PPCP news

LSU AgCenter
Research · Extension · Teaching

LSU
College of Agriculture

January 2023

Department of Plant Pathology and Crop Physiology

Visiting Student Scholars, Postdoctorates and Faculty

Andrew Mann, a Ph.D. student with the Department of Plant Pathology at the University of Minnesota, was a spring seminar speaker. His presentation was entitled "The role of symbiotic microbes in the invasion process of tree-killing beetles" and was part of an ongoing student seminar exchange program between PPCP and the University of Minnesota's Department of Plant Pathology.

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Andrew Mann, third from right, joins PPCP graduate students after his seminar presentation.

From the department head

Lawrence E. Datnoff

Happy 2023!

The department is doing well, and we are going through several personnel changes. Chris Clark retired in August and the newly hired sweetpotato pathologist is Imana Power. Jeff Hoy recently announced his retirement, and a search is on for his replacement. Furthermore, our office coordinator and accounting technician retired, and new replacements were hired.

As last year, faculty and students published several refereed manuscripts and extension articles; gave many presentations, locally, regionally, nationally, and internationally; and competed for grants to support their research and outreach. They also won prestigious recognition for their efforts that include LSU AgCenter's Excellence in Extension Award.

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Postdoctorate

Dr. Jeshurun Asher M. Tarun earned his B.S. in agronomy and M.S. in plant breeding and genetics at the University of the Philippines Los Baños. He obtained his Ph.D. in crop sciences at the University of Illinois Urbana-Champaign. Afterwards, he had a postdoctoral stint at the University of Illinois in the lab of Dr. Laurie Leonelli. He focused on building a canopy-specific promoter database in soybean and cowpea to enable targeted engineering of photosynthesis and other processes at specific canopy levels. He joined the laboratory of **Dr. Jonathan Richards** in the summer of 2022. His current research is focused on understanding the population structure, genetic diversity, genome evolution and transcriptional responses to environmental stresses in *Phragmites australis* (Roseau cane) and the relationship of these factors to Roseau cane dieback.

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Help Us to Ensure Excellence in Plant Pathology and Crop Physiology

While the department receives monetary support for core research/extension programs (LSU AgCenter) and its teaching program (LSU College of Agriculture), these funds are not sufficient to provide the resources to move our programs to the next level of performance.

Private financial support is becoming a vital resource to enhance existing programs and begin new initiatives. Please consider contributing to help support our programs.

You may help to support the Plant Pathology and Crop Physiology Department by donating to one of the below listed funds:

#106098 — The Max and Leah Cohn Invited Lecture Endowment Fund
#100250 — Plant Pathology and Crop Physiology Excellence Fund
#100246 — Dr. C. W. Edgerton Memorial Fund
#100247 — Dr. Weston J. Martin Fellowship Fund
#105458 — M. C. "Chuck" Rush Plant Pathology Teaching Laboratory Fund
#106771 — Raymond W. Schneider Student Travel Fund
#104814 — Don Ferrin Student Teaching Fund

Donations can be made by accessing the LSU Foundation site at www.lsufoundation.org/give or by sending a personal check made out to the LSU Foundation with a letter stating which fund you would like to donate to. Address the letter to:

Department of Plant Pathology
& Crop Physiology
302 Life Sciences Building
LSU Campus
Baton Rouge, LA 70803

For more information contact: Lawrence E. Datnoff
Professor and Department Head
ldatnoff@agcenter.lsu.edu
or 225-578-1366

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(**Dr. Trey Price**), American Phytopathological Society Student Travel Awards (**Jobelle Bruno** and **Kensy Rodriguez**), and the Cal Agri Products Student Support Award (**David Galo**). Our staff members also were recognized for their outstanding excellence in research support (**Cathy DeRobertis**). Our M.S. and Ph.D. graduate students were highly engaged, and their efforts and outstanding contributions continue to infuse the department with vitality and enthusiasm, while helping to answer basic scientific questions along with solving plant disease problems of importance to the clientele of Louisiana.

In this current newsletter, you'll see for yourself these wonderful activities and achievements of our faculty, staff, postdocs, students and even former students and the profound effects on the University and AgCenter's missions, Louisiana agriculture and beyond.

Happy reading!

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Visiting Scholars

Dr. Fabricio A. Rodrigues, a professor of plant pathology at the Universidade Federal de Vicosa, visited our department in May 2022. Rodrigues has had a long professional relationship with us via a memorandum of understanding between our department and the LSU AgCenter. He has collaborated in research with **Dr. Zhi-Yuan Chen** and sent numerous interns (Alessandro Fortunato, Daniel Debona, Caroline Hawerroth, Veronica Bras and Bianca Fontes) and students to pursue their M.S. or Ph.D. degrees (Debora Xavier, Washington da Silva, Eduardo Chagas da Silva, Izabel Costa da Novaes and Ernesto da Silva). While here, he presented a seminar on his department as well as his current and past research. He also visited with graduate students to provide them with professional insights on research and prepare for a future in academia or industry.

Dr. Fabricio Rodrigues, sixth from left, joins PPCP graduate students at LSU's Memorial Oak Grove.

Alumnus Dr. **Washington Luis da Silva** was invited as our featured speaker for the Departmental 2022 Fall Weekly Seminar Series. Dr. da Silva is a virologist at The Connecticut Agricultural Experiment Station, New Haven. He obtained his M.S. in PPCP in 2013 and **Dr. Chris Clark** was his major advisor. His presentation was entitled "Nano-enabled Technologies: Prospective Weapons to Tackle Destructive Plant Viruses." While here, he visited with graduate students and faculty.

Student Scholars

Nicol Mari Pinales Arias, a visiting scholar from the Zamorano Pan-American Agricultural School, Francisco Morazán, Honduras, visited **Dr. Ely Oliveira-Garcia**'s laboratory from June 15 to Dec. 24, 2022. During her visit, she was involved in enhancing wheat resistance to Fusarium head blight disease through various molecular approaches. She worked with **Dr. Ely Oliveira-Garcia** and graduate student **Bernard Budot** to learn various techniques in the fields of microbiology and molecular biology, such as fungal isolation from diseased samples and molecular methods in plant disease diagnosis. She took an active part in assessing the population structure of *Fusarium* species associated with Fusarium head blight of wheat in Louisiana over two decades.

