

# Biologicals: The proof is on your turfgrass

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tests on actual grass grown in the laboratory. Even if it survives this second round of lab tests, it must still test positively in the field.

"Don't buy anything that is only laboratory-tested in terms of a biological control. The proof is on your turf, not in the laboratory," Wilkinson said.

Since many of the biological controls tested on warm-season pythium have done little more than slow the growth of disease, Wilkinson predicts the first wave of

biologicals on the market will be mixed with chemical fungicides.

A successful biological control keeps 97 to 98 percent of the plant surface, according to researchers. What diseases potentially have biological controls that fit the bill?

Tests have shown many patch diseases, take-all and summer patch among them, to be successfully suppressed by certain bacteria. They are suppressed naturally, although it may take five to 10 years for the diseases to run their course.

In addition to natural suppres-

sion, the patch disease has two phases — a seedling blight phase and a mature declining phase. Biologicals work best on seeds rather than mature grass stands that are more resistant to change. Grass seeds coated with a certain bacteria have proven resistant to patch disease on grass-less soil containing patch fungi.

Tests have been less successful on mature turf where the biologic must be drenched into the ground and then journey to the plant root to attack the fungus. Many of the

bacteria don't survive the trek. Biological controls have been only half as successful on mature turf as grass-less soil.

Coating the disease-carrying fungi itself with a biological control and then placing both in the turf has yielded interesting results. Introducing the problem and the solution at the same time kills some of the plants, but also helps build resistance against future attacks, Wilkinson said.

Perhaps the biggest obstacle to full-scale development of biologicals

is the bacteria's ability to change, Wilkinson said. A researcher can give an agro-chemical company a bacteria that has proven effective in deterring disease. But if the company's method of growing the biologic is even slightly different than the researcher's, the control could change into something ineffective or even harmful to turf.

So what is the future of biological control?

"We'll probably never be able to rely completely on biologicals," Wilkinson concluded. "They're not designed to do the whole job.

"But with an integrated approach of biologicals and other combinations of chemical, managerial and fertilizer solutions, we'll probably be able to reduce the impact of pesticides into the system and gain very acceptable levels of control."

## Ohio Turfgrass Foundation gives out scholarships

CINCINNATI — OSU senior Robert King received the \$2,000 George Biddulph Memorial Scholarship from the Ohio Turfgrass Foundation at its annual show.

OSU junior Carolyn Fisk was given the \$1,000 Dick Duke Award.

The \$1,000 Glen Hudson Scholarship went to OSU junior Michael Fast. Fast worked most recently at Sycamore Hills Golf Club in Fort Wayne, Ind., and would like to become a superintendent.

Fast also received a \$1,000 Central Ohio District Golf Scholarship, as did fellow OSU students Dawson Thombs, Gary Posey and David Zahniser. The \$1,000 NorAm Award went to Thombs.

Recipients of \$1,000 OTF scholarships were ATI seniors Ron Swing and James Kracker as well as sophomore Monty Hale; Clark State University sophomores Mark Seitz and Joseph Wichie; and OSU seniors Zahniser and Donna Barlow along with junior Timothy Kelley.

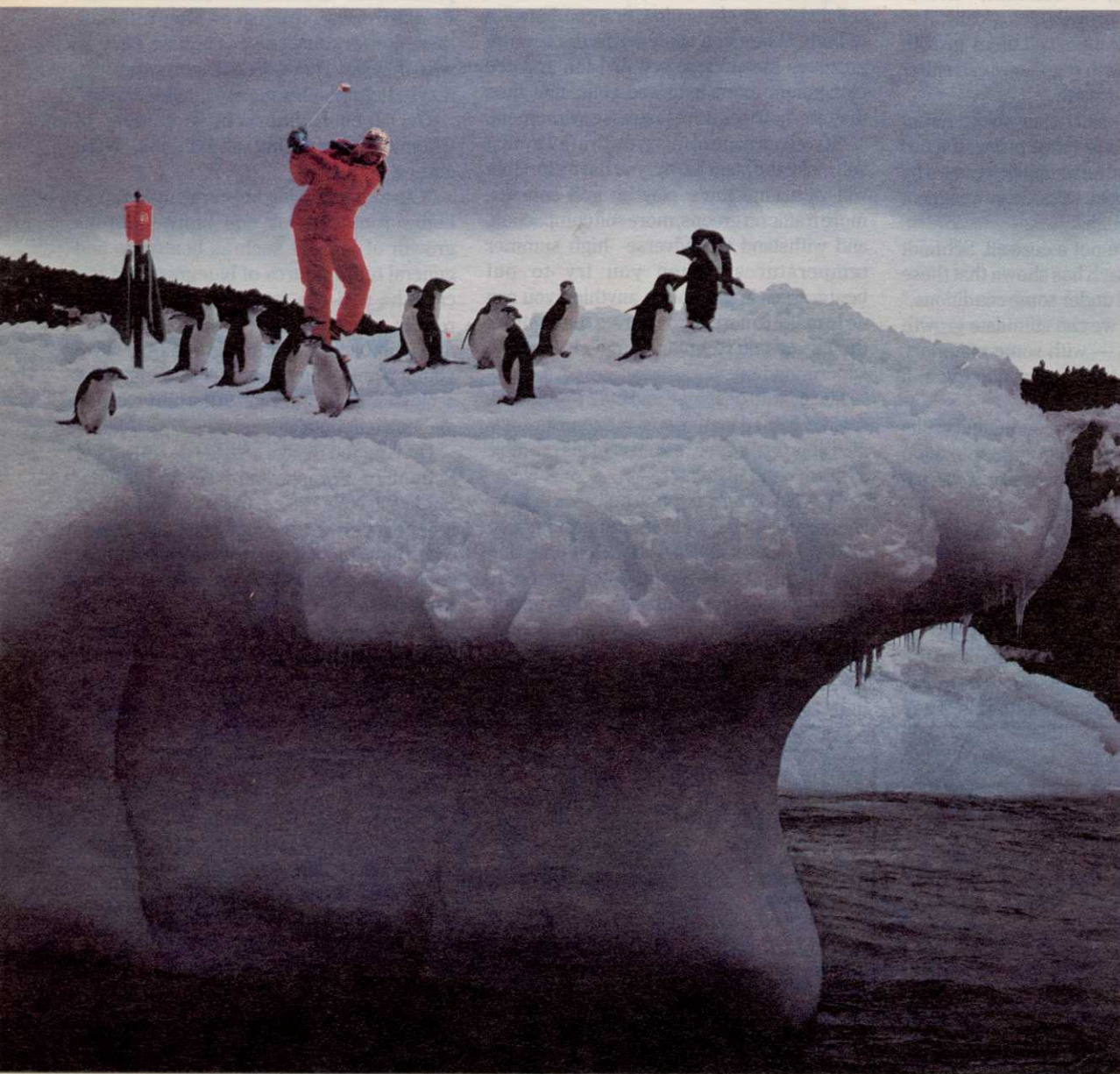
Kelley also received a \$1,000 scholarship from the Trans-Mississippi Golf Association.

## Michigan State adds specialist

Frank S. Rossi has been appointed to the new position of environmental specialist in turf at Michigan State University.

Rossi will be responsible for developing and teaching material concerning safe pesticide use, and concepts of integrated pest management. He also will develop and coordinate seminars dealing with environmental stewardship and turf management.

He holds bachelor's and master's degrees from the University of Rhode Island. He is finishing his Ph.D dissertation at Cornell University.



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