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| Project Number:  | 1920-172-0125-A  |
| Project Title:  | Enhanced Pest Control Systems for Mid-South Soybean Production |
| Organization:  | LSU AgCenter |
| Principal Investigator Name: | Trey Price |
| Report Period: | 2nd Quarter 2019 |
| Project Status: Active |
| [x]  I understand that the information contained in this report will be posted to the website and visible to the public.[ ]  I have included a brief non-technical summary of this report that can be posted to the website for public viewing.[ ]  I DO NOT agree to allow the information contained in this report to be posted to the website. |
| **Louisiana Price:** Seed for the PI increase has been retrieved from GRIN and sent to Missouri for increases this season. Locations for the 40-entry trial (lines from AR, LA, and MO) were planted in St. Joseph and Alexandria and are up to acceptable stands. **Ward:** Analyses have been completed for both the breeding line and commercial cultivar projects for years 2016-2018. Publications have been written and are in review with authors and journal reviewers. Promising sources of CLB resistance in breeding lines have been advanced in trials while many entries have been dropped. Updated lists have been distributed to collaborators. Further analyses are being conducted and written for publication for fungicide efficacy on CLB and symptom correlation. Fungal isolates are being prepped for storage for hand-off. A selective medium for easier isolation of Cercospora has been developed and is being tested. **Padgett:** The 40-entry trial has been planted at Ben Hur in Baton Rouge and is up to an acceptable stand. **Davis:** Stink Bug Project: Inadequate seed supplies prevented screening at multiple locations, and all seed was to Missouri for increase and crossing where there will be new lines next season. CLB Variety Trial: We have planted the 40-entry trial at Baton Rouge and Alexandria. Emergence is fair considering the dry weather and then heavy rains. We will begin sweeping for stink bugs at R1. **Buckley:** No report received.  **Alabama Sikora:** No report received.**Arkansas Ford/Tolbert:** The trial was planted on Rohwer Station in Kelso, AR, June 5, 2019.**Mississippi Allen:** Plots should be planted as soon as we have enough moisture in Stoneville and Verona. To date, seed has been received and is ready to be planted. Trials will be planted in Stoneville and Verona to address the varietal differences. Work also continues with colleagues from LSU to publish the results of the first several years of the field trials to consider the varietal differences from the PI lines planted as well as the commercial varieties. **Missouri Chen: CLB Variety Trial:** We are continuing our collaboration on the CLB variety trial in 2019. This year the test has 40 entries comprised mostly of Missouri high-yielding lines along with some breeding lines from Arkansas, Louisiana and commercial checks. The test is grown in one location with 3 replications for yield and will be monitored for CLB and Frogeye Leaf Spot (FLS) occurrences. The test was planted on 5/24/19 with good field emergence. **CLB PI Evaluation:** We are also continuing our collaboration on growing and evaluating the PI set for CLB reactions in 2019. There are 57 PI’s in this test that have been narrowed down from the previous year’s research. These plots will be monitored for CLB and FLS occurrences at three rating intervals. **CLB Crossing:** We have included seven selected PIs with best CLB resistance in 2019 crossing block and plan to make 8-10 new crosses with high-yielding conventional, RR1, R2Y, and LL lines. **Stink Bug Project:** We are advancing 7 breeding populations in Puerto Rico and Costa Rica, 1 from R2Y cross, 3 from RR1 crosses, and 3 from conventional crosses. All these crosses are involved with high-yielding elite lines and five stink bug (SB) resistant parents. These populations will be used for genetic mapping and breeding purposes. We have planted 6 SB-resistant lines in 2019 crossing block. We plan on making 5-10 new crosses between lines with stink bug resistance and high yielding conventional, RR1 R2Y and Liberty-Link (LL) lines in summer 2019. We are also increasing the lines with stink bugs resistance for Jeff Davis to have an adequate seed supply to enter into collaborative variety trials in 2020.**Tennessee Kelly: No report received.****Texas Zhou**: As arranged, this year we continue conducting the CLB resistance variety trial at Texas A&M AgriLife Research and Extension Center, Beaumont, Texas. This trial consists of 40 entries with each being replicated four times for disease resistance and yield performance evaluation. Plots consist of raised beds 20 ft long. The trial was planted on May 29, 2019. The emergence is good, and the plants are at the V1 stage as of June 12.  |