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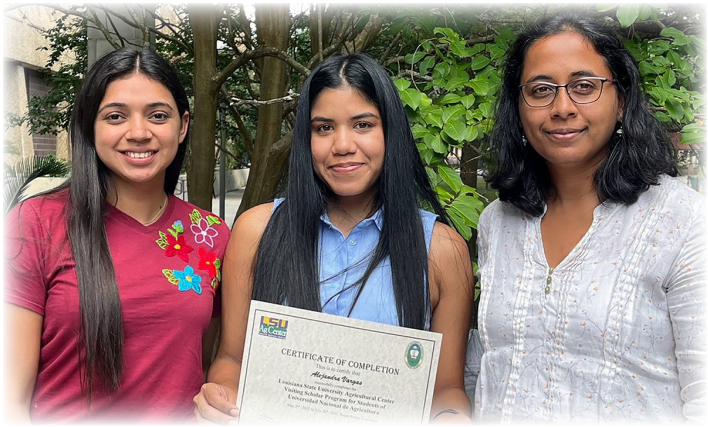
Student Scholars (cont.)

Alejandra Vargas was an intern in the field crop pathology lab of **Dr. Sara Thomas-Sharma** in the summer of 2022. Vargas is from Honduras and completed her bachelor's degree in agricultural science from the Universidad Nacional de Agricultura, Honduras. During the internship, she characterized fungicide resistance of isolates of *Rhizoctonia solani* AG1-IA, the causal agent of aerial blight on soybean. Her internship was partly funded by the diversity mini-grant (from the LSU AgCenter Council for Diversity, Inclusion, Equity and Change) awarded to Kensy Rodriguez-Herrera on behalf of the UNAs at LSU Association. Vargas is currently pursuing a M.S. degree in plant pathology with **Dr. Jonathan Richards**.



Alejandra Vargas, center, receives a certificate of completion from Kensy Rodriguez-Herrera, left, and Dr. Sara Thomas-Sharma.

Ingrids Mata Vigil is from Honduras and completed her undergraduate degree from Zamorano Pan-American Agriculture School in Honduras. She completed her internship in **Dr. Tristan Watson**'s nematology laboratory from February to July 2022. During this time, she worked on establishing cotton and soybean nematicide efficacy field experiments in St. Joseph and Winnsboro, Louisiana. Vigil is currently applying to graduate school in soil science at various U.S. universities.

Dr. Tristan Watson presents an internship certificate of completion to Ingrids Mata Vigil.

Elisa Guardado is from Honduras and received her undergraduate degree from Universidad Nacional de Agricultura in Honduras. She completed an internship in **Dr. Tristan Watson**'s nematology laboratory from June to November 2022. Guardado worked on several field crops as well as evaluated new nematode resistant cotton cultivars. Guardado will be returning to LSU AgCenter in January 2023 as a M.S. student in the School of Nutrition and Food Sciences.

Nydia Melgar is from Honduras and received her undergraduate degree from Universidad Nacional de Agricultura in Honduras. She completed an internship in **Dr. Tristan Watson**'s nematology laboratory from June to November 2022. Melgar worked on screening soybean varieties for reniform nematode resistance. She became increasingly interested in nematology during her internship and is currently organizing her application materials for graduate school to continue studying nematodes in the United States.

Dr. Josie Rezende (left) presents internship certificates of completion to Elisa Guardado (middle) and Nydia Melgar (right).

Jessica Fonseca (not pictured) is originally from Honduras but is currently completing her M.S. degree in Brazil at Universidad Federal de Lavras. She completed an internship in **Dr. Tristan Watson**'s nematology laboratory from June to August 2022. During this time, Fonseca worked on several field crops evaluating the efficacy of new nematicide formulations. She has returned to Brazil to finish her graduate studies.

Arnold Martinez Santos is from Honduras and received his undergraduate degree from Universidad Nacional de Agricultura in Honduras. He is currently completing an internship in **Dr. Tristan Watson**'s nematology laboratory and started in November 2022. Santos is working on examining nematode development in the roots of new sweetpotato breeding lines.

At right, Arnold Martinez Santos quantifying nematodes in sweetpotato root samples.

Graduates in 2022

Chenie Zamora, left, and her adviser, Dr. Jeff Hoy at the College of Agriculture graduation ceremony.

Dr. Jeff Hoy, left, advised graduate student Kezia Reis.

Ph.D. degree

Rosalie Calderon

Development of bacterial consortia that promote growth and health of soybean plants, advised by **Dr. Jong Ham**.

Jose David Cortes

Development of functional markers for resistance to smut and identification of genes differentially expressed in response to brown rust in sugarcane, advised by **Dr. Jeff Hoy**.

M. Izabel Costa de Novaes, Elucidating factors affecting cercosporin production in Cercospora leaf blight of soybean to develop better tools for disease management, advised by **Dr. Sara Thomas-Sharma**.

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Dr. Jong Ham, right, advised graduate student Jobelle Bruno.

Dr. Jong Ham, left, and Rosalie Calderon attend the College of Agriculture graduation ceremony.

Kensy Rodriquez, left, and Dr. Sara Thomas-Sharma attend the College of Agriculture graduation ceremony.

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M.S. degree

Jobelle Bruno

Development of alternative materials and strategies for enhancing rice health, advised by **Dr. Jong Ham**.

Gabriel Munoz Herrera

Genetic characterization of resistance to frogeye leaf spot of soybean, advised by **Dr. Jonathan Richards**.

Kezia Reis

Effects of pesticides on red rot of sugarcane, advised by **Dr. Jeff Hoy**.

Kensy Rodriquez

Screening soybean cultivars for resistance to aerial blight caused by *Rhizoctonia solani* AG1-1A, advised by **Dr. Sara Thomas-Sharma**.

Jacob Searight

Population genomic characterization of *Cercospora janseana* in the southern United States, advised by **Dr. Jonathan Richards**.

Chenie Zamora

Marker-trait association mapping of Sorghum mosaic virus resistance in sugarcane, advised by **Dr. Jeff Hoy**.

APS Educational Tour 2022

The PPCP Graduate Student Association had their Scientific Educational Tour before the American Phytopathological Society Plant Health annual meeting held in August in Pittsburgh, Pennsylvania. During the tour, they visited academic and governmental institutions related to agriculture and food production located in Alabama, Kentucky and Ohio.

At the University of Kentucky, they had the opportunity to introduce LSU's Department of Plant Pathology & Crop Physiology to the faculty, staff and students of UK's Department of Plant Pathology. David Galo and Nelomie Galagedara provided updates on PPCP professional and social activities.

