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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: | 2nd Quarter 2017 |
| Project Status: Active |
| **Louisiana****Price:** The 30 entry-variety trial has been planted at St. Joseph and is in the vegetative stages. No disease has been observed to date and the stand is satisfactory. Due to continuous rainfall and less-than-timely receipt of seed, the 30 entry variety trial and the 500 entry PI set has not been planted yet in Alexandria. If we miss the rain Monday, it will likely be planted next week (3rd week of June). **Hollier:** We are waiting for the rain to stop and dry enough to plant our 30 varieties at Ben Hur.  The seed are in, packaged and ready.  Need cooperative weather. **Alabama Sikora:** The 30-entry variety trial will be established in Fairhope during early June.**Arkansas Orazaly:** Ten cultivars and six advanced lines from University of Arkansas, including high-yielding conventional, high-yielding Roundup Ready 1 and 2, and high protein lines, were entered in the 2017 Cercospora Leaf Blight (CLB) Variety Trial that is conducted in seven different states (MO, TN, AR, MS, AL, LA, and TX). The screening of 500 PIs is being conducted in seven southern locations (Alexandria and Red River, LA; Stuttgart, Keiser, Rohwer, AR; Stoneville, MS, Portageville, MO, and Jackson, TN). Additionally, extra set of 100 seed for those PIs were requested from GRIN and will be increased in AR in 2017. For association mapping analysis, we used Louisiana and Mississippi data since AR did not have much disease pressure in 2016. Based on the preliminary one year petiole severity data from LA and MS, we found regions on chromosomes 12 and 18 that had SNPs associated with the trait. Although it is preliminary results, it is worth noting that PSS resistance gene, *Rpss1,* is located on chromosome 18 (Jackson et al., 2008). Having data from seven locations in 2017 will help to identify molecular markers to be used for Marker assisted selection. More detailed analysis will be reported once 2017 data is collected. F1 hybrid seeds were planted in Fayetteville, AR and the presence of morphological markers will be checked this summer. **Faske:** Screening soybean germplasm for susceptibility to *Cercospora* diseases from UA and LSU is planned to be conducted at the UA Extension Station near Newport, AR. Since mid-April these fields have remained wet thus we have not been able to plant any foliar fungicide or disease screening trials at this location. Based on today’s forecast it will be late next week before we will be able to plant these trials. Typically we plant this location in early June, so this is not much later than normal. **Mississippi Allen:** Plots have been planted to address the role of fungicides in managing Cercospora blight. Two different Cercospora blight trials were planted in Stoneville with susceptible varieties. In addition, a variety trial will be planted in Verona, MS over the next few weeks when the field has time to dry out. The second location will be planted in Stoneville in a similar time frame depending on the weather. In addition to the fungicide portion and the variety trial to meet the needs of the breeders, a PI-line trial will be planted to aid Dr. Chen from the University of Arkansas. Single row lines (500) will be planted either the end of this week or the beginning of next to address the susceptibility of the lines to Cercospora blight. **Missouri Chen: LENGTHY REPORT ATTACHED.** |