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| Please use this form to clearly and concisely report on project progress. The information included should reflect quantifiable results that can be used to evaluate and measure project success. Comments should be limited to the designated boxes. Technical reports, no longer than 4 pages, may be attached to this summary report. |
| Project Number:  | 2223R0036 |
| Project Title:  | How does cover crops impact soil water dynamics and soybean production in Louisiana? |
| Organization:  | Louisiana State University-Agricultural Center |
| Project Lead Name: | Xi Zhang |
| Report Date: | Sep. 14, 2023 |
| **In the Progress Summary section below, please provide a brief summary of project progress in lay language that will be shared publicly in the** [**National Soybean Checkoff Research Database**](https://www.soybeanresearchdata.com/)**. Do not include any confidential or proprietary information. If no lay language is provided, the contents of this entire report will be published in the** [**National Soybean Checkoff Research Database**](https://www.soybeanresearchdata.com/)**.** |
| Progress Summary (in non-proprietary lay language suitable to be shared publicly): |
| The project started on April 1, 2023. In the past quarter (7/2023-9/2023). we1. Installed a METER ATMOS 41 environment monitor to collect weather data for estimating evapotranspiration to calculate soil water budget.
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| Detailed Progress Status – Expand upon the above section. What key activities were undertaken and what were the key accomplishments during this reporting period? List each key deliverable from the proposal and describe progress made (or not made) toward achieving it, including metrics were appropriate. |
| 1. The METER ATMOS 41 weather station was installed between the research plots to continuously collect weather data, such as humidity, precipitation, temperature, solar radiation, wind speed and atmospheric pressure. These data are used in Penman-Monteith equation with crop coefficients (FAO 56) to quantify the amount of evapotranspiration or water loss from cover crops and evaluate cover crops water use. This an important component for calculating the soil water budget under different treatments and estimating the actual effects of cover cropping on soil water storage changes.
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