UK Department of Plant Pathology graduate students and faculty gave a tour through their labs and the research being conducted. Dr. Nicole Gauthier, PPCP alumna and Extension Associate Professor, provided a tour of her experimental plots on hemp production and plant diseases.

At The Ohio State University College of Food, Agricultural and Environmental Sciences Wooster Research Station, PPCP students met with students and faculty from the departments of Plant Breeding and Genetics and Plant Pathology.

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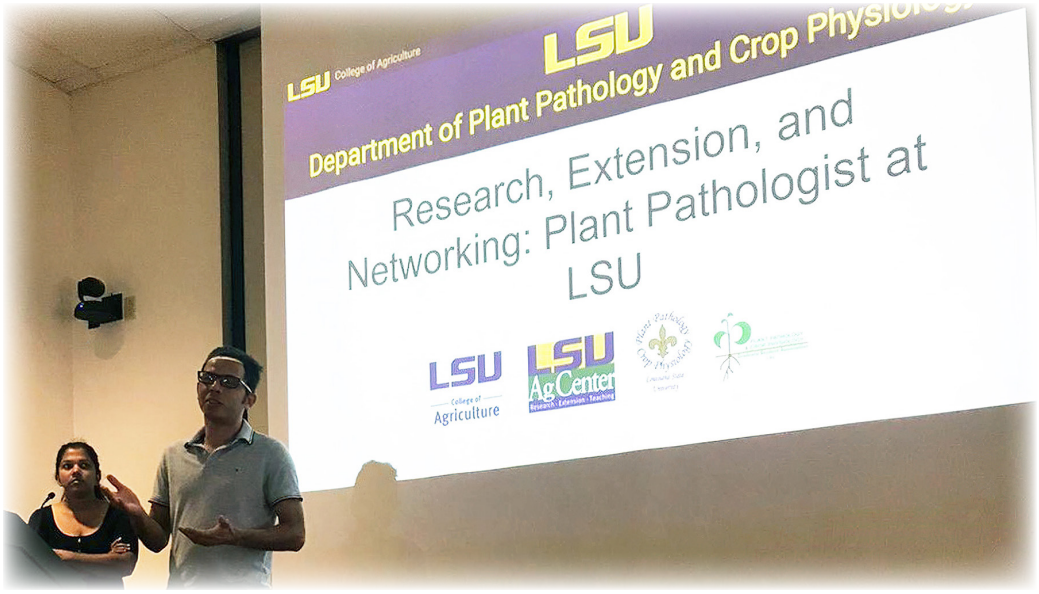
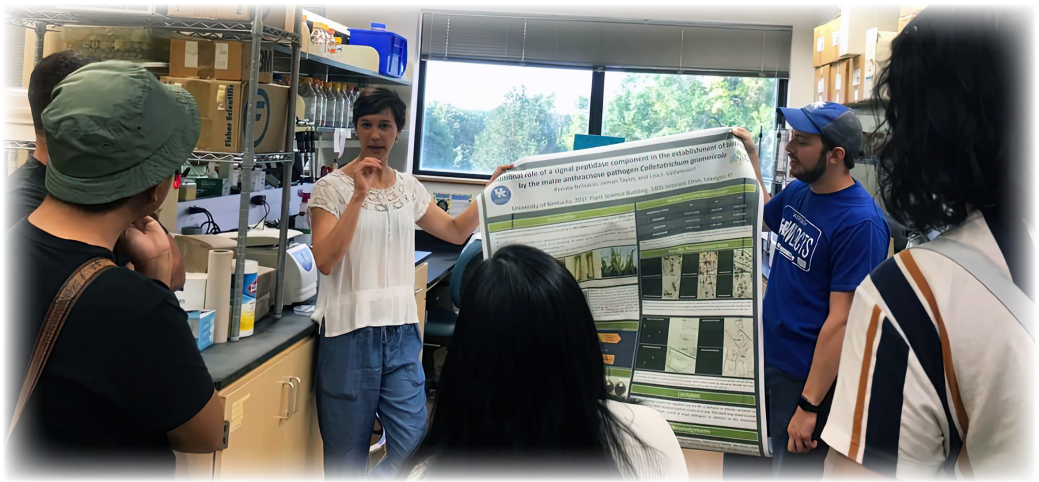


Nelomie Galagedara, left, and David Galo provide updates on LSU's PPCP activities to a group at the University of Kentucky.



Renata Belisario with the University of Kentucky discusses her research on maize diseases.

LSU students toured The Ohio State University's greenhouses.

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They learned about the wheat breeding program and their efforts to find resistance against Fusarium head blight. Also, they visited the greenhouses to observe different experiments conducted to find new alternatives to reduce plant diseases in hydroponic lettuce and ornamentals crops.

After the APS meeting, PPCP students visited Auburn University and toured their research facilities. Dr. Kassie Conner, Extension Specialist, explained her role and common analyses used in the Plant Diagnostic Clinic while Dr. Cesar Escalante, a PPCP alumnus, explained his research on viral diseases of cotton.

Left: *PPCP alumna Dr. Nicole Gauthier led a tour of her experimental plots on hemp production at the University of Kentucky.* ***Below:*** *PPCP alumnus Dr. Cesar Escalante explains his research at Auburn University.*

PPCP graduate students participate in AgMagic

AgMagic is the LSU AgCenter's spring event when 1000s of school children from 4 to 12 years of age from around the state visit campus to learn about plants, insects, animals and the environment. The department has a display on plant diseases, and graduate students along with faculty take complex technical information and present it in age-appropriate ways so these children walk away with a better understanding of plant diseases.

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Gabriel Munoz Herrera, left, and Ernesto da Silva helped at LSU's AgMagic.

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APS Annual Meeting: Plant Health 2022

The American Phytopathological Society (APS) Plant Health meeting was held Aug. 6-10 in Pittsburgh, Pennsylvania. PPCP students, postdocs and faculty attended and were actively involved from leading sessions to presenting posters. Their activities included the following:

Detection of airborne inoculum of Cercospora leaf blight of soybean to better understand epidemiology and improve disease management, **Nelomie N. Galagedara**.

Development of biological agents that promote soybean growth and health through seed treatment, **Jonas J. Padilla**.

Fine mapping of narrow brown leaf spot disease resistance locus CRSP2.1 and candidate gene identification in rice, **Shankar P. Gaire**.

Population genomics reveals genetic diversity, structure, and mode of reproduction of the rice pathogen *Cercospora janseae* in Louisiana and Texas, **Jacob Searight**.

LSU Alumni Networking event at APS Plant Health 2022.

