



# Louisiana Agricultural Consultants Association Turn Row Talk

**Spring Issue 2023**

**Volume 33**

## A Message from the Executive Director

*Denise Wright*

I hope everyone is off to a great start in this 2023 growing season! I hope all your acres are planted and these rains are as timely as they can be for getting the crops up and growing or giving those older crops a good drink! I've just got one noteworthy clip I'd like to share with you...normally, this would be where the President's column would be, but I'm giving **Tim White** a break this go-round since he's been trying to get a cotton crop in...

I've included a couple pics from the Cotton Consultant of the Year (CCOY) event where our own **Hank Jones** received this very prestigious award. The event was very well attended and I couldn't be more proud that one of our own has once again been named among the best of the best! THANKS to Cotton Farming Magazine and Syngenta for continuing this tradition.



***Hank graciously accepts  
the 2022 CCOY award  
at the Peabody Memphis  
on February 24th, 2023.***

***Hank Jones, 2022 CCOY  
recipient with several past  
recipients, two of which  
are also LACA members,  
Dr. Grady Coburn (second  
from right), and Harold  
Lambert (at the top of the  
stairs). Ya'll make us  
proud!!!***



## A Message from our Past President

*Jeremy Babin*

*Calvin Viator, Ph.D. & Associates, LLC*

It's that time of year again, preparing for the rough summer months ahead that hopefully lead to a bountiful harvest. No matter which crops you consult on in Louisiana the growing season is upon us. Whether it has been planted or not, we're all preparing for the months ahead, repairing ATV's, doing truck maintenance, and updating maps in hopes to alleviate problems that could lead to time lost during the summer. Seems like these cycles we go through as consultants speed up yearly (except for those long, hot summer days).

For South Louisiana weather has been favorable for field work from the beginning of last winter through now. We had a dry sugarcane grinding season and timely rains throughout the spring months so far. Besides the Christmas freeze in 2022, which did cause sugar loss late in the grinding season, we have been blessed. Farmers have been able to get field work and fertilizer out early to sugarcane fields and soybean fields prepared and most planted.

I am so grateful to LACA and all its members for allowing me to serve as president in 2022. I would like to thank all those who serve on LACA committees as you all are the backbone of the organization. Keep bringing new ideas to the table as I feel LACA's impact on Louisiana agriculture continues to grow and our influence on issues facing Louisiana agriculture is getting stronger. In conclusion. I wish all of you a safe and productive growing season.



***Jeremy receives his LACA gavel plaque from 2023  
President Tim White.***



## **The Fundamental Duty of Mankind is to Feed the World**

I start each and every workday with a syndicated radio broadcast on the Voice of Louisiana Agriculture Radio Network. "It's an absolutely great day in Louisiana Agriculture, Aquaculture, and Forestry." Never before have we had the opportunities that are now in front of us.

Between now and 2050, we must triple agricultural production in the United States, double it abroad, and produce more food worldwide than we have since the dawn of civilization. This is a daunting task as we currently utilize over 86% of all arable land and 70% of available freshwater - with over 80% going into the cultivation of crops. Further challenges include the expansion of the human footprint (housing, energy, and development), limited natural resources (oil, natural gas, potash), sinking coastlines, and rising seas.

If we analyze leading publications of the day, such as the USDA World Agriculture Supply and Demand Estimates Report (WASDE), the Virginia Tech Global Agricultural Productivity Report (GAP), the UN FAO/WHO State of Food Security and Nutrition in the World Report, and others, it is abundantly clear that we have crossed the rubicon as it pertains to the growth in food supply vs. demand and that we must markedly accelerate productivity and efficiency all the while being better stewards of the environment. We can already see social and political stress in most areas of the world due to the tightening of available resources.

All of these factors put us in the driver's seat, and we must and will rise to the challenge and lead the world in food science, technology, production, delivery, and overall sustainability.

Tripling our food production with less resources per bushel, pound, or unit may seem like an unreachable goal. Since 1960, we have increased production fourfold with only a doubling of total inputs. With the advances such as in computing technology and mapping of the genome, standing on the shoulders of giants before us, we can reach our goals.

We have ground to make up. According to the 2022 GAP Report, "To sustainably produce food and agricultural products for more than 9 billion people in 2050, agricultural productivity must increase an average of 1.73 percent annually. From 2011-2020, global agricultural productivity grew at an average of just 1.12 percent per year, a significant drop from the average growth rate of 1.99 percent from 2001-2010 (USDA ERS)."

