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The Doctor Is In

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A perfect day for Alison Robertson would have her standing in a corn or soybean field under a scorching sun, swimming in high humidity and taking questions from farmers.

“I love those summer months,” says Robertson, an assistant professor of plant pathology with research and extension responsibilities in field crop diseases. “I’ll take those days over any other.”

She listens carefully to questions posed by corn and soybean growers. Many times they are seeds that germinate into new research.

Take white mold.

“2009 was a bad year for the disease. In 2011, many growers will return to those hard-hit fields,” says Robertson. “The Iowa Soybean Association recently funded a proposal of ours to research ways to improve white mold management. A lot of the ideas in our proposal came from growers, including evaluating the effectiveness of a biological control and of spraying fungicides.”

Another good example resulted from hailstorms that shredded corn fields in 2009. “We got a lot of questions about ear rots and mycotoxins,” she says. “As a result, we studied how hail affects grain quality and disease, which was recently published.”

Sometimes she feels like a jack of all trades, depending on what diseases are rearing their heads. Each growing season is completely different, which makes Robertson’s job challenging. Her current hit list includes anthracnose, sudden death syndrome, Phytopthora root rot and Goss’s wilt.

A common thread through her work is providing better management information to growers. For her, it’s rewarding, especially when she’s working closely with farmers and agronomists.

“The best part is teaching people how to diagnose the different diseases and talking about the management tactics available. I listen to growers who tell me how they’ve managed disease problems over the years. We share ideas. I’ve had people tell me something they learned really helped them and saved them thousands of dollars. That’s the best.”

A majority of today’s plant pathologists work at the genetic and molecular levels to better understand pathogen-crop interactions. As a plant pathologist in Iowa, where about 23 million acres of beans and corn are grown each year, Robertson says her applied research is just as critically important.

“At the end of the day, growers are the most important people to me,” she says. “I want to help them grow the healthiest, highest quality, highest yielding crops they can.”

Robertson does conduct some basic research. One of her Ph.D. students modified a way to evaluate soybean lines for multigene resistance to Phytopthora root rot, making it easier and more objective. They’re using the method to screen plants and look for new areas of potential resistance.

Besides farmers’ questions, she also gets asked about her work by people who haven’t a clue what a plant pathologist does.

“I simply tell them I’m a plant doctor,” Robertson says. “I tell them sick plants can affect productivity, which can impact our food supply in many ways. My job is to help plants stay healthy.”