Response of Roseau cane (*Phragmites australis*) to two biotic stresses: *Hyalopterus pruni* and *Bipolaris yamadae*, **David Galo**.

Exploring the genetic diversity of *Rhizoctonia solani* AG1-IA causing soybean aerial blight to screen for cultivar resistance, **Kensy Rodriguez-Herrera**.

Molecular and morphological characterization of *Phytophthora* sp. isolated from various host plant species in Louisiana, **Hamilton Crockett**.

Genetic characterization of the soybean nested association mapping population to identify resistance in frogeye leaf spot, **Gabriel D. Munoz-Herrera**.

Development of alternative materials and strategies for enhancing rice health, **Jobelle Bruno**.

Dissection and characterization of rice disease resistance to bacterial panicle blight via QTL mapping and RNA-seq approaches, **John C. Ontoy**.

Understanding cercosporin production: Insights into fundamental biology and fungal plant interactions, **M. Izabel Costa de Novaes**.

Pathogenicity and distribution of *Cercospora* species associated with Cercospora leaf blight in the southern United States, **Ernesto T. da Silva**.

Competitive APS travel awards to attend were won by **Jobelle Bruno** (H. David Thurston Student Travel Award and H.J. Dubin Student Travel Award in honor of the Peace Corps) and **Kensy Rodriguez-Herrera** (J. Artie and Arra Browning Plant Medicine and Janell M. Stevens Student Travel Award). In addition, **Hamilton Crockett** received an LSU Graduate Travel Award to attend.

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Poster sessions were held at the APS Plant Health meeting.

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PPCP members travel to Corteva Agriscience

In October 2022, members of the PPCP department visited the research center of Corteva Agriscience, Stoneville, Mississippi. While there, they learned about the center and the role the scientists play within the company. This networking trip was important for PPCP students and others to better understand how to seek potential employment opportunities with the agricultural industry.

GSA holds international luncheon

After a two-year hiatus, the PPCP Graduate Student Association organized an international luncheon for students, faculty, staff and friends. All the participants sampled foods from numerous countries that included Brazil, Colombia, Ecuador, Haiti, Honduras, Kenya, El Salvador, Philippines, Sri Lanka and Zambia. The students shared their diverse ethnic backgrounds through these dishes. The International luncheon provided a great social gathering opportunity for students, faculty and staff to discuss science and food.

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The PPCP Graduate Student Association organized an international luncheon.

GSA students stand by to serve their international dishes.

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PPCP graduate students participate in recruitment fair

The spring 2022 recruitment information fair was organized to recruit students for our department, interact with prospective students and families, share what our department has to offer and explain why LSU should be their home next fall.

Right: *David Galo, from left, Kensy Rodriguez-Herrera and Nelomie Galagedara provide information on the Department of Plant Pathology & Crop Physiology.*

Nelomie Galagedara, left, and Waana Kaluwasha explain research opportunities in the PPCP department to LSU undergraduate students.

Graduate students promote plant pathology at fair

The LSU undergraduate research information fair took place during fall Welcome Week. The aim of the event was to have undergraduate students learn about the research opportunities in various departments at LSU by interacting with faculty, graduate students and even fellow undergraduate students from the respective departments.

Graduate Student Awards and Honors

PPCP students receive fellowships from American Society of Sugar Cane Technologists

Five graduate students from the Department of Plant Pathology & Crop Physiology received fellowships funded by the Louisiana Division of the American Society of Sugar Cane Technologists at the February 2022 joint meeting of the ASSCT and American Sugar Cane League. They were **Iris Aguilar**, **Rosalie Calderon**, **Jose Cortes**, **Kezia Reis** and **Chenie Zamora**. **Hector Fajardo** and **Cristina Reis**, students from LSU's School of Plant, Environmental, and Soil Sciences, were also recipients. Dr. Luke Laborde, then LSU AgCenter Interim Vice President and Dean, made the award presentations.

The fellowship funding is generated from Louisiana's cane farmers and millers and is managed by the LSU Foundation. The American Sugar Cane League has played a large role in building the American sugar industry and the research community.

The Louisiana sugarcane farm gate is valued at more than $1 billion annually and creates a $3 billion economic impact for the state.

Attending the joint meeting of the ASSCT and American Sugar Cane League are, front row from left, Rosalie Calderon, Chenie Zamora and Cristina Reis, and back row from left, Jose Cortes, Hector Fajardo, Iris Aguilar, Dr. Luke Laborde and Kezia Reis.

Galo receives PPCP student fund support award

David Galo, advised by **Dr. Tristan Watson**, received funding from the Cal Agri Products, LLC Graduate and Undergraduate Student Support Fund. Selection for this award was based on academic standing, significance of the research and less importantly, nearness to completion of the degree.

Dr. Tristan Watson, left, presents the award to David Galo.

Galo and Watson awarded LSU AgCenter diversity grant program

Ph.D. student **David Galo** and **Dr. Tristan Watson** received $2,000 from the LSU AgCenter's diversity mini grant program to host a visiting scholar from Honduras. The intern will develop research skills in nematode extraction, identification of nematode symptoms, inoculum preparation, plant maintenance, data collection and data analysis. This program generates opportunities for people with low representation in science including first-generation students, women in agriculture, low-income students and native Honduran students. The mentoring program also aims to facilitate the networking between visiting scholars and faculty at LSU and help them with the process of applying to graduate schools at LSU or other U.S. universities.

Jhonson wins 3rd place in the ISAC student oral competition

The 8th International Silicon in Agriculture Conference (ISAC, www.issag.org) was held in New Orleans on May 23-26. While attending the conference, **Jhonson Leonard** participated in the Five-Minute Rapid Oral Presentation competition and was awarded third place. His presentation was entitled "Characterization of the Microbial Community of the Rice Rhizosphere Structured by Silicate Fertilization and *Rhizoctonia solani* Infection."

Da Silva wins MSA travel award

Ernesto da Silva won the Mycological Society of America's Edward E. Butler Travel Award to attend MSA's annual meeting held in Gainesville, Florida. Butler was a prominent mycologist and worked on several plant pathogenic fungi, especially *Rhizoctonia solani*.

COA Awards

Subbarao receives the LSU College of Agriculture Outstanding Alumni Award

Dr. Krishna Subbarao received his doctorate from the LSU Department of Plant Pathology and Crop Physiology in 1989. Following brief postdoctoral stints at LSU and the University of California, Berkeley, Subbarao joined the Department of Plant Pathology at University of California, Davis, as an assistant professor in 1992. He became a full professor in 2002 and recently earned the title of distinguished professor, one of the highest honors bestowed by UC Davis.