Adding marginally productive acres and grasslands worldwide is inadequate to achieve these goals and, in the end, will result in the loss of sustainability, biodiversity, and wildlife habitat. Further, these practices will contribute markedly to soil health degradation, erosion, and increased greenhouse gas emissions.

New and expanded methodologies such as advanced drought and rain-tolerant plants, subsurface drip irrigation, advanced

cover crops, improved animal genetics, advanced biological disease and pest control, full utilization of the plant's genome, and streamlined informatics are just a few of the emerging technologies that must be brought up to scale and become commonplace.

In order for this to happen, there must be readily available education, advanced research and extension, significant access to credit, and a positive political environment. Consumers must be fully informed and accept the technologies and methodology utilized to produce enough food to feed the planet. This is key to unlocking the potential, thus allowing us to fully utilize the natural resources we have available.

Every inch of every acre is precious. We must protect our most fertile farmland at all costs. What we have currently available is all that there will ever be. In computing the value of the land for farming vs. development, we must look at its production value in 2050 to truly understand its worth. In real dollars, what is 24,000 lbs of sugar, 25,000 lbs of rice, 480 bushels of corn, 160 bushels of soybeans, or 3000 lbs of cotton per acre per year worth?

Add to this carbon and other greenhouse gas credits, and we can now truly see the value of agriculture in the next generation.

Truly, the challenges ahead are great, but the opportunities are far greater. In this struggle, we cannot fail. Civilization as we know it began with a grain of wheat. We have now come full circle. Our very survival now depends on "a grain of wheat," i.e., modern agriculture.

**Mike Strain, DVM**

**Commissioner**

**Louisiana Department of Agriculture and Forestry**

**(225) 922-1233**



## **Welcome New LACA Members!!!**

### **Affiliate**

**James Villegas**

### **Sustaining**

**AgXplore**

**Americot Nexgen**

**Helm Agro**

**ORO Agri**

**Tiger-Sul**

**VIVE Crop Protection**



## **2023 LACA Scholarships**



***Nelomie Galagedara, Ph.D. student awarded her \$2,000.00 scholarship by 2023 LACA President, Jeremy Babin.***

**Nelomie Galagedara** has worked in agriculture and plant pathology for the past decade through her undergraduate and graduate studies, working currently on management of row crop diseases. Throughout her training she has sought opportunities to grow both professionally and personally and was grateful for the opportunity to apply for this scholarship.

Nelomie obtained her bachelor's degree in Plant Biotechnology from the highest ranked university in Sri Lanka, University of Colombo. For her undergraduate research project, she worked on developing a biofertilizer for rice cultivation in Sri Lanka by using the fungus, *Hypocrea virens*. The latter aimed to help rice farmers in Sri Lanka tackle phosphate unavailability in the soil.

Following this, she completed a M.S. degree in the Department of Plant Pathology at North Dakota State University in May 2018. Her thesis research was on genetic mapping of quantitative trait loci for resistance to tan spot in durum wheat and resulted in two publications in the high impact peer reviewed journal, *Theoretical and Applied Genetics*. During this time, she learned and applied tools in conventional and molecular wheat breeding, to help North Dakota wheat farmers tackle the yield-limiting tan spot disease.

Since spring 2019, Nelomie has been a graduate research assistant working on her doctoral degree majoring in Plant Pathology and minoring in Applied Statistics. She is co-advised on her dissertation research by Drs. Sara Thomas-Sharma and Vinson Doyle, LSU AgCenter. My dissertation research aims to understand the seasonal dynamics of *Cercospora* Leaf Blight (CLB) on soybean in Louisiana. The project utilizes spore traps to capture fungal spores in soybean fields, uses next generation sequencing to understand community-level spore dynamics, develops species-specific detection assays to quantify air borne inoculum of CLB, and utilizes the improved understanding of spore peaks to better target fungicide applications.

