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#### MISSISSIPPI SOYBEAN PROMOTION BOARD PROJECT NO. 63-2017 (YEAR 2) 2017 Annual Report

## Title: On-farm, Interactive Soybean <u>Management Verification Program (MVP)</u>

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## BACKGROUND

Within Mississippi, there is a range of growers' attitudes toward, and adoption of, Mississippi State University Extension recommendations. There is a subset of soybean growers that rely on Extension information and are early and enthusiastic adopters of recommendations resulting from Mississippi State University research programs. However, there is also a subset of soybean growers in Mississippi that are either unaware of or are reluctant to follow Mississippi State University recommendations.

Soybean yield or production efficiencies have the potential to be substantially increased on growers' operations if appropriate Extension recommendations are followed. There are already ample meetings, field days, and online resources available to growers regarding extension recommendations. One strategy to increase adoption of recommended production practices is one-on-one interaction and demonstration of the complete set of extension recommendations on growers' operations. Working directly on grower farms to compare university recommendations with current practices will increase adoption, and benefit not only the grower but also help to inform future directions for soybean research.

Farmers wishing to participate in the Management Verification Program were recruited. The farmers worked with the MVP coordinator to pick two similar fields at each location for the program. Fields were selected that had similar soil type, slope, fertility, irrigation capacities, and size. The cooperating farmers were instructed to manage one field using their standard management practices, while the MVP coordinator assumed responsibility for management of the other field. The MVP coordinator visited all fields weekly and recommended management practices based on MSU Extension recommendations. The fields were harvested at the end of the year and yields from the farmer's field and the MVP field were compared.

# **OBJECTIVES**

**Objective 1:** Increase adoption of Mississippi State University Extension recommendations by soybean farmers in Mississippi.

**Objective 2:** Increase profitability and efficiency of individual farms by personally working with growers to identify and fix production issues.

# **PROGRESS AND ACTIVITIES**

Management activities and yield data were compiled and compared between the farmer's fields and the MVP fields. The results of the program are presented in this report.

#### IMPACTS AND BENEFITS TO MISSISSIPPI SOYBEAN PRODUCERS

The program started out with eight participating producers; however, two were lost during the growing season. Of the remaining 6 locations, one was in Tunica County, two were in Grenada County, two were in Leflore County, and one was in DeSoto County. The fields encompassed both dryland and furrow-irrigated fields.



The results of the MVP comparison can be seen in the below tables. The first table is the MVP field while the second table is the farmer field.

In 5 of the 6 study locations, the MVP field produced a greater yield compared to the field where standard farmer practices were applied. Tunica was the only location where the farmer field outperformed the MVP field. Yield increases for the MVP-managed fields ranged from 2 to 14 bu/acre.

In general, seeding rates used in the MVP fields were lower than those used in the farmer fields. Also, in general more aggressive herbicide programs encompassing both pre-emergence and post emergence herbicides with overlapping residuals were used in the MVP fields compared to the farmer fields.

This project suggests that farmers can improve their management practices by following Mississippi State University Extension recommendations.

# END PRODUCTS-COMPLETED OR FORTHCOMING

The farmers that participated in the program in 2017 indicated that the program helped them improve their management practices and connected them better to Extension. However, since this program is no longer continuing, these benefits will no longer be realized.



# WITH UP-TO-DATE SOYBEAN PRODUCTION INFORMATION

# **MVP TABLE**

County	Variety	Field Size (ac)	Previous Crop	Seeding rate (seeds/acre)	Planting Date	Emergence Date	Harvest Date	Yield adj. to 13% moisture (bu/ac)
Tunica	Dyna-Grow S49LL34	40	Rice	120K	5-16	5-24	10-19	40.95
Leflore-1	Asgrow 4632	50	Soybeans	120K	5-10	5-19	10-18	62.14
Greneda-1	Asgrow 4632	40	Soybeans	120K	4-26	5-6	10-1	48.60
Greneda-2	Dyna-Grow S45XS66	44	Soybeans	120K	5-20	5-27	9-27	41.77
Leflore-2	Asgrow 4632	40	Soybeans	120K	4-10	4-19	9-9	70.51
DeSoto	Agventure 48E3RR	35	Soybeans	120K	5-18	5-26	10-2	58.21

#### FARMER'S TABLE

County	Variety	Field Size (ac)	Previous Crop	Seeding rate (seeds/acre)	Planting Date	Emergence Date	Harvest Date	Yield adj. to 13% moisture (bu/ac)
Tunica	Dyna-Grow S49LL34	40	Rice	140K	5-16	5-24	10-19	45.12
Leflore-1	Asgrow 4632	50	Soybeans	140K	5-10	5-19	10-18	57.86
Greneda-1	Asgrow 4632	40	Soybeans	140K	4-26	5-6	10-1	46.34
Greneda-2	Dyna-Grow S45XS66	44	Soybeans	140K	5-20	5-27	9-27	41.21
Leflore-2	Asgrow 4632	40	Soybeans	140K	4-10	4-19	9-9	67.58
DeSoto	Agventure 48E3RR	35	Soybeans	140K	5-18	5-26	10-2	44.55