He is renowned for his outstanding, pioneering research on cool-season vegetable crop diseases, with more than 235 refereed journal articles and numerous prestigious awards at the institutional and national levels that attest to the magnitude of his national and international profile.

Subbarao currently resides in Salinas, California.

Staff Awards

DeRobertis wins Outstanding Associate Award

Cathy DeRobertis received the LSU AgCenter's Outstanding Associate Award at the annual conference held in Baton Rouge on Dec. 12. This award recognizes an AgCenter associate who consistently demonstrates the highest levels of performance in technical knowledge, quality of work, teamwork, professionalism, commitment and overall contributions to the mission of the AgCenter.

Staff New Hires

Rooney chosen as the next business office coordinator

Kimberly Rooney joined the business office as the office coordinator in May 2022. She replaced Dolores Dyess who took another position with the Department of Biological Sciences. Rooney grew up in Metairie, Louisiana, and has been a resident of Baton Rouge since 2019. Married 28 years to Thomas, she has one son and has recently become a grandmother, much to her enjoyment.

Reynolds selected as next accounting technician

The PPCP department welcomes **Rebecca Reynolds**, who recently joined the business office as an accounting technician after the retirement of Charletta Warr. Reynold's background has been in construction and nonprofit accounting since 2012. She is working to obtain a bachelor's degree in accounting. She grew up in Denham Springs, Louisiana, and is married with two sons, ages 12 and 14.

Faculty Retirement

Dr. Chris Clark Leaves Indelible Mark on Sweet Potato World

United States Sweet Potato Council, Inc., National Clean Plant Network News

To say that Dr. Chris Clark has had a successful career is an understatement. For over 45 years, Clark has made contributions to the sweet potato industry both nationally and internationally. As an exceptional scholar, researcher, extension professional, mentor and teacher, he has played a pivotal role in the advancement of virus-tested clean seed programs and served as chair of the National Clean Plant Network-Sweetpotato Tier 2 group since its inception.

In 1999, Clark spearheaded the decision to transition the foundation seed

program at the Louisiana State University AgCenter Sweet Potato Research Station (one of seven National Clean Plant Centers for Sweetpotato) to a virus-tested foundation seed program. The program has since processed over 80 different sweet potato cultivars and breeding lines through meristem-tip culture and virus indexing and has also maintained by nodal propagation in tissue culture, virus-tested plantlets of each cultivar. Clark has published over 100 refereed publications, compendiums, and book chapters. He has contributed to the training of graduate students, many of which remain involved with sweet potatoes today.

Clark's soft-spoken humility belies the expanse of accolades he has garnered throughout his career. He has been recognized with numerous national awards from his peers, including the National Sweet Potato Collaborators Group National Impact Award and the Outstanding Plant Pathologist by the American Phytopathological Society-Southern Division. He was selected as Mr. Yam by the Louisiana Sweet Potato Industry in 1990 and received the Distinguished Service Award from the Louisiana Sweet Potato Association in 1997.

It takes unique talent and a special personality to successfully bridge the scientific and academic world and the real world of production agriculture. Clark has done just that. As a go-to resource for both scientists and growers, his legacy as an authority on sweet potato diseases will follow him well beyond his retirement in August 2022. With heartfelt gratitude for all you have done, The National Clean Plant Network family salutes you Mr. Yam, and wishes you all the best in the next evolution of your life!

Faculty Hire

Power hired as the new sweetpotato pathologist

Dr. Imana Power started as an assistant professor in the Department of Plant Pathology and Crop Physiology in September 2022 after the retirement of Dr. Chris Clark. Her research program will focus on the management of sweetpotato diseases in Louisiana by developing multiple disease resistance, clean plant production and minimizing cultivar decline.

She obtained her MSc. in Ecological Phytopathology,

from Wageningen University and Research in the Netherlands where she worked with Dr. Jos Raaijmakers and Dr. Aad Termorshuizen on biocontrol of the soilborne wilt caused *Verticillium dahlia*. In 2014, she received her Ph.D. in plant pathology from the University of Georgia, under the guidance of Dr. Albert Culbreath, where she characterized peanut rust resistance. As a postdoctoral research associate with Dr. Renee Arias, National Peanut Research Laboratory, she worked on RNAi against aflatoxin production by *Aspergillus flavus*. After her postdoc, she moved back to her home country, Suriname, and worked at the Center for Agricultural Research (CELOS) as head of the CELOS plant pathology laboratory and as the institute director. Her research focused on developing in-field molecular detection tools to better manage diseases of root and tuber crops such as banana, cassava and ginger.

