

Plant Doctors

| *Laura Alexander*

A new program out of Florida is producing the first-ever doctors of plant medicine and they're giving the industry a new pool of potential employees and interns

When something goes awry, you need to know how to fix it . . . and fast. Yet, nailing down the problem can require combining the disciplines of ornamental horticulture, plant pathology, soil and water science, botany, entomology and nematology. It's hard to find an employee well-versed in all of these areas, but a new program may change that.

Faculty at the University of Florida, Gainesville, recently created an innovative program that prepares students to handle this and many other challenges facing horticulture today. It's called the Plant Medicine Program, and it trains students to be plant doctors.

"This program complements the existing system," explains Robert McGovern, director and professor of the Plant Medicine Program. "Our students apply the knowledge gained through horticultural research to specific problems—they're practitioners."

In human medicine, Ph.D.s conduct research while MDs put that research into action. A Doctor of Plant Medicine (DPM) essentially functions as an M.D. for plants—he or she identifies and finds treatments for health issues.

Get with the program

The idea behind plant doctors goes back to early in the 20th century. It was first conceived by HH Whetzel, a plant pathologist at Cornell. It took nearly a century for the concept to become reality, but in 1999 the University of Florida founded the first Plant Medicine Program in the world.

"Florida is an ideal location for this program because it is a sentinel state," Robert says. "It has a great diversity of crops from north to south, and the environmental conditions are conducive to pests and other pathogens. This allows students to learn the full spectrum of problems."

Today, 34 students from five countries are enrolled. Each will spend three to four years completing coursework and internships to earn their degree. A wide variety of subjects—plant/soil science, entomology/nematology, plant pathology, integrated pest management and agricultural law—are built into the curriculum, but the program also allows flexibility for students to choose an area of specialization.

Training plant physicians

Since DPMs are practitioners, practical experience is a key part of the program. A total of 30 internship credits, 14 required and 16 elective, are built into the curriculum to help students establish themselves in their field of choice.

Many current DPM students are interested in production, and elective internships provide them with the opportunity to move in that direction. In the past, students have worked at PanAmerican Seed Company, Tagawa Greenhouses and the Breakers Resort Hotel golf course.

"The large amount of internship credits required in the program means that students generally have multiple internship experiences," says Robert. "Most have two, but some have more."

Although research isn't required, about 60% of students find research assistantships outside of the DPM program in one of the related departments.

For more information about UF's Plant Medicine Program or its students, visit www.dpm.ifas.ufl.edu or contact Robert McGovern, e-mail: rjm@ifas.ufl.edu; Tel: (352) 392-3631 Ext. 213.

A promising future

So far, 16 students have graduated from the Plant Medicine program and already several other universities have shown interest in forming programs of their own. There's good reason for the interest: both students and employers are excited about this new field of study.

"When I started the program, I wanted to gain diverse and in-depth knowledge about plant health problems," says program graduate Rajya Shukla. "I wanted to be of use to the plant and agriculture business beyond country and continent lines and limitations. The Plant Medicine Program helped me gain this knowledge."

Graduates have gone into a diverse range of fields, including plant health management, government regulations, crop consulting and extension.

"One of the things that drives the necessity of DPM graduates is the increasing complexity of the regulatory world," says Madeline Mellinger, president and founder of Glades Crop Care in Jupiter, Florida.

Madeline, has served as an advisor to Congress, the National Academy of Sciences and the Environmental Protection Agency. "Producers have a need for people on staff with information about a lot of topic areas," she says. "It's hard to predict ahead of time which areas might be the most important. To have someone on staff who has a broad range of professional contacts and scientific coursework, someone who could pull together an array of resources, would be great."

Like human doctors, DPMs are trained to stay abreast of new research developments in all related disciplines. "It's important to have someone who can be on top of new problem pests that might be in the vicinity," Madeline explains. DPM students have the knowledge to identify upcoming threats and put the best preventative measures in place.

Robert says, "We're very confident that when a problem is correctly identified, fewer chemicals are necessary to treat it," says Robert. "We're working towards solving plant crop problems with less and less deleterious impact on the environment, but we also have to do what it takes so our clientele, our growers, can stay in business."

The field of plant medicine is still young and the University of Florida's curriculum is constantly growing and evolving. It's already clear, though, that DPMs could have a vital place in the horticultural industry's future.

"These students are risk takers, but the future looks bright," says Robert. "These pioneers' gamble has been successful and we see that they have been able to establish very interesting, rewarding careers."