

Precision Agriculture Initiative

**College of Agriculture and Life Sciences
Mississippi Agricultural and Forestry Experiment Station
Mississippi State University**

**The Impacts of the Monsanto Gift to CALS and MAFES
2014 - Present**



Gift Agreement

Between

MONSANTO

and the

Mississippi State University Foundation, Inc.

The following sets forth the agreement between Monsanto and the Mississippi State University Foundation with regard to the (I) Background, (II) Purpose, (III) Schedule and Form of Contributions, (IV) Recognition and (V) Administration of a \$2,760,000 gift from Monsanto.

Spring/Summer 2014

**Approached by Monsanto about a gift
Meetings with Monsanto / Climate Corp**

October 2014

Signed Gift Agreement: \$2,760,000

Spring 2015 – Fall 2015

**Curriculum Development begins - Certificate
April 2015: 2+2 Pathway Agreement with Hinds CC
Cluster Hire of Precision Ag Faculty (7 total linked)**

Fall 2015 / Spring 2016

**Curriculum approvals completed
Monsanto Scholarships awarded for 2016-2017 AY
Field Scientist Program Graduate students identified
Precision Agriculture Labs Renovated**

Fall 2016

Students Enrolled in Certificate Program

Etc.....



A Special Invitation

Please join **Governor Phil Bryant**, Mississippi State University President **Dr. Mark Keenum**, The Gaddis Farms President **Ted Kendall III** and Hinds Community College President **Dr. Clyde Muse** for an exciting announcement and vision for Aviation at Hinds Community College.

April 9, 2015 – 2 p.m.
2 Plus 2 Signing Ceremony & Precision Agriculture Partnership
John Bell Williams Airport / Raymond Campus

The John Bell Williams Airport, owned and operated by Hinds Community College, sits at the crossroads of economic development in southwest Hinds County. With multi-million dollar improvements in operations and infrastructure during the past few years, the airport has spurred the expansion of aviation career programs at Hinds. This new partnership with Mississippi State University signifies a bold step in advancing the agriculture economy of Mississippi. The Unmanned Aerial Systems program at Hinds is the only one of its kind in Mississippi and among the handful of programs in the Southeast.

AVIATION CAREERS at Hinds Community College:

- Commercial Aviation
- Aviation Maintenance Technology
- Aviation Technology – Program Options
 - Air Traffic Control Technology
 - Airport Operations
 - Aviation Security Technology
 - Unmanned Aerial Systems