Faculty Awards and Honors

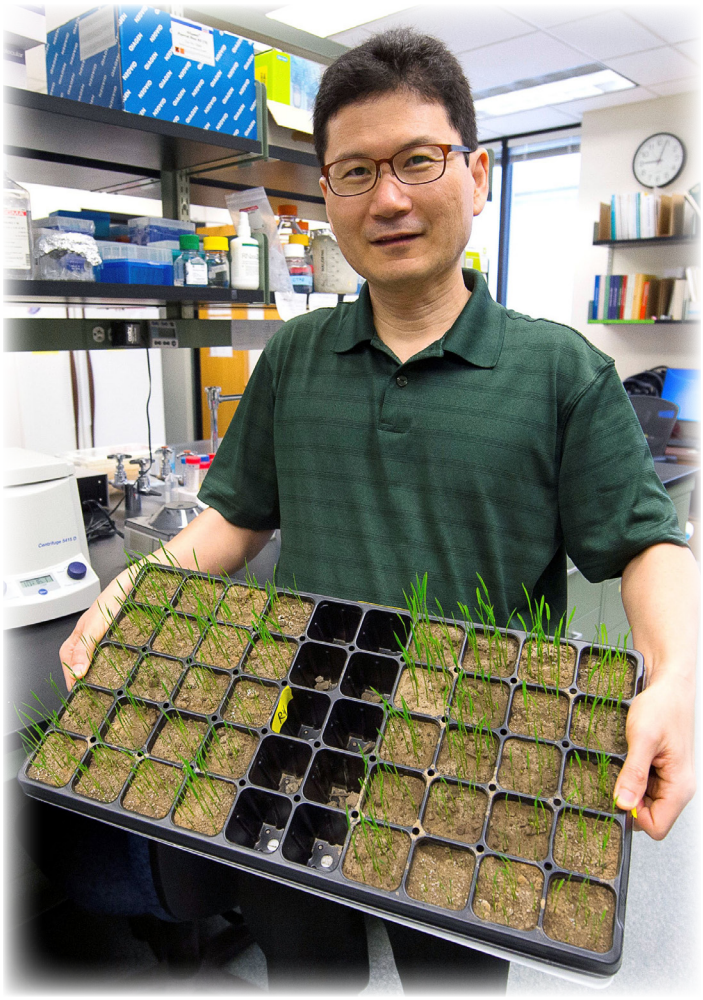
Ham receives Daggett Professorship

Dr. Jong Hyun Ham, professor, Department of Plant Pathology & Crop Physiology, LSU AgCenter, was awarded the F. Avalon Daggett Professorship in Rice Research. He received this recognition based on his discovery and characterization of the qsmR gene — a key regulatory factor of *Burkholderia glumae*, the bacterial pathogen that causes panicle blight in rice. His research group also has found additional genes that affect virulence factors and used state-of-the-art DNA technology to further their understanding of these regulatory systems.

Ham's work has offered new insights into disease management strategies and helped identify disease resistance traits. These findings have led to more than 10 new disease-resistant rice lines that also have good yield potential.

In just the past five years, Ham has secured nearly $1.4 million for research funding, trained six graduate students, and made more than 30 presentations at scientific conferences — serving as the keynote speaker at two international meetings. During the same time period, he also has published 44 articles (refereed, book chapters, proceedings, annual reports and abstracts).

The professorship recognizes outstanding research accomplishments in rice production. It supports recipients' programs by providing salary supplements as well as funding for instruction, research equipment, materials and faculty improvement.



Price receives the Extension Excellence Award

Dr. Paul "Trey" Price III, Associate Professor of Plant Pathology, received the LSU AgCenter's Extension Excellence Award at the annual conference held on Dec. 12-13. This award promotes scholarship and excellence within the Louisiana Cooperative Extension Service and is given annually to the extension professional who has shown outstanding and distinguished service to citizens of Louisiana and upholds the mission of the LSU AgCenter.

Price was recognized for being in the forefront of identifying diseases in row crop fields and recommending ways to control them. His strategies for controlling diseases on farms have helped crop producers save on input costs. He also was one of the first to report on new plant diseases such as taproot decline in soybeans. Price has secured nearly $3 million in grant funds to develop programs to help control diseases. One of his strengths is having a knack for communicating to producers and the public in easy-to-understand terms.

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Overstreet receives the LSPA Distinguished Service Award

Dr. Charles Overstreet, professor emeritus, received the Distinguished Service Award from the Louisiana Sweet Potato Association in recognition of his commitment to addressing yield limiting and quality concerns for both rootknot and reniform nematode species affecting sweetpotato in Louisiana. Overstreet, for much of his career, was involved in on-farm research and outreach initiatives addressing nematode issues in sweetpotato and in developing best management practices. Just prior to his retirement, he led efforts to identify guava root-knot nematode and worked with the industry to develop management strategies and quarantine guidelines.

Thomas-Sharma receives the APS Lafayette Frederick Diversity Award

Dr. Sara Thomas-Sharma was a recipient of the American Phytopathological Society's Lafayette Frederick Diversity in Mentoring Award which provides mentored experiences in plant pathology for students and postdocs from underrepresented minority groups. Established in 2020, the goal of the award is to increase the number of practicing plant pathologists from underrepresented

groups, particularly those from historically Black colleges and universities, 1890 land-grant institutions, tribal colleges and universities (1994 land-grant institutions) and minority serving institutions. The award is designed to enable mentors and enhance the academic and professional experiences of mentees.

This award was established by the APS Foundation in honor of **Dr. Lafayette Frederick** to provide mentored experiences in plant pathology for students and postdocs from underrepresented minority groups. Frederick had an esteemed career in botany, mycology and plant pathology as a faculty member at Southern University and Atlanta University as well as department chair at Howard University. Throughout his career, Frederick was a tireless mentor and advocate for students of color.

Faculty Activities

Zhi-Yuan Chen

Invited Presentations

- Mid-South Soybean Board meeting, Newport, Arkansas. Aug. 25-26, 2022. "Spray application of dsRNA for simultaneous management of multiple soybean fungal and insect diseases."
- Commodity Classic meeting, New Orleans, Louisiana. March 8, 2022. Progress report on the AMCOE funded project "Transgenic Control of Aflatoxin Contamination in Corn through Host Induced Gene Silencing."
- 118th Annual Meeting of Southern Association of Agricultural Scientists (SAAS), New Orleans, Louisiana. Feb. 14, 2022. "RNA Interference and Its Applications in Plant Disease Management."
- Seminar at the Department of Biological Sciences, Louisiana State University. Jan. 31, 2022. "RNA Interference and Its Applications in Plant Biology."

Committees

- PPCP space committee.
- PPCP promotion and tenure committee.
- Jonathan Richards and Ely Garcia's mentoring committees.
- LSU AgCenter Promotion and Tenure committee.
- LSU AgCenter Award committee.
- NIFA SBIR 8.2 panel.
- University of Maryland Industrial Partnerships grant panel.

Grants and Contracts

- United Soybean Board grant for "Simultaneous management of multiple soybean diseases through dsRNA applications." $101,450. October 2022 to September 2023.
- LSU AgCenter Center of Research Excellence Plant Biotechnology and Crop Development Pilot Program grant for "Cationic lignin nanoparticles as RNA delivery systems for managing soybean fungal diseases" with C.M. Sabliov. $30,000. (As Co-PI, Chen's portion is $5,000.) July 2022 to June 2023.
- The AMCOE Aflatoxin Program grant for "Transgenic Control of Aflatoxin Contamination in Corn through Host Induced Gene Silencing." $69,059. June 2022 to May 2023.
- 2022 Louisiana Soybean and Grain Research and Promotion Board grant for "Cercospora Leaf Blight Disease of Soybean-Explore new approaches for management." $42,970. April 2022 to March 2023.
- 2022 Louisiana Soybean and Grain Research and Promotion Board grant for "Direct double stranded RNA application for managing Cercospora leaf blight and rust." $38,500. April 2022 to March 2023.
- Mid South Soybean Board grant for "Transgenic Control of Aflatoxin Contamination in Corn through Host Induced Gene Silencing." $20,000. March 2022 to May 2023.