She has so far carried out her field experiments in Macon Ridge research station in Winnsboro, Doyle Chambers Central research station in Baton Rouge, and Dean Lee research & extension station in Alexandria. She has carried out four seasons of spore trapping, documenting that airborne spores are likely the main source of CLB epidemics. The spore counts were highly variable by year and location and ranged from 12 to 6,900 spores, but in all locations/years, spore peaks were observed prior to symptoms. Nelomie is currently developing detection assays for the minor causal species involved in CLB to obtain a more accurate picture of CLB outbreaks. In 2021, 2022, she carried out fungicide trials in all three locations to determine if targeting fungicide application during spore peaks improves fungicide efficacy compared to standard grower practice of plant growth stage-based applications. Data analysis is currently underway, but initial results indicate that although yield was not statistically different between spore-peak and growth stage-based applications, targeting spore peaks had the greatest effect on reducing profit risk. She has thus far presented her dissertation research at six national and regional scientific meetings. One of these included the annual meeting of the American Phytopathological Society (APS), for which she received a student travel award. She has also sought out grant writing experiences to support her dissertation research and has utilized various opportunities to develop her leadership and soft skills. She was also able to help one of the undergraduate student workers, Gabrielle Bellelo to apply for LSU Discover Undergraduate Research program and to obtain \$7000 worth of grant money for her to work in a side project related to Nelomie's dissertation work. She was also able to present her work in this year's APS meeting in Pittsburgh, Pennsylvania. She has thus far served as the fund-raising committee chair (2019-2020), the treasurer (2021-2022), and is currently the president of the Plant Pathology and Crop Physiology Graduate Student Association (PPCP GSA). Through these activities she was able to lead in raising funds totaling around \$2000 for their association through LSU tiger stadium and basketball stadium clean-ups, selling T shirts, caps and other PPCP GSA merchandise. During her presidency, she is planning more fund-raising events, coordinating, and hosting an invited seminar speaker for spring seminar 2023, organizing networking events for fellow graduate students and educational trips to research institutes, universities, and industries. When she was serving as

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## **2023 LACA Scholarships (cont'd)**

the Secretary of Sri Lankan Student Association at LSU in 2020-2021, she helped to raise funds for the association through more LSU stadium cleanups and other volunteer activities. She also helped to organize cultural events, i.e., Sri Lankan New Year event, representing their association in events organized by International Cultural Center (ICC) at LSU and helped welcome new international students to LSU. With a decade of dedication and hard work in the field of agriculture and plant pathology, Nelomie is determined to continue providing scientific and practical solutions/improvements towards agriculture. Eventually, she would like to pursue a career in International Agriculture by joining the Food and Agriculture Organization (FAO). Funds provided by the LACA scholarship award will help her and motivate Nelomie immensely to move forward with her graduate studies and to accomplish her research goals.



***David Galo Ph.D. student awarded his \$2,000.00 scholarship funded by Dr. Grady and Mrs. Barbara Coburn of Pest Management Enterprises.***

**David Galo** has devoted the past eight years of his life to the study of different plant pathogens while working on a range of research projects at different academic institutions. He has been surrounded by people who have devoted their lives to agriculture. Perhaps his biggest influence was his father, a coffee farmer in Honduras, who instilled in him a passion for farming from a very young age. This passion made David pursue agronomy as his major for undergraduate studies at the National University of Agriculture, Honduras. There, he was introduced to plant pathology with research projects evaluating plant diseases on, cocoa, coffee, and corn plantations. This research experience opened new opportunities and led David to participate as a scholar in the Agricultural Chemistry

Lab at Louisiana State University.

As a visiting scholar at LSU, he analyzed the residuality of glyphosate on Roundup Ready soybean. They were able to identify low concentrations of glyphosate on soybean and corn after harvest, and found that glyphosate residue values were under the values permitted by food safety organizations. This experience provided him the opportunity to pursue graduate studies in the Department of Plant Pathology and Crop Physiology at LSU. In his research as a M.S. student, he had a rewarding experience working with plant diseases such as “taproot decline” on soybean, foliar diseases on Roseau cane and viral diseases on taro.

