Schmidt of Virginia Polytechnic Institute and State University.

Schmidt initiated the new research work using Banner fungicide and a seaweed extract that enhance or stimulate root growth

and overall strength of sod. He also observes that turf treated with bio-stimulants showed increased drought resistance and better growth at low soil moistures, along with a reduction in *Poa annua* seedhead development in bentgrass putting turf.

"Bio-stimulants" are materials—other than essential plant nutrients—that promote plant growth

when used in small quantities. Triazole fungicides are classified as synthetic bio-stimulants, and seaweed extracts are natural bio-stimulants. Both have shown to have a positive influence on turfgrass.

"We have also shown more tolerance to low temperatures by bermudagrass and better uptake of nutrients—which means less fertilizer use—by using

bio-stimulants," Schmidt notes. "We're stimulating a lot of enzymes within the plant."

He says that warm-season grasses seem to show better results using the seaweed extracts while cool-season grasses show better results with the triazole fungicides. He adds that results seem to be better when the grass is under stress. □