Visiting Scientists/Students

- Dr. Surassawadee Promyou, associate professor, faculty of Natural Resources and Agro-Industry, Kasetsart University Chalermphrakiat Sakon Nakhon Province Campus, Thailand. January 2022 to July 2022.

New Graduate Students

- Dablieny Souza, Brazil, spring 2022.
- Vivek Khambhati, Mississippi, fall 2022.

New Collaborations

- Dr. Baozhu Guo, U.S. Department of Agriculture-Agricultural Research Services, Tifton, Georgia, on using dsRNA to manage aflatoxin contamination in peanut.

Felipe Dalla Lana

Invited Presentations

- Cornell University, Nov 22, 2022. "Developing a risk assessment model for disease management: a case study on Gibberella ear rot (2022)."
- Federal University Rural of Pernambuco, Brazil, Nov. 10, 2022. "From the Spreadsheet to the field: use of epidemiology in the management strategy (Portuguese; 2022)."

Other Presentations

- Rice pathology workshop, H. Rouse Caffey Rice Research Station, LSU AgCenter, Crowley, Louisiana, April 27, 2022.
- Central Region Rice Field Day, Mamou, Louisiana, May 26, 2022. Rice pathology overview.
- Acadia/South Farm Field Day, H. Rouse Caffey Rice Research Station, LSU AgCenter, Crowley, Louisiana,

June 15, 2022. Rice pathology overview.

- H. Rouse Caffey Rice Research Station, LSU AgCenter, Crowley, Louisiana, June 2022. Rice pathology program updates.

Committees

- American Phytopathological Society, Epidemiology Committee, immediate past chair.
- American Phytopathological Society and Brazilian Society of Plant Pathology Working Group, vice chair.
- American Phytopathological Society, Crop Loss Assessment and Risk Evaluation (CLARE), member.
- American Phytopathological Society, Chemical Control, member.
- American Phytopathological Society, Tropical Plant Pathology, member.
- PPCP Award Committee.
- Graduate Student Mentoring Committees, Jobelle Bruno, PPCP-LSU, Ph.D. student, major advisor: Dr. Jong Hyun Ham; and Maria Roselane Alves Oliveira, PPGF-UFRPE, Brazil, major advisor: Dr. Rocha Silva.

New Collaborations

- University of Arkansas.
- Universidade Federal Rural de Pernambuco, Brazil.
- Louisiana Rice Research Board.
- Gowan USA.
- Albaugh, LLC.
- Arkion Life Sciences.
- Nichino America.
- 5Metis, Inc.

Vinson P. Doyle

Invited Presentations

- LSU President AgCenter Stakeholder Tour. Dec. 7, 2022. “Building a research program in mycology to address regional problems with international impact.” LSU Rural Life Museum.

Committees

- Chair - PPCP Courses and Curricula Committee.
- Chair - College of Agriculture Courses and Curricula Committee.
- PPCP Graduate Admissions.
- PPCP Graduate Student Recruiting.
- PPCP Space Committee.
- College of Agriculture Undergraduate Research Grant Review Committee.
- Chair - Mycological Society of America Student Mentor Travel Awards Committee.

Grants and Contracts

Principal investigator (new and continuing)

- Louisiana Soybean and Grains Research and Promotion Board (LSGRPB). “Characterizing the production and spread of inoculum and infection strategies for Cercospora Leaf Blight and Purple Seed Stain pathogens.” $23,500. Co-PIs: Trey Price, Sara Thomas-Sharma and Jonathan Richards.
- Louisiana Soybean and Grains Research and Promotion Board (LSGRPB). “Developing the tools for the management of taproot decline.” $20,340. Co-PI: Trey Price.
- 2021 Louisiana Soybean and Grains Research and Promotion Board (LSGRPB) Funding Program. “Characterizing the production and spread of inoculum and infection strategies for Cercospora Leaf Blight and Purple Seed Stain pathogens.” $25,000. Co-PIs: Trey Price, Sara Thomas-Sharma and Jonathan Richards.
- 2021 Louisiana Soybean and Grains Research and Promotion Board (LSGRPB) Funding Program. “Building the framework to develop integrated management strategies for taproot decline.” $20,000. Co-PI: Trey Price.

Co-principal investigator (new and continuing)

- Louisiana Soybean and Grains Research and Promotion Board (LSGRPB). “Evaluation and application timing of cultivar resistance for management of Cercospora leaf blight on soybean.” $47,500. PI: Sara Thomas-Sharma; Co-PIs: Vinson Doyle, Trey Price, Boyd Padgett and L. Conor.
- Louisiana Soybean and Grains Research and Promotion Board (LSGRPB). “Redesigning fungicide control strategies for Cercospora leaf blight.” $15,534. PI: Sara Thomas-Sharma; Co-PIs: Vinson

Doyle and Trey Price.

- Louisiana Soybean and Grains Research and Promotion Board (LSGRPB). "Soybean seed treatment with fungicide-loaded nanoparticles." $25,000. PI: Cristina Sabliov; Co-PIs: Trey Price, Vinson P. Doyle and Jeff Davis.
- Southern IPM Center. "Developing cultivar resistance as a management tool against aerial blight on soybean." PI: Sara Thomas-Sharma; Co-PIs: Vinson Doyle and Trey Price.
- USDA-APHIS. 2022-2025. "Roseau Cane Dieback: Multidisciplinary approaches to address plant decline and opportunities for restoration." $1,611,263 ($153,561 to Doyle). PI: Rodrigo Diaz; Co-PIs: James T. Cronin, Tracy Quirk, Vinson P. Doyle, Xuelian Meng, Jonathan Richards, Michael Stout and Andy Nyman.
- USDA-APHIS. 2021-2024. "Integrating the Effects of Environmental Stressors, Above and Belowground Interactions and Plant Genetics to Understand Roseau Cane Die-off and Restoration." $1,611,263 ($173,560 to Doyle). PI: Rodrigo Diaz; Co-PIs: James T. Cronin, Tracy Quirk, Vinson P. Doyle, Xuelian Meng, Jonathan Richards and Michael Stout.
- USDA-APHIS. 2020-2023. "Roseau Cane Die-off: Soil Chemistry, Above and Belowground Interactions and Long-Term Monitoring." $1,608,135 ($344,395 to Doyle). PI: Rodrigo Diaz; Co-PIs: James T. Cronin, Tracy Quirk, Vinson P. Doyle and Xuelian Meng.
- USDA-NIFA Crop Protection and Pest Management Program. "Developing tools for long-term integrated management of Cercospora leaf blight on soybean." $324,998. PI: Sara Thomas-Sharma; Co-PIs: Vinson P. Doyle, Tom Allen, Trey Price, Boyd Padgett and Terry Spurlock.
- Louisiana Soybean and Grains Research and Promotion Board (LSGRPB). "Soybean seed treatment with fungicide-loaded nanoparticles." $25,000. PI: Cristina Sabliov; Co-PIs: Trey Price, Vinson P. Doyle and Jeff Davis.
- Louisiana Soybean and Grains Research and Promotion Board (LSGRPB). "Redesigning fungicide control strategies for Cercospora leaf blight." $15,534. PI: Sara Thomas-Sharma; Co-PIs: Vinson Doyle and Trey Price.
- USDA-NIFA Pests and Beneficial Species in Agricultural Production Systems Program. "The ecological and genetic drivers of adaptation in a generalist leaf pathogen in North America." $240,656. PI: Jonathan Richards; Co-PI: Vinson P. Doyle.
- College of Agriculture Undergraduate Research Program. "Quantifying Metabolites of *Xylaria necrophora*, a Fungus Responsible for Taproot Decline of Soybean in the Southern United States." Student Investigator: Michelle Gremillion; Faculty Supervisor: Vinson P. Doyle.