Bryant



Keenum



Kendall



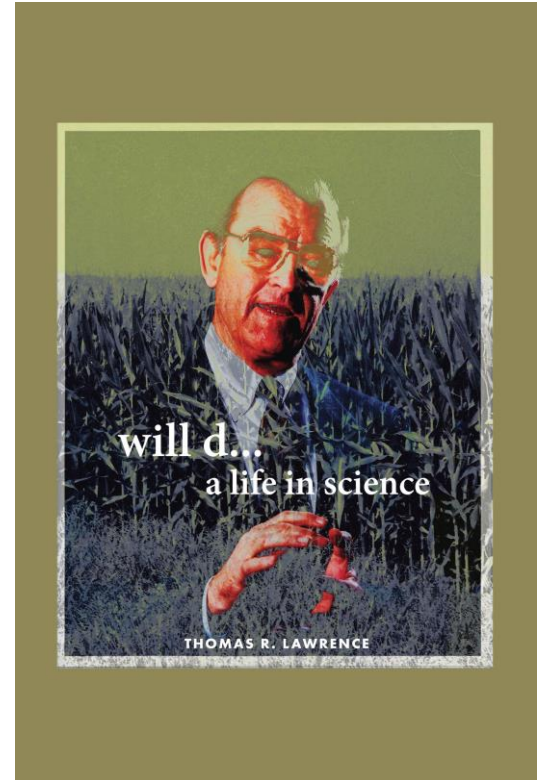
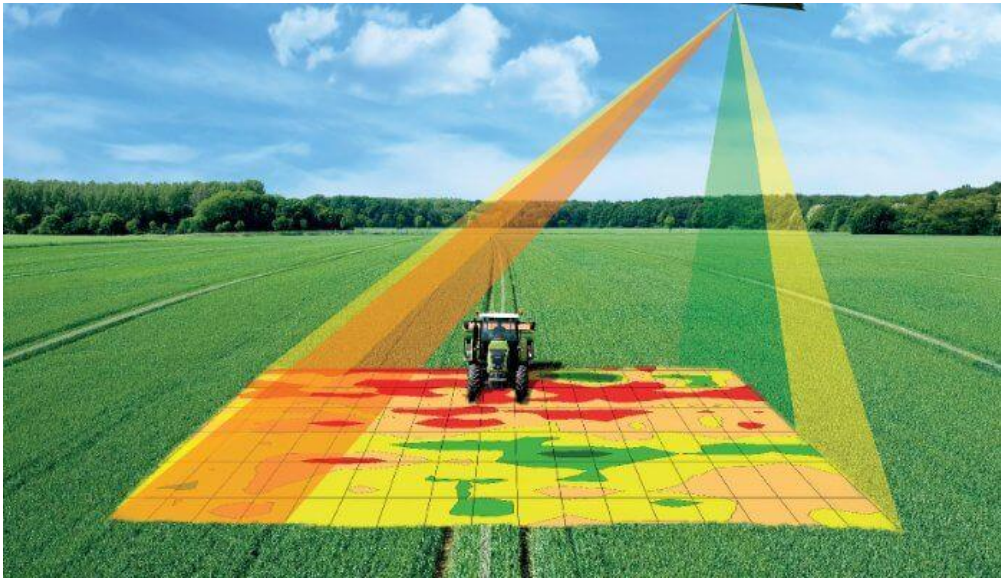
Muse

Precision Agriculture: East Mississippi Community College and Mississippi State University

Amber El-Amin, Miles Foshee, David Garraway, Megan Holland,
Kyle Morales and Sandra Murray
Spring 2015 MBA Candidates



- **Monsanto Precision Agriculture Curriculum Fund**
- **Monsanto Precision Agriculture Annual Scholarship Fund**
- **Will D. Carpenter Distinguished Field Scientist Graduate Assistantship Fund**



- A. The Mississippi State University Foundation agrees to use \$1,350,000 of the gift to establish the **MONSANTO PRECISION AGRICULTURE CURRICULUM FUND**.

The **MONSANTO PRECISION AGRICULTURE CURRICULUM FUND** will be used by MSU to support a certificate program and curriculum that includes field research programs to address the education of students in this developing area of precision agriculture and data management. This curriculum will involve joint collaboration between multiple departments to better understand the interactions and relationships of the environment, crop inputs (seed, fertility, water, biotechnology, pesticides,) equipment (planters and applicators) and IT software and hardware to help the grower increase their productivity in a sustainable method.

College of Agriculture and Life Sciences (CAL S) / Mississippi Agriculture and Forestry Experiment Station (MAFES)

Department of Agricultural and Biological Engineering (ABE)

Department of Plant and Soil Sciences (PSS)

Department of Biochemistry, Molecular Biology, Entomology and Plant Pathology (BCH-EPP)

Department of Agricultural Economics (AEC)

Delta Research and Extension Center (Stoneville, MS; DREC)

Departments of Animal and Dairy Science, Poultry Science and Landscape Architecture

Partners:

Geosystems Research Institute (GRI)

