

# CONTROLLED-RELEASE N, P & K FERTILIZER MANAGEMENT IN STRIP-TILL 30" ROWS AND NO-TILL 15" ROWS FOR HIGH-YIELD SOYBEANS

## PROJECT SUMMARY

This project aims to better understand how strategic nutrient management can impact soybean yield across northern and central Illinois. It will evaluate different nutrient strategies under no-till, strip-till, 15" rows, 30" rows, with cover crops, and without cover crops. Data will be used to inform future year trials and ultimately provide farmers with best management practices for nutrient management in soybean crops.

## QUESTIONS THIS PROJECT WILL ADDRESS

- ① Which fertilizer, row spacing and reduced-tillage regimens most consistently increase soybean yield?
- ① When is the optimal timing of fertilizer placement to positively impact soybean yield?
- ① What is the right combination of nitrogen (N), phosphorous (P), potassium (K), sulfur (S) and micronutrients to push soybean yields to the next level?

## WHY THIS RESEARCH IS IMPORTANT

- ⚠ In Illinois, it's more common for farmers to focus fertilizer management on their corn crop with the belief some fertilizer will remain for their soybean crop. However, this approach may result in yield being left in the field.
- ⚠ In addition, little is known about the impact of N and S on soybean yield in no-till, strip-till and cover cropping systems, as well as when to time applications to optimize nutrient uptake for soybean growth and yield.

## HOW THIS RESEARCH BENEFITS THE FARMER

- 🎯 Ideally, these trials will continue for two more years to gain adequate data that can be analyzed in conjunction with data from similar trials.
- 🎯 Results from this and similar trials will enable more farmers to assess how reduced tillage, strategic nutrient management and row spacing can fit into their operations to improve soybean yield.
- 🎯 More specifically, this trial hopes to show how strip-till can replace full width tillage and fertilizer banding to improve soybean yields.

## ABOUT THE LEAD RESEARCHER

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With decades of experience in the fertilizer industry, Schaefer has conducted research in strip-till and soil conservation systems, N management and the maximum return to nitrogen (MRTN) program. In his role at IFCA, he's responsible for working with University of Illinois researchers on developing research protocols to continue improving nutrient management recommendations. Prior to IFCA, he spent 31 years at Illini FS, during which time he was able to earn an undergrad and master's degree while growing his young family and discovering his favorite vacation spot is Maui.

## RESEARCH TEAM

- **Eric Miller**, Farmer, Director, Piatt County SWCD Board
- **Lowell Gentry**, Principal Research Specialist in Agriculture
- **Jason Solberg**, CCA, Illinois Fertilizer and Chemical Association

## TRIAL LOCATIONS

- **Five sites across northern and central Illinois**

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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.

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