Currently, David is a Ph.D. student under the advisement of Dr. Tristan Watson. For his research, he is working in a multi-state project that aims to meet the needs of stakeholders that are experiencing severe economic losses due to root-knot nematode damage. His research project involves the “Identification and characterization of *Meloidogyne enterolobii*-resistant sweet potato genotypes” to develop commercial sweet potato varieties with resistance to *M. enterolobii* and *M. incognita*. To accomplish this, sweet potato genotypes developed by the LSU AgCenter’s sweet potato breeding program are exposed to each nematode species, and sweet potato response is evaluated by comparing the damage caused by each nematode species on sweet potato genotypes. So far, David has been able to identify sweet potato genotypes with resistance to both root knot nematodes species, *M. enterolobii* and *M. incognita*. He is currently evaluating the variation in root architecture such as lateral root length, surface area, volume, and number of root tips per plant among sweet potato genotypes infected with either *M. enterolobii* or *M. incognita*. Based on their findings, resistant sweet potato genotypes appear to have a compensatory root growth when inoculated with either root-knot nematode species; and this may be a contributing resistance factor. These findings have motivated David to investigate more into the resistance mechanisms involved in the sweet potato response to *M. enterolobii* and *M. incognita* infection. Further research experiments will be focused on better understanding the resistance genes, structural and physiological components that are associated with the resistance of sweet potato to *M. enterolobii* and *M. incognita*. Results from this project will directly benefit the stakeholders in Louisiana, and worldwide through the release of new root-knot nematode resistant sweet potato cultivars.

Another milestone of David’s experience at LSU has been publishing the “first worldwide report of corm and root rot disease caused by *Phytophthora chamaeaphyon*” on taro plants, two coauthored manuscripts on “Secondary metabolites produced by *Xylaria necrophora* are responsible for foliar symptoms associated with taproot decline of soybean” and the “First report of dasheen mosaic virus infecting taro (*Colocasia esculenta*) in Louisiana”. These research findings provided insights on important diseases impacting soybean and taro production, and stakeholders across the country are now informed. In addition to bridging

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## **2023 LACA Scholarships (cont'd)**

the gap between fundamental and applied research to provide solutions for agricultural stakeholders, David's efforts are guided by a sincere passion for plant pathology research and providing practical solutions to production challenges.



***Schyler Lee, a M.S. student was awarded her \$2,000.00 scholarship by David Bordelon of Louisiana Land Bank.***

**Schyler Lee** was born and raised in South Louisiana with a strong work ethic and a deep appreciation of agriculture. She double majored in animal science and horticulture. She marched piccolo in the LSU Golden Band from Tigerland, where she learned valuable leadership skills and received the Kayleigh Billings Award. Further, she has served as a volunteer musician at St. John the Evangelist Catholic Church since 2015. Professionally, she has immersed herself into as many agricultural disciplines as possible throughout the years. From landscape to sugarcane production, she is inspired to help producers in a hands-on way. After earning her master's degree, she hopes to become a well-respected crop consultant in this state. This goal was realized after a previous internship with GreenPoint Ag in Louisiana, where she learned from Mr. Ryan Waguespack, Mr. Shawn Mayeaux, Mr. Faron Molaison, and Mr. Neal Poche. She gained valuable field knowledge and skills in sugarcane, soybean, milo, and rice. She worked to understand the complexity of precision agriculture and how it can be used in modern production. According to Schyler, the more she learns, the more she finds herself asking bigger picture questions that have direct application. How can research influence a consultant's advice to a grower and make production most economical for them?

With her current and future findings, she hopes to reach Louisiana growers with information to aid management decisions and limit yield losses throughout the growing season. Earning this scholarship will undoubtedly assist her in her research and allow her to more easily attain her future career goals.

Below is Schyler's scholarship application essay. She is attending LSU and is advised by Dr.'s Jeff Davis and Mike Stout in the Entomology Department.

The sweet potato weevil, *Cylas formicarius elegantulus* (Summers), is considered the most threatening insect pest to sweet potato across the world. Yield loss has been reported up to 80% without management. Females will lay eggs in the plant's storage roots, and larvae will hatch and begin tunneling, destroying the plant from the inside out. Additionally, sweet potatoes may become unpalatable due to the production of bitter tasting terpenes as a response to weevil feeding. Louisiana growers face many challenges to limit the spread of this pest.

My research focuses on improving sweet potato integrated pest management with a focus on the sweet potato weevil. The first objective explores how the environment can influence sweet potato resistance to sweet potato weevil emergence. In collaboration with Louisiana sweet potato growers, Mr. James Deshotel and Mr. Larry Fontenot, and with university research sites, we have already been able to show that adult emergence is influenced by cultivars and growing locations.

