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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 four pages, may be attached to this summary report. |
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| Project Title:  | Enhancing Stink Bug Resistance in Midsouth Soybean |
| Organization:  | LSU AgCenter and University of Missouri-Fisher Delta Research Center |
| Principal Investigator Name: | Dr. Jeffrey A. Davis |
| Other investigators:  | Dr. James Grover Shannon |
| Report Period: | 9/16/2022 to 12/15/2022 |
| Project Status: Ongoing; year 1 of a three-year project |
| **Yield Tests**We selected three breeding lines from the stink bug resistant population in the MU-FDREEC Preliminary Yield Tests (PYT). These lines yielded 98 – 120% of the non-Xtend check mean and 63 – 78% of the Xtend check mean at the Portageville, MO environments. The same lines were evaluated in two environments in the COOP, the lines yielded 74.8 – 92.6% of the check mean. These lines will be evaluated in the 2023 AYT. **New Stink Bug Resistant Lines** We selected twenty breeding lines derived from five stink bug resistant populations. These lines were selected based on plant architecture and pod load potential. These lines will be evaluated in the 2023 PYT. **Evaluation of Stink Bug Resistant Lines**Y22 lines were evaluated in small plot trials at both the Ben Hur Research Farm (Baton Rouge, LA) and the Dean Lee Research Farm (Alexandria, LA). Trials were harvested in late September and early October. Seed damage and 100 seed wt. evaluations are ongoing. Laboratory life table assays were completed in November and data analysis is ongoing. Current lines exhibit reduced survival to adulthood, reduced egg lay, and reduced feeding.  |