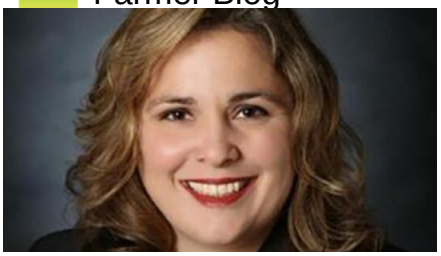
SOYBEAN RESEARCH PRINCIPAL INVESTIGATOR PROFILE – DARCY TELENKO

Farmer Blog



Darcy Telenko, associate professor, extension plant pathologist, Purdue University

Why did you decide to pursue a career that includes soybean research?
I grew up on a dairy farm in New York, and I knew I did not want to work with animals, but I really enjoyed the cropping side of the farm. I pursued a degree in biology as an undergrad and looked to get into applied research with plants. I completed my master's work on sudden death syndrome in soybeans and charcoal rot. Understanding the disease impact on crops has been important to me, and soybeans have always been one of the crops I've focused on with my career.

What research topic have you completed in the past, or are working on now, that could have or has had the most significant impact on soybean production?
My disease of choice is white mold. I started studying white mold in peanuts and now on soybeans. My lab has a number of soybean research projects including our current work with drone-applied fungicides to reduce soybean diseases. We also run many trials evaluating the effectiveness of new products for managing important soybean diseases in Indiana including frogeye leaf spot, white mold, sudden death syndrome, and other soilborne and seedling diseases. The data we collect contributes to fungicide efficacy data for soybean foliar and seedling disease publications.

Fungicide Efficacy for Control of Soybean Foliar Diseases – Crop Protection Network publication

Fungicide Efficacy for Control of Soybean Seedling Diseases – Crop Protection Network publication

How has the soybean checkoff enhanced your ability to find answers to production problems for farmers?

The soybean checkoff allows me to fund my program and support my staff, particularly students. I have several students focusing on topics such as fungicide resistance, how biologicals integrate with pesticides, the effect of sulfur on sudden death syndrome, and now dealing with red crown rot and determining its distribution and how to better manage this new pathogen.

Within your area of expertise, what are the top two or three general recommendations you would offer farmers to improve their management practices?
First, farmers need to know and understand what the greatest disease risks are on their farms. Once they know this, they can utilize a targeted, integrated approach towards management of the disease. There are many available tools to choose from, whether it's disease resistant variety selection, seed treatments, fungicide application or even using the new predictive models to help make informed decisions on whether a fungicide application is needed.

Within your area of expertise, what do you consider to be critical soybean research needs that can impact the profitability of farmers in the future?
Some of our critical research needs are monitoring for new and emerging pathogens, screening pathogen populations for fungicide resistance, and finding sustainable ways to manage them. As we look to the future, with shifting weather conditions, we are seeing changes in fungal pathogen distribution and risk. Are we going to be able to properly manage them when they move into an area?
Also, there are a lot of biologicals coming onto the market and we need to more broadly look at how these can be used effectively and how to incorporate them into the system, especially as we continue to see more issues with fungicide resistance.

SRIN articles:

Can Fungicide Applications via Drones Effectively Control Soybean Foliar Diseases?

Multi-Faceted Plant Pathology Project Reflects the Collaborative Intention of NCSRP

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