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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. |
| Project Number:  | 1420-732-7231 |
| Project Title:  | Effects of the Introduction of Feed Grains into Mid-South Soybean Production Systems |
| Organization:  | Mississippi State University |
| Principal Investigator Name: | Drs. Bobby Golden and John Orlowski |
| Report Period: | July-September 2016 |
| Project Status: Ongoing |
| Mississippi State University-Stoneville-Bobby Golden and John OrlowskiCorn, grain sorghum, and soybeans have all been harvested. Soil and residue samples will be taken this week and the residue management activities (ie. burning) performed next week. Corn and soybean yields were good, but grain sorghum yields were poor due to bird and sugarcane aphid damage. A post-doctoral researcher has been extended an offer, which we expect her to accept. She will begin work on December 1st. Once all 2016 yield data arrives, data analysis for the first three years of the study will begin. Mississippi State University-Starkville-Trent IrbyThe Brooksville, MS location of this project is at the harvest stage. The soybean plots are approaching the point of being ready to harvest. Grain sorghum plots are expected to be harvested within the next week while the corn has already been harvested. Yield data for corn harvest are currently being entered and preparations are underway for the remaining reside and soil samples to be collected for this year. University of Arkansas-Jeremy RossNewport Extension Center:Dramatic visual differences in irrigated and non-irrigated plots.  Corn and grain sorghum plots have been harvested, and I’m waiting for the weights and moistures to calculate grain yields.  Non-irrigated corn had very poor yields due to hot, dry conditions during June and July.  Irrigated corn yields will be lower than normal due to heavy green snap due to high winds during a thunderstorm on June 15, 2016.  Grain sorghum yields will be lower than expected due to heavy bird damage.  Soybean plots will be ready for harvest in the next 10-14 days.  Corn residue samples are being pulled, and soil samples will be pulled after soybean harvest.  Residue management plots will be burned after soybean harvest as well.  Early in the season, this test looked the best it had looked over the past three years, but hot, dry conditions during June and July and wind damage caused some yield loss.Pine Tree Research Station:Dramatic visual differences in irrigated and non-irrigated plots.  Corn and grain sorghum plots have been harvested, and I’m waiting for the weights and moistures to calculate grain yields.  Walking the plots late in the season, corn and grain sorghum yields should be similar to previous years.  Soybean plots should be ready for harvest in the next 10-14 days.  Corn residue samples are being pulled, and soil samples will be pulled after soybean harvest.  Residue management plots will be burned after soybean harvest as well.  Early in the season, we had issues with establishing grain sorghum stand due to bird pressure.  Grain sorghum yields may be decreased due to later than anticipated planting.University of Missouri- Gene StevensThis quarter irrigation sidedress N was applied to corn and sorghum. Plots were chopped to kill pigweeds that were not control with herbicides. Double crop soybeans were planted after wheat. Irrigation was applied to the appropriate plots. Corn and grain sorghum are mature and ready to harvest.Louisiana State University- Ronnie LevyCorn and sorghum has been harvested and soybeans should be harvested tomorrow this week. Soil samples, residue samples, and burning treatments will be performed within the week. Texas A&M University- Clark Neely and Ronnie SchnellCollege Station has received 29.8 cm of rainfall from June through August, the majority of which came in August (22.6 cm). Following a drier than average June and July, the second half of August was abnormally wet (333% above monthly average). Temperatures were near normal for June, 2 degrees above normal for July and 1.2 degrees below normal in August due to the number of rainy days. The timing of the rain was problematic. Soybeans were drying down as the extended three week wet period began which caused rotting of seed in the pod. A desiccant was applied September 9 and plots will be harvested this week, but yield and seed quality will be extremely low. Corn and sorghum were harvested on August 11 and August 5, respectively, before the rain in mid-August. Sorghum was heat stressed during flowering and flooded soils earlier in the year reduced tillering resulting in very low yields (1777 lb/a average). Corn yields were low and some plots were unharvestable due to wild hog damage. Yields were variable and averaged 116 bu/a. Wheat plots that were harvested in May averaged 36 bu/a, which is slightly below average, but near expectations due to delayed planting in the fall from wet field conditions. Irrigated plots received 1.75” of water on June 23, July 6, and again July 22. Soybeans were sprayed with Karate Z (2.6 oz/a) on June 28 and July 8 to control loopers and stinkbugs. Glystar (2 pt/a) was applied via backpack sprayer between soybean rows for weed control on July 1. Soil samples were collected June 29 and 30 for in-season nematode analysis on all plots (post-harvest for wheat plots). Post-harvest nematode soil samples were collected in corn plots September 7 while sorghum and soybean plots will be sampled after soybean plots are harvested since all plots received a desiccant and terminated grain sorghum growth as well. There was a field day held June 16 which showcased the trial and economics of the different cropping rotations were compared across the first two years.  |