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| Project Number: | 1720-172-0124 |
| Project Title: | Enhanced Pest Control Systems for Mid-South Soybean Production |
| Organization: | LSU AgCenter |
| Principal Investigator Name: | Trey Price |
| Report Period: | 1st Quarter 2017 |
| Project Status: Active | |
| **Louisiana**  **Price:** In the winter months, there is no field work to report other than areas at Alexandria and St. Joseph have been reserved for planting the 30-variety screening, PI screening, and stinkbug screening. Over the off season, 2016 results have been presented at the MSSB meeting prior to the Conservation Tillage Cotton and Rice Systems tillage conference, multiple grower meetings, and at the project meeting in Pensacola, FL, prior to the SSDW meeting. During 2016, the 30-entry trial was successfully executed at 12 out of 15 locations. Both Hollier locations and the Zhou location were lost to flooding. The ~500 entry PI screening was successfully completed in 5 locations. The stinkbug trial was lost in the TX location, successful in 2 LA locations, and had no insect pressure in the MO location. Plans are to move the MO stinkbug location to Monticello, AR or add another LA location. **Buckley:** Thirty soybean lines were evaluated for Cercospora Leaf Blight (CLB) at 12 locations in 6 states during 2016. The 30 lines will be reevaluated a second year in 2017 for CLB in replicated trials at 15 locations in 7 states (AL, AR, LA, MO, MS, TN, TX). The lines will be rated for incidence and severity of the CLB symptoms of bronzing/purpling, leaf blight, and petiole lesions. The percent of purple seed stain in seed of each line will be recorded. Yield of each line will be determined. In addition, 520 Plant Introduction (PI) lines evaluated for the three CLB symptoms in 2016 at 5 locations in 3 states will be reevaluated in 2017 at 7 locations in 5 states (AR, LA, MO, MS, TN).  **Arkansas**  **Orazaly:** Total of 500 PIs with adequate amounts of seed were harvested during fall. Disease pressure was not significant in AR locations compared to MS. MS data showed that out of 500 PIs screened, 38, 203, 163, and 92 had CLB scores of 0, 6, 7, and 8, respectively. For FLS, majority of the PIs showed tolerance in both locations (Table 1). We will repeat the test in 2017 in seven southern locations (Alexandria, Red River, Stuttgart, Pine Tree, Stoneville, Portageville, and Jackson). Purple Seed Stain (PSS) were scored using seeds from two AR locations but there were not many with PSS. Data from Louisiana will be added in the next report. Association mapping analysis using each location data and combined data from all locations will be added in the next report. Additionally, extra set of 100 seed for those PIs were requested from GRIN and will be increased in AR in 2017. **Faske:** The field site for screening soybean germplasm from UA and LSU will be at the UA Extension Station near Newport, AR. Field prep will not begin for another few weeks although it seems spring is in full swing.  **Mississippi Allen:** Data summary as well as preparation for the 2017 season are essentially the only activities to report at this particular time. The MSU portion of the project attended the planning meeting last week and will provide space for:  -foliar fungicide trials to determine the role of fungicides in managing Cercospora blight.  -two locations for the mini-variety trial for the breeding component of the CLB project (similar to 2016 we will have one trial in Stoneville and a second trial location in Verona, MS (northeast MS)).  -MSU will also provide an additional location for the PI lines from AR/MO to rate for foliar disease during the season and provide those information to the breeders to increase their knowledge base on CLB as well as additional foliar diseases as relates to soybean production in the southern U.S. | |