CARRIE (MIRANDA) DOTTEY – SOYBEAN RESEARCH PROFILE

Farmer Blog



Carrie Dottey, Assistant Professor, North Dakota State University

Why did you decide to pursue a career that includes soybean research?
It was a winding career road before I ended up in agriculture. I grew up in Cleveland, Ohio, and hadn't been exposed to agriculture. However, I was always interested in plant science and pursued that through my bachelor's and master's degrees. Also, I traveled and lived internationally during my 20s, which is where I was exposed to agriculture and saw first-hand the importance of food availability. When I returned to the U.S., I had a newfound appreciation for the American agriculture industry and its success, and knew I had something to offer. I chose plant breeding for my Ph.D. focus and found an amazing mentor who worked with soybeans. I saw how impactful soybeans are economically and as a nutritious food source to combat hunger.

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?
I am a young researcher, and my work is in the beginning stages. However, I am really excited about the direction of my work. My group is focusing on understanding the genetics behind yield in North Dakota, in addition to creating new, superior varieties. I believe there is a lot of potential to increase our yields similar to other Midwest states, and I plan to prove this over the course of my career.

How has the soybean checkoff enhanced your ability to find answers to production problems for farmers?
First, I want to say thank you to North Dakota farmers and all the soybean groups including North Dakota Soybean Council, North Central Soybean Research Program, and United Soybean Board for their support of the NDSU soybean breeding program. Without them, this work would be impossible. I know growers utilize the results of the iron deficiency chlorosis, soybean cyst nematode and yield testing trials that we conduct, which are possible through

NDSC funding. The council also supports the breeding program operations, which allows us to focus on creating new NDSU soybean varieties. NCSRP and USB fund the research necessary to create higher yielding, disease-resistant lines.

Within your area of expertise, what are the top two or three general recommendations you would offer farmers to improve their management practices?
I don't consider myself as knowledgeable as a farmer when it comes to management, but I can offer some specifics. Soybean cyst nematode is starting to spread throughout the state and there are ways to prevent yield loss. First, test your field for the presence of the nematode. If it is present, buy a soybean variety with SCN resistance and incorporate it into your crop rotation. Also, everyone should be diligent about washing equipment when moving between fields to reduce the likelihood of spreading the nematodes to different locations.

Within your area of expertise, what do you consider to be critical soybean research needs that can impact the profitability of famers in the future?
Most certainly to create and release high yielding cultivars with SCN and IDC tolerance.

SRIN articles:

Variety Trials for Iron Deficiency Chlorosis in North Dakota Help Farmers Choose Seed Wisely

SOYBEAN RESEARCH & INFORMATION NETWORK

This website is funded by the soybean checkoff

©2026 Soybean Research & Information Network