

UNDERSTANDING THE IMPORTANCE OF COVER CROP PLANTING DATE IN ILLINOIS ROW CROP PRODUCTION

PROJECT SUMMARY

To encourage farmers to include more cover crops within their cropping systems, this project is comparing 1) different cereal rye seeding dates and rates before soybean, and 2) different planting dates of two clover species after soybean harvest and ahead of corn. Farmers will gain better insights into cover crop planting and seeding rate recommendations and best management practices.

INSIGHTS GLEANED TO-DATE

- Earlier cover crop planting dates can provide greater biomass and more reliable cover crop establishment of clovers and cereal rye.

QUESTIONS THIS PROJECT WILL ADDRESS

- What is the ideal planting date to maximize survivability of cover crops and biomass production?
- How does cover crop planting date affect seeding rate?
- Which cover crops work best in a soybean/corn rotation?
- How does cover crop termination timing affect the following crop's stand, growth and yield?

WHY THIS RESEARCH IS IMPORTANT

- Cover crops are an important tool in preserving and increasing soil productivity, stewarding water resources, suppressing weeds and retaining nutrients. However, planting cover crops coincides with the busy harvest season. Also, research to influence best practices for successful cover crops has been limited across the vast Illinois growing environments.
- This project consists of two different trials spanning two years to inform how cover crops can best fit within a soybean/corn rotation:
 - Cereal rye after corn harvest before no-till soybean
 - Different clover species after soybean harvest before no-till corn
- The trials will assess optimal planting windows, seeding rates, and termination timing to maximize overwintering; biomass production; and rotational crop stand, growth and yield.

HOW THIS RESEARCH BENEFITS THE FARMER

- Results of this trial are designed to give farmers more cover crop options in their management toolbox. By conducting the trials across the state and over two years, researchers will be able to provide best management guidance on a regionalized basis to take into account the variability across the state, as well as the impact of the unique weather conditions each season.
- Farmers will be equipped with better insights on planting dates and seeding rates, which cover crop species fit best within soybean-corn rotations, and optimum termination timing to maximize biomass production and new crop stand establishment.

ABOUT THE LEAD RESEARCHER

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NATHAN JOHANNING

Extension Educator, Commercial Agriculture, University of Illinois Extension

☎ 618-939-3434

✉ njohann@illinois.edu

Based in Waterloo, Nathan has more than 14 years of crop research and outreach experience in Illinois and works closely with the Midwest Cover Crops Council (midwestcovercrops.org). He conducts research on local farms and the Southern Illinois University Belleville Research Center. He enjoys collaborating with farmers in the St. Louis Metro East counties to understand and research solutions to their production challenges. In his spare time, he unwinds with his family on the farm where he enjoys some of his favorite home-cooked foods and an ice-cold Ski soda.

RESEARCH TEAM

- **Dr. Talon Becker**, Extension Educator, Commercial Agriculture, University of Illinois Urbana-Champaign (UIUC)
- **Luke Merritt**, Research Specialist, UIUC
- **Dr. Giovanni Preza Fontes**, Assistant Professor & Field Crops Extension Agronomist, UIUC
- **Greg Steckel**, Research Agronomist, UIUC

TRIAL LOCATIONS

- **Crop Sciences Research & Education Center, Urbana**
- **Northwest Illinois Agriculture Research & Demonstration Center, Monmouth**
- **Orr Agricultural Research and Demonstration Center, Baylis**
- **Belleville Research Center, Belleville**
- **Ewing Demonstration Center, Ewing**



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YOUR ISA AGRONOMY TEAM CONTACTS



Jennifer Jones

☎ 217.251.1276

✉ jennifer.jones@ilsoy.org



Stacy Zuber

☎ 309.307.9363

✉ stacy.zuber@ilsoy.org



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