My second objective evaluates commercially available pesticides containing entomopathogenic fungi to control the sweet potato weevil and how these products can influence below-ground feeding. A series of laboratory tests, greenhouse experiments, and field trials look to confirm the efficacy of these products. Lastly, work will seek to identify volatile compounds released by sweet potato that are thought to play a role in resistance to insect pests. Identifying these compounds can potentially be used in future research to improve pheromone trapping systems. My research emphasizes the importance of integrating hostplant resistance, biological control, and novel plant volatile applications into a producer's management plan. This will reduce the impact of sweet potato weevil in the field and hopefully increase profit.

The 2023 undergrad scholarship recipient, **Carter Banks** is a life-long resident of Crowville, LA and currently attends Louisiana Tech University where he is majoring in Agribusiness with a concentration in Business. Carter has grown up working on his Dad's farm helping raise corn and soybeans for the past eight years. While assisting his father on the farm, Carter also started a business selling sweet corn to local residents for the past six years. Not only is he a hard worker on the farm, Carter is an exceptional student in the classroom. In 2019, he graduated as Salutatorian of his senior class with a 3.9 GPA and was named Student of the Year for Franklin Parish. He finished high school with 24 hours of college credit and is currently a senior at LA Tech with a 3.774

*Continued on page 6...*

## **2023 LACA Scholarships (cont'd)**

GPA, a four-time Presidents List award winner, and has an anticipated graduation date of May 2023.

Carter has completed a summer intern position with Climate Fieldview, and will be ready to obtain a job in the field of agriculture. With his positive attitude, strong work ethic, and great personality, he should have no trouble finding a position and becoming an asset to whomever hires him.



***Carter Banks with Ms. Dorothy and Mr. Ray Young who funded the undergrad scholarship.***

***THANKS TO ALL WHO SUPPORT OUR LACA SCHOLARSHIPS!!! YOU ARE PART OF THE SUSTAINABILITY OF AGRICULTURE!***

### **NAICC Legislative Visits and the CBOH**

**Hank Jones**

I've often heard Mr. Ray Young say, "It's not who you know in Washington D.C., it's who knows you." For many years, Mr. Ray has invited me and countless other consultants to participate with the National Alliance of Independent Crop Consultants at the "Crawfish Boil on The Hill." This was not my first trip to Washington D.C., but this trip certainly held more purpose than previous visits. Along with close to 15 other NAICC members, I spent 3½ days networking, voicing concerns, and volunteering assistance to many Washington D.C. based entities as well as governmental officials. This article will serve as a "debriefing" to LACA as to

the events of this trip, and hopefully spark an interest in others to attend in the future.

Initially, NAICC holds an afternoon meeting to discuss ag policy and topics of concern. Some of the focal points this year are 1) Pesticide Regulation regarding the Endangered Species Act, 2) IR-4 Project Funding 3) and voicing concern about the Protect America's Children from Toxic Pesticides Act. After a thorough review of these topics, NAICC members were divided into teams to visit selected Representatives, Senators, government agencies, and other agricultural related lobbying groups. I participated with groups that visited EPA (Office of Pesticide Programs: Biological and Economic Analysis Division, Pesticide Re-Evaluation Division, & Environmental Fate and Effects Division), Senator John Boozman (Arkansas), Congresswoman Julia Letlow (LA-05), and the National Cotton Council. As anyone who has visited Washington D.C. knows, visits are quick and typically limited to 15-20 minutes. I am very happy to report that every visit our team made lasted longer than scheduled, and staff members received our message with marked enthusiasm.

After a day and a half of "Hill visits," Tim Ford, a man very familiar to LACA, put on his chef hat and prepared crawfish etouffee, red beans and rice, and boiled crawfish for our D.C. guests. The "Crawfish Boil on the Hill" celebrated its 25<sup>th</sup> anniversary this year, and approximately 400 people attended. With Tim Ford backstage in the kitchen, Mrs. Kim Bourgeois and I represented Louisiana quite well. We identified the food for many staffers that had no clue what was being served, and I even showed Senator Marco Rubio's staff the proper way to eat crawfish. All in all, the trip was an incredible experience, and I was proud to represent not only NAICC, but LACA as well. I would encourage anyone who is not a member of NAICC to join, and to consider attending this event to make sure PEOPLE KNOW YOU in Washington D.C.



