**Quarterly report for MSSB**

**Project: Effects of the Introduction of Feed Grains into Mid-South Soybean Production Systems**

Soil samples from all study locations were sent to LSU soil testing lab in May. Soil samples for two locations sent to LSU Soil Testing lab is already analyzed. However, soil samples from other locations are not yet analyzed. Soil analysis for nematode populations was completed for all locations in Stoneville pathology lab.

**Stoneville, MS:**

Wheat was planted on late November in 2018 for rotation 12 (corn-soybean-wheat-soybean), one of the double crop rotations. Wheat growth was slow because spring season in Stoneville was very wet due to rains every week. The wheat was harvested on June 30. After that, the wheat residues were burned in residue management treatments and then, all plots were disked and hipped again. Soybean was planted in those wheat plots on June 1. Double crop soybeans were sprayed with 48 oz gramoxone and 20 oz boundary 0.25% surfactant.

In all other rotations, corn, sorghum and soybean were planted on 24 April and 30 April, respectively. All plots received pre-emergence herbicide applications 30 Aprilth. Nitrogen was applied to corn and sorghum at 240 lbs N/acre and 60 lbs N/acre as UAN. Nitrogen was applied in two split applications; half after corn emergence and remaining half was applied on 10 June. All crops are in fine condition as of now.

**Missouri:**

Corn was planted on April 23. This was a replant date after a poor stand count rating was conducted, we initially planted April 11th. The sorghum and soybeans were planted on the same day- May 13th, we only had to plant once and the beans and sorghum are in great shape. We have irrigated our irrigated plots just twice so far in the season due to the heavy rainfall we have received since our planting season began. A flow meter was used and we have put about 1.5 inches’ irrigation on both times.

Corn: Gramoxone as the burndown; Atrazine and round up as a post emergence application; Dual and Round up as a clean-up application.

We fertilized corn with urea with agrotain blended June 11th.

Soybeans: Gramoxone as the burndown; Section grass herbicide, Charger max,and Prefix as the post emergence application; Round up and Dual for the clean-up application.

Milo: Gramoxone as the burndown and Huskie for the pre-emergence application.

**St. Joe, LA:**

Burned residue treatments November 29, 2018. Double disked, field cultivated, re-hipped and rolled beds on all ground, except winter wheat treatment, November 30, 2018. No cultivation was performed on the wheat treatment due to wet weather. Wheat was planted December 3, 2018. Sprayed wheat with PowerFlex HL at 2 oz/a + non-ionic surfactant on January 11, 2019. Wheat was sprayed with Osprey at 4.5 oz/a plus Harmony SG at 0.9 oz/a plus a non-ionic surfactant on February 1, 2019. Fertilized wheat on February 5 and March 27, 2019 with 28-0-0-5 applying 50 units of N each time. Test area was fertilized with 200 lb per acre of a triple super phosphate plus potash blend (0-23-23). Corn was planted on March 22, 2019 and fertilized May 7, 2019 with 28-0-0-5 at 240 units of N. Soybeans were planted April 24, 2019. Grain sorghum was re-planted May 17, 2019. Grain sorghum was fertilized May 22, 2019 with 28-0-0-5 at 125 units of nitrogen per acre. Wheat was harvested June 5, 2019. Wheat stubble was mowed and residue treatments burned June 10. Soybeans following wheat were planted June 11, 2019. Corn irrigation treatments have been irrigated 3 times and soybean once.

**Arkansas:**

**Newport, AR:**

All crops were planted on 29 April 2019. Milo and corn received first N application on 30 April at rate of 1.91 lbs and 3.0 lbs per plot, respectively. Milo and corn received second N application on 15 May at rate of 4.99 lbs and 7.98 lbs per plot, respectively. Corn and Soybean also received potassium application at 1.91 lbs/plot. Herbicide application list for each crop is provided below.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Crop** | **Chemical** | **Rate** |
| 30-Apr | Milo (pre) | Dual | 1.3 pts. |
| 30-Apr | Milo (pre) | Atrazine | 1 qt. |
| 30-Apr | Milo (pre) |  |  |
| 20-May | Milo | Dual | 1.3 pts. |
| 20-May | Milo | Atrazine | 1 qt. |
| 30-Apr | Corn (pre) | Acuron | 2.5 qt. |
| 20-May | Corn | Roundup | 1 qt. |
| 20-May | Corn | Laudis | 3 oz. |
| 20-May | Corn | Dual | 1 pts. |
| 20-May | Corn | Atrazine | 2 qt. |
| 30-Apr | Soybean (pre) | Boundary | 2 pts. |
| 20-May | Soybean | Roundup | 1 qt. |
| 20-May | Soybean | Prefix | 2 pts. |

**Colt, AR:**

Corn and milo were planted on 3 April 2019. Corn was replanted on 24 April, 2019. Corn and Milo received N application on 15 May at 3 lbs and 1.5 lbs per plot. Milo (24 April), corn (24 April) and soybean (30 April) received K application at rate of 2.68, 2.87, and 2.30 lbs per plot.

Milo (24 April), corn (24 April) and soybean (30 April) received P application at rate of 3.99, 4.99, and 2.99 lbs per plot. Herbicide application list for each crop is provided below.

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Crop** | **Chemical** | **Rate** |
| 24-Apr | Re-Planted Corn Only (Pre) | Dual | 1.3 pts. |
| 24-Apr | Re-Planted Corn Only (Pre) | Atrazine | 1 qts. |
| 16-May | Milo | Dual | 1.4 pts |
| 16-May | Milo | Atrazine | 1 qts. |
| 16-May | Corn | Dual | 1.3 pts. |
| 16-May | Corn | Atrazine | 1 pt. |
| 24-May | Corn | Round up | 1 qts. |
| 29-May | Milo | Facet | 1 qts. |
| 29-May | Milo | Atrazine | 1 pt. |
| 29-May | Soybean (Pre) | Boundry | 2.25 pts. |
| 29-May | Soybean (Pre) | Round up | 1 qts. |
| 12-Jun | Soybean | Prefix | 2 pts. |
| 12-Jun | Soybean | Round up | 1 qts. |
| 10-Jul | Soybean | Round up | 1 qts. |