

# Plant Doctor Explains Integrated Pest Management Ties

WOOSTER, Ohio — Ohio State University scientist Mike Ellis believes that everything in the world of plant diseases relates in some way to Integrated Pest Management (IPM).

Ellis, a plant pathologist with the Ohio Agricultural Research and Development Center (OARDC) and Ohio State University Extension, relates his work to IPM using the term Integrated Disease Management (IDM).

IPM doesn't just include insects — it also includes diseases that can only be controlled by integrating different methods. IDM programs develop and explain the biology and pathology behind plant diseases, then share this information with growers, which is one of IPM's goals.

"Integrated Disease Management is a critical portion of the overall pest management program," Ellis said. "I consider myself a plant doctor. I got my mas-

ter's degree in botany, and I went into plant pathology because I viewed it basically as plant medicine.

"Diseases aren't like insects that you can see," Ellis added. "Diseases have to be controlled before you see them. When you see a disease, you're seeing the symptoms of the disease, (which result from) the interaction between the pathogen and the host." The pathogen can infect the host days or even weeks before symptoms are visible.

A plant pathologist for 27 years, Ellis develops IDM programs that integrate as many control practices as possible for the diseases of small fruits and tree fruits — apples, grapes, peaches, raspberries and strawberries. His work addresses the needs of both commercial fruit growers and backyard fruit growers and gardeners.

The key is not just to spray with the fungicide, but also to in-

tegrate programs that cover all bases of pest and disease management. IDM programs include not only cultural practices, like pruning and mulching, but also disease resistance and biological control.

"The thing that drives my thinking there, is not so much the food safety issues, because I believe fungicides we use are safe — if they're used the way they're registered," Ellis said. "These products cost Ohio growers thousands, millions of dollars. And it comes right out of their own pockets."

For example, it costs a strawberry grower \$1,000 to purchase a four-gallon case of the fungicide Quadris. To put this figure in perspective, Quadris costs approximately \$40 an acre to apply. Other fungicides, like Switch, get still more expensive: \$60 an acre per application. "The growers aren't using them unless they have a real perceived need for

them," said Ellis. "Nobody throws their money away. Would you?"

And that's part of the beauty of IPM. By applying Ellis' research, farmers won't have to empty their pockets on fungicides.

Ellis received his bachelor's degree in education and his master's degree in botany from Eastern Illinois University. He

received his doctorate in plant pathology from the University of Illinois. Before joining OARDC, Ellis worked as a plant pathologist for the University of Puerto Rico.

"It's great," said Ellis of his career. "It's one of the most rewarding things when a grower comes up to you and thanks you for something you have developed that actually works."

## Wet Fields Root Of Soybean-Disease Problems

WOOSTER, Ohio — Constant rains and cool weather have given soybean fields the short end of the growing stick, and now, along with stunted plants, growers can expect to see diseased, dying plots.

Most of Ohio has had a constant rain since May and growers are now seeing stunted, yellow soybean plants with small or non-existent rhizoidal nodules, said Anne Dorrance, an Ohio State University plant pathologist. The result: poorly developed root systems and rotten roots caused by Phytophthora root rot, Sclerotinia stem rot and soybean cyst nematode.

"Every heavy rain puts us that much further behind," said Dorrance, who also is a researcher with the Ohio Agricultural Research and Development Center in Wooster. "Some of the fields that were planted in May have plants that are only ankle high and they just can't get their roots established."

According to the Ohio Agricultural Statistics Service, only a little over 50 percent of soybean fields are in good condition.

Constant flooding injury has kept plants from establishing new root systems and diseases are starting to latch on. While the rain and cool evenings have helped to ward off Phytophthora, Dorrance recently found symptomatic plants in a research plot in northwest Ohio. Within the week, growers are going to start seeing dead spots in the field, she said.

"The next thing that will be coming down the pipe is Sclerotinia stem rot," Dorrance said. Fields that have a history with stem rot are at much higher risk for the infection. Other conditions for these fields include a closed canopy before flowering and high moisture and cool nights during flowering, both of which have existed this year.

This year's flooding problem should indicate to growers that along with choosing resistant varieties and implementing crop rotation, they have to have drainage in their fields.

## Miller Named To Regional Agriculture Advocacy Committee

HARRISBURG (Dauphin Co.) — Rep. Sheila Miller (R-129) has been appointed to the Northeast States Association for Agricultural Stewardship (NSAAS) Executive Committee. The organization is an affiliate of the Council of State Governments Eastern Regional Conference.

"Assisting Pennsylvania's number one industry has been a top priority of mine during my tenure in the state House," said Miller, who operates her own 150-acre beef cattle farm in Berks County and serves as vice chairman of the House Agriculture and Rural Affairs Committee. "I look forward to the opportunity this appointment will provide to further enhance the industry throughout the northeast U.S."

Miller said the agriculture industry is facing some serious challenges, such as low commodity prices and high land and input prices. While technology is transforming the way farms are operated, there is much that needs to be done to make sure agriculture continues to survive the obstacles placed on it by Mother Nature and economic policies, said Miller.

"We need to work together to ensure farmers have the tools they need to meet these challenges so agriculture can continue to thrive in the future," she said.

NSAAS includes representatives from states from Maine to Delaware, as well as Puerto Rico and U.S. Virgin Islands. It was established in 1999 to address the region's agricultural and rural concerns. The organization recently played a key role in ensuring that regional equity and conservation programs were addressed in the federal Farm Bill in 2002.

Miller, who also chairs the Center for Rural Pennsylvania, plans to attend the organization's annual meeting in October in Pittsburgh.

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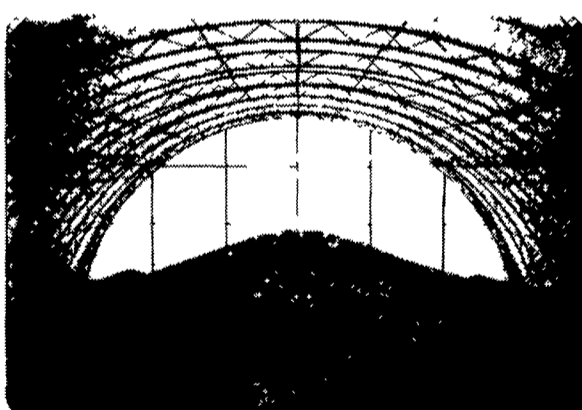
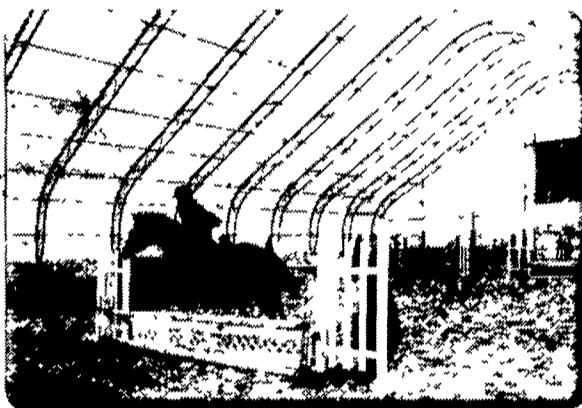
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