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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. |
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| Project Title:  | Enhancing Stink Bug Resistance in Midsouth Soybean |
| Organization:  | LSU AgCenter |
| Principal Investigator Name: | Jeffrey A. Davis |
| Report Period: | December 15, 2023, to March 15, 2024 |
| Project Status: Ongoing |
| The following report is what was presented at the January board meeting. We are preparing for planting and hope for good weather. Greenhouse work has just begun and will finish in June once temperatures are too warm within the greenhouse to continue.***University of Missouri (Drs. G. Shannon and F. Lin)***Lines for further screening continue to be developed.**Advanced Yield Trials 2024**: 4 lines

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| **Line** | **MG** | **Pedigree** |
| S22-24339 | 4-M | TX12-1061 x S16-8898 |
| S22-24366 | 4-M | TX12-1061 x S16-8898 |
| S22-24644 | 4-M | S16-15896 x 1035 |
| S22-24701 | 3-M | S15-10879 x 1039 |

**Generation Advancement:** We have ten populations with different purposes being advanced in Puerto Rico.

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| **Cross number** | **Pedigree** | **Purpose** |
| S23-514 | S21-21984 x S18-6328 | Cultivar development |
| S23-515 | S21-22147 x PI 097139 | Cultivar development |
| S23-516 | S21-22147 x PI 85665 | Cultivar development |
| S23-517 | S16-7922C x S21-21942 | Cultivar development |
| S23-518 | S16-9478 x S21-21942 | Cultivar development |
| S23-580 | S21-22147 x S21-21942 | Cultivar development and gene mapping  |
| S23-581 | S21-22147 x IAC-100 | Cultivar development and gene mapping  |
| S23-582 | S21-21975 x PI 085665  | Cultivar development and gene mapping  |
| S23-583 | S21-21975 x PI 097139 | Cultivar development and gene mapping  |
| S23-584 | S21-22147 x PI 097139 | Cultivar development and gene mapping  |

***Louisiana State University AgCenter (Dr. J. A. Davis)***Once again, last year’s soybean production was strongly affected by the weather. The extreme drought felt throughout Louisiana hampered production. One positive from the drought was the reduced insect pressure. But even with lower stink bug numbers, we still saw significant insecticide applications go out to preserve what yield was to be had. As is typical for the Midsouth, stink bug pressure for 2023 was a complex of species, with browns accounting for 14.2%, greens accounting for 31.5%, and redbandeds accounting for 54.3% of total stink bugs found. Progress towards a stink bug resistant soybean continues. We screened forty-nine advanced soybean entries from the University of Missouri Soybean Breeding program. Results for the screening are below. The damage index is a measure of seed injury caused by stink bugs. The seed was saved and will be repeated next year.We have received new lines for screening from the University of Missouri and continue introgression of resistance into high yielding varieties. |