

UNIVERSITY OF ILLINOIS CROP SCIENCE VARIETY TRIALS – PROTEIN, OIL AND SCN RESISTANCE

PROJECT SUMMARY

In addition to using the SCIO CNST NIR technology on the combine to determine the protein and oil content of each tested variety, soil samples will be collected at harvest to assess population levels of soybean cyst nematode (SCN). Data will be shared with Illinois farmers through several methods, including the UI Variety Trial website.

INSIGHTS GLEANED TO-DATE

🔍 Data from the 2023 crop season is available on the UI Variety Trial website (vt.cropsci.illinois.edu) to help farmers select high-yielding varieties best suited for their farm.

QUESTIONS THIS PROJECT WILL ADDRESS

- ❓ How can we streamline data collection from the state's variety trials so data can be compiled and made available to farmers more quickly?
- ❓ How do different soybean varieties fare under different SCN pressures at different testing sites?
- ❓ How do different varieties with the same genetic resistance respond to SCN pressure? What causes the differences in responses?
- ❓ How do varieties respond to differences between SCN populations?

WHY THIS RESEARCH IS IMPORTANT

- ⚠️ Typically 250 varieties representing the various trait stacks from more than 20 seed companies are tested across Illinois each year. Using the SCIO CNST NIR technology on the combine will allow researchers to automatically determine the protein and oil content of each tested variety.
- ⚠️ While most, if not all, commercial varieties have resistance to SCN, that resistance may be derived from different genetic backgrounds. Even varieties with the same genetic resistance may possess other differences that affect their response to SCN. Similarly, differences between SCN populations across different fields may also lead to different varietal responses.

HOW THIS RESEARCH BENEFITS THE FARMER

- 🎯 Farmers will be able to review variety trial results that include protein and oil content assessments more quickly so they can choose their soybean varieties earlier.
- 🎯 Farmers, as well as seed companies, will be equipped with data about how different varieties respond to SCN. They can use this to better inform their SCN management strategies and variety selection.

ABOUT THE LEAD RESEARCHER

Published November 2023



DARIN JOOS

Research Agronomist, University of Illinois Urbana-Champaign (UIUC)

☎ 217-778-7047

✉ jooos@illinois.edu

With more than 20 years of variety trial experience, Darin serves as the cornerstone for the University of Illinois' Variety Testing program. He manages the state's soybean, corn and wheat variety testing so Illinois farmers are equipped with the best information when making their annual seed purchase decisions. When he's not managing variety trials or the University's Crop Sciences Research and Education Center, you might find Darin out hunting or on the lake fishing.

RESEARCH TEAM

- **Nathan Schroeder**, Associate Professor, UIUC

TRIAL LOCATIONS

- **Region 1: Freeport and DeKalb**
- **Region 2: Monmouth and Goodfield**
- **Region 3: Perry and Urbana**
- **Region 4: St. Peter and Belleville**



Check Out [ILSoyAdvisor.com!](https://ilsoyadvisor.com)

**ILSOY
ADVISOR**

ILSoyAdvisor is your go-to source for expert agronomic and management advice for Illinois soybean production. Funded by the Illinois Soybean Association checkoff program, ILSoyAdvisor provides the latest education, resources, webinars, success stories, and more so you can maximize your operation. **Check the site regularly for updates and results from checkoff-funded research.**

See updates and learn more about this project, the research team and other projects at [ILSoyAdvisor.com](https://ilsoyadvisor.com) and [@ILSoyAdvisor](https://www.facebook.com/ILSoyAdvisor) on Facebook and X.

YOUR ISA AGRONOMY TEAM CONTACTS



Jennifer Jones

☎ 217.251.1276

✉ jennifer.jones@ils soy.org



Stacy Zuber

☎ 309.307.9363

✉ stacy.zuber@ils soy.org