MSU Extension Service

MSU Bagley College of Engineering – various units/departments

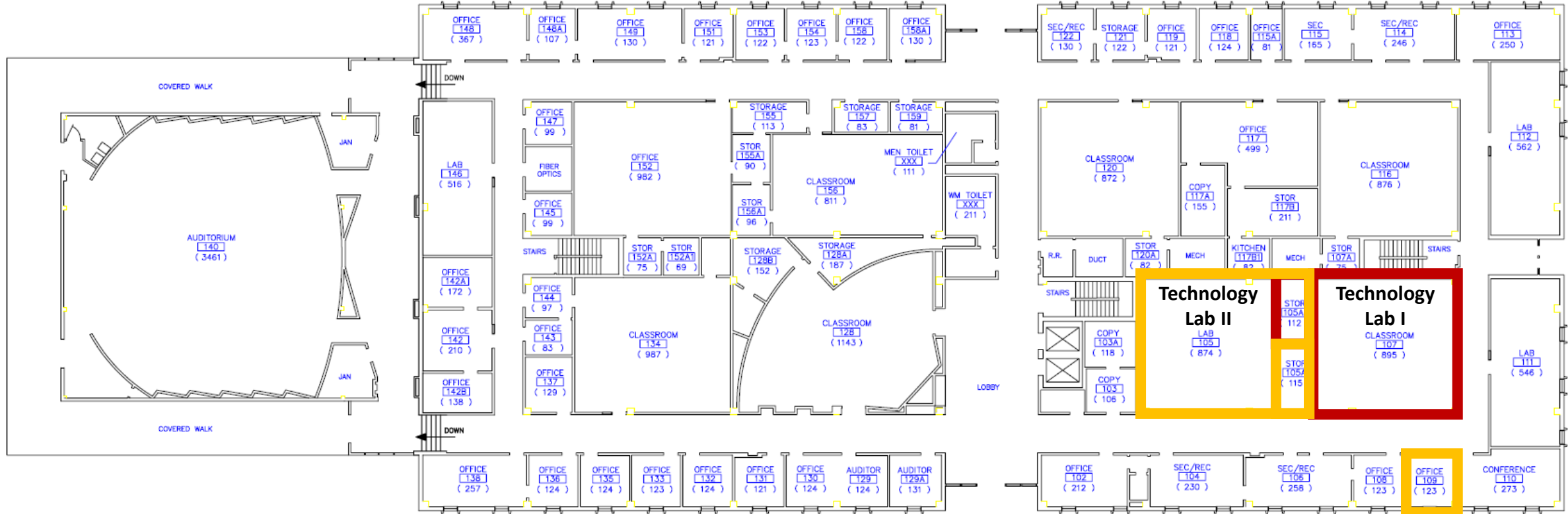
Hinds Community College (HCC)

East Mississippi Community College (EMCC)

Industry – Funding (e.g., Monsanto), Training, In-Kind Equipment, Advice/Input

Initial Funding:

Monsanto Gift, Precision Agriculture Development (J. Skelton), MAFES-SRI, CALS-MAFES-EXT, etc.



DORMAN HALL

FIRST FLOOR

| | |
|-------------------|---------------|
| DORMAN HALL | BLDG NO. 0101 |
| GROSS SQUARE FEET | 141,584 |
| NET SQUARE FEET | 89,903 |

| | | |
|----------|----------|-------|
| | DATE | BY |
| ORIGINAL | XX/XX/XX | MAFES |
| REVISED | 06/16/98 | PRD |



Dr. George M. Hopper
Dean / Director
College of Agriculture and Life Sciences
Miss. Agric. and For. Exp. Station
Mississippi State University

Will D. Carpenter Distinguished Field Scientist Graduate Assistantships


(MSU Faculty Mentors along with Dr. Anthony Mills, Monsanto Mentor).