***Hank with fellow NAICC members, Laurie Bennett and Brandon Kessler, Da Cook, Tim Ford, and CBOH attendees from the Hill.***





**Hank, Congresswoman Julia Letlow, NAICC President Clark Poppert, and NAICC Executive Board Treasurer, Kim Bourgeois.**



**Hank in D.C.**

**For information on membership in NAICC contact Allison Jones at [allisonjones@naicc.org](mailto:allisonjones@naicc.org) or Denise Wright at [denise@laca1.org](mailto:denise@laca1.org) or go to [www.naicc.org](http://www.naicc.org)**

**NAICC offers a certification program for it's members. You can obtain a CPCC-I (Certified Professional Crop Consultant-Independent) or CPCC-R (Certified Professional Crop Consultant-Researcher). On top of your state certification with the LDAF, this certification can further enhance your credibility in your profession.**

### **Ray and Dorothy Young Endowed Student Award**

#### **So Far, So Good: My Current Graduate Journey** **Tyler Musgrove**

I once again would like to express my deepest thanks to Ray and Dorothy Young and the LACA for the privilege of receiving the Ray and Dorothy Young Endowed Student Award. Your investment in me brings me so much appreciation and lets me know that my work is recognized.

My experience in agriculture began over a decade ago thanks to **Mr. Rusty Elston**, and as a 27-year-old, I don't believe that's common for someone who didn't grow up on a farm. He brought me in under his wing and without him taking a chance on me, I don't know that I would be where I am today.

Similarly, you have all taken a chance on me with this award, and I don't take that lightly. I sincerely hope to play a role in what the future has in store for Louisiana crop consulting and to make a lasting impact to this critical field. But that bridge is several years away and there's opportunities to improve Louisiana ag now—for me, that's producing relevant and meaningful scientific research.

I've been fortunate to have professors at LSU that have allowed me to take a leading role in developing my graduate research. Normally, students are given projects that have already been decided based on what the current program is investigating. Prior to enrolling at LSU, I had developed an interest in the three cornered alfalfa hopper based on my previous experience as a field scout. When I first visited the Dept of Entomology, I met with Jeff Davis and proposed a research program focusing on this pest of soybean. From there we developed several objectives looking at the impact of neonicotinoid seed treatments on early season control as well as re-evaluating the action threshold. I enjoyed the work as it gave me a solid foundation to continue pursuing a PhD.

My current research focus is on IPM in row rice. Before graduate school, I had not even heard of row rice—but it immediately piqued my interest when I learned about it. As a field scout, my most fond crop to check was rice. When I finished my master's program, I was eager to join a lab focusing on rice pests which led me to Blake Wilson. Being that row rice is a relatively new phenomenon to commercial rice production in Louisiana, we have a unique opportunity to produce research in a system that in some ways can be considered a novel crop. What's more is that there's limited entomological literature on this system, meaning the work we produce will lay the groundwork for future research. Additionally, this project has allowed me to meet with growers and consultants that I very well may interact with professionally after graduation.

Our research focuses on two areas: 1) addressing immediate IPM needs associated with row rice, and 2) improving our knowledge on the rice billbug. In addressing IPM needs, we have two objectives. Our first is to characterize the insect pest complex and natural enemies associated with row rice. We know altering irrigation practices can have a major impact to resident insect populations and documenting that allows us to predict what pests and natural enemies will be important going forward. Our second objective is to determine the efficacy of insecticide seed treatments in row rice. This technology is vital in managing pests that are difficult to control with foliar application. In row rice, that would primarily be billbugs and stem borers. Different seed treatments and combinations can be more effective than others and highlighting that would be an obvious benefit to improving row rice IPM. Our final two objectives focus primarily on billbug biology and management. The first is to screen for host-plant resistance across a variety of rice cultivars against billbugs.

*Continued on page 8...*

The second is to document basic life history characteristics of the billbug such as life cycle duration, alternative hosts, etc.

I'm excited to be able to work on this project and hopefully provide insights that would help the rice industry in Louisiana. I am also thankful I had the opportunity to present my current research progress at the past consultant's meeting as well as addressing the entire LACA in the general session. Me and my family are grateful for the support and look forward to the next several years in Baton Rouge.



Figure 1: Scouting soybean (2019)



Figure 2: Row rice trial in Crowley, LA

Figure 3: Irrigation setup for row rice trial in Crowley, LA



Figure 4: Left to right—Erika, Theodore, Olivia, and me.



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**GAIA**  
Global Alliance of Independent  
Agricultural Consultants