The value of this partnership to Mississippi State University, our College, and our Students:

- **Unique Private-Public Partnerships** for real-world professional experiences for our students (and their faculty mentors).
- Relevancy of Research – Students see how their research fits in the grand scheme of agriculture and commerce, and how they can advance the future of agriculture.
- Student Leadership / Professional Development – “Practice of Profession”, Communication Skills, etc.
- **A “Win-Win” for Monsanto and the Student – A “long job interview”**: Is an industry position right for the student, and is this particular student the right future employee, researcher, manager, etc. for the company? When the student transitions to the work force, they are “work-ready”, trained, already have connections in the company, and they understand the company’s vision and mission. The company gets a value-added employee at hire, a known commodity with experience.
- **Dr. Anthony Mills brings context to the research and bridges the gap between the theoretical research findings and potential applications.** Industry mentors introduce students and faculty to new avenues in research, provide alternate interpretations, and focus findings on commercial technologies that may not have been realized.
- **The Future: These professional experiences transcend internships (and even cooperative educational opportunities), and focus on long-term mentorship.** How do we expand these partnerships with industry (specifically, Monsanto)? How can we make these opportunities open to more students in more disciplines? Are there more Monsanto’s (and Anthony Mills’) out there willing to be the bridge for a student between academia and industry in this unique way?

- **RISER Program – Row Crop Irrigation Science and Extension Research (RISER) Program Program at MSU to reduce water usage without a reduction in yields. Incentivize producers to invest in water saving tools (flow meters, sensors, valves, etc. program**
- **Monsanto Water Quality and Numeric Nutrient Research Fund Research to reduce nutrient runoff, use of numeric nutrient criteria, adoption of BMPs to address soil erosion and prevent nutrient runoff**
- **REACH Program – Research and Education to Advance Conservation and Habitat (REACH) Land stewardship, diversity in cropping systems, BMPs, landscape-level practices**

RISER On-Farm Evaluations: Soybean



| | Yield ---Bu/acre--- | Water Use ---Acre-in--- | WUI --Bu/acre-in-- | Profitability -----\$----- |
|----------|------------------------|----------------------------|-----------------------|-------------------------------|
| Producer | 70.8 | 10.1 | 8.3 | 701.8 |
| Riser | 71.0 | 7.2 | 10.6 | 713.0 |
| P-value | 0.9227 | 0.0654 | 0.0425 | 0.3121 |

Subscribe Past Issues Translate

View this email in your browser

MISSISSIPPI STATE UNIVERSITY
RESEARCH EDUCATION & SERVICE
CONSERVATION & HABITAT

April 2019 Newsletter - Issue 3



March field days highlight producer innovation & environmental stewardship in Mississippi

Unintended impacts of farming practices are commonly highlighted by the media and there is deserved concern regarding environmental impacts of some production practices. REACH field days, held across Mississippi in March, aimed to develop a new narrative. Field days were held on working farms and highlighted producers who are integrating conservation practices into their production systems, while remaining productive and profitable. While research continues around how conservation effectiveness is measured and more profitable is always warranted, these events help share ideas, technologies, and generate information about how much conservation is on the



- **Monsanto Pollinator Research Efforts Fund**
Graduate Student Support – Coexistence of row crop farmers and beekeepers
Extension/Outreach on education and communication between producers and beekeepers
“Bee Aware” Flag Program



Five Years Later: October 2014 – October 2019

Courses: Fall 2019: Precision Ag I (n=36), Precision Ag II (n =24)
 Spring/Fall 2019: Ag Flight Tech I (n=15), Ag Flight Tech II (n=13)

Certificate: n=9 have completed; n = 12 pursuing currently

Benefits: Faculty Professional Development, Fast-Tracked Curriculum
 Teaching-Research Cross-Over (UAVs, Precision Systems)

Monsanto Gift Status: 20% of initial curriculum gift remains for program support
 Funding for two additional Public-Private PA GRA's "on hold"
 Endowed Undergrad/Grad Scholarship Support Continues

Development: Three additional gifts received with Precision Agriculture focus
 (Foundational Gift leveraged to Additional Gifts)



*How Do We
Sustain High Value,
But High Cost,
Programs ?*

INFINITE
Impact
THE MISSISSIPPI STATE
UNIVERSITY CAMPAIGN

Gift Agreement
Between
MONSANTO
and the

Mississippi State University Foundation, Inc.



Precision Agriculture Initiative

College of Agriculture and Life Sciences

Mississippi Agriculture and Forestry Experiment Station

Mississippi State University