Ely O. Garcia

Committees

- Mentoring committee member of LSU graduate students Jobelle Bruno (under Dr. Jong Hyun Ham, PPCP) and Jennifer Manangkil (under Dr. Adam Famoso, SPESS).
- Search committee member and diversity advocate for the PPCP faculty position in Plant Immunity.

Grants and Contracts

- KWS Saat AG, "Establishing efficient protocols for gene replacement for Setophaeria turcica, the causal agent of the northern corn leaf blight." $94,325. Submitted Sept. 4, 2021, collaboration agreement. New funds received for 2023.
- Louisiana Rice Research Board, "Evaluation of the effectiveness of deployed resistance genes in LSU AgCenter advanced rice breeding lines" with A. Famoso, F. Dalla Lana and R. Levy. $14,000. Submitted Sept. 22, 2021.
- Louisiana Board of Regents (R&D), "Functional characterization of Magnaporthe oryzae effector proteins during infection." $75,500.

Visiting Scientists/Students

- Samuel de Paula, University of Sao Paulo.
- Nicol Aries Pinales, Zamorano program.

New Graduate Students

- Bernard O. Budot.
- Chenie S. Zamora.

New Collaborations

- Dr. Simon Williams, The Australia National University. Project on effector biology.

Faculty Activities

Jong Hyun Ham

Invited Presentations

- Louisiana Soybean and Feed Grains Research and Promotion Board Meeting, Nov. 17, 2022. "Development of seed-priming agents that augment soybean growth and broad spectrum disease resistance."
- Department of Biochemistry, Molecular Biology, Entomology and Plant Pathology, Mississippi State University, Oct. 24, 2022. "The signaling and regulatory system of *Burkholderia glumae* causing bacterial panicle bight of rice."
- Southern Association of Agricultural Scientists (SAAS) annual meeting, Feb. 14, 2022. "Development of seed treatment technology based on fundamental research of plant pathology and microbiology."
- Louisiana Agricultural Technology and Management Conference, Feb. 10, 2022. "Development of seed-treating biostumulants for promoting soybean growth and health."

Other Presentations

- American Phytopathological Society annual meeting (Plant Heath 2022), Pittsburgh, Pennsylvania, Aug. 6-10, 2022.
  - "Development of biological agents that promote soybean growth and health through seed treatment" with J. Padilla and R. Calderon. Poster presentation by Jonas Padilla.
  - "Characterization of *qsmR* functioning as a master regulator beyond the quorum-sensing system for the pathogenesis of *Burkholderia glumae* in rice" with T. Lelis, J. Padilla, I. Barphagha, J. Ontoy and J. Bruno. Poster presentation by Jonas Padilla.
  - "Dissection and characterization of rice disease resistance to bacterial panicle blight via QTL mapping and RNA-seq approaches" with J.C. Ontoy, B. Shrestha and I. Barphagha. Poster presentation by John Ontoy.
  - "Development of alternative materials and strategies for enhancing rice health" with J.S. Bruno, J.C. Ontoy and I. Barphagha. Poster presentation by Jobelle Bruno.
- 8th International Conference on Silicon in Agriculture, New Orleans, Louisiana, May 23-26, 2022. "Characterization of the microbial community of the rice rhizosphere structured by silicate fertilization and pathogen infection" with J. Leonard and R. Calderon. Poster presentation by Jhonson Leonard.

Publications in Refereed Journals

- Ontoy, J., B. Shrestha, H. S. Karki, I. Barphagha, B. Angira, A. Famoso, and J. H. Ham. 2022. Genetic characterization of the partial resistance of rice to bacterial panicle blight and sheath blight by combined QTL linkage and QTL-seq analysis. *Plants* (in press).
- Cruz, J. A., B. S. Tubana, L. M. Fultz, M. S. Dalen, J. H. Ham. 2022. Identification and profiling of silicate-solubilizing bacteria for plant growth-promoting traits and rhizosphere competence. *Rhizosphere* 23: 100566. DOI: 10.1016/j.rhisph.2022.100566.
- Jungkhun N., A. R. G. de Farias, J. Watcharachaiyakup, N. Kositcharoenkul, J. H. Ham, and S. Patarapuwadol. 2022. Phylogenetic characterization and genome sequence analysis of *Burkholderia glumae* strains isolated in Thailand as the causal agent of rice bacterial panicle blight. *Pathogens* 11: 676. DOI: 10.3390/pathogens1106076.

Committees

- PPCP Safety/Operational Committee, chair.
- PPCP Promotion and Tenure Committee, chair.
- PPCP Graduate Student Recruiting Committee, member.
- PPCP Course and Curricula Committee, member.

Grants and Contracts

- The Land Institute Super Ratooning Rice Program. PI: Jong Hyun Ham, Co-PI: Mike Stout. $52,080. December 2020 to December 2023.
- United Soybean Board Program, "Development of seed-treating biostimulants that protect soybean plants from biotic and abiotic stresses." $65,700. Oct. 1, 2022, to Sept. 30, 2023.
- Louisiana Soybean and Feed Grains Research and Promotion Board Grant, "Development of seed-priming agents that augment soybean growth and broad spectrum disease resistance." PI: Jong Hyun Ham, Co-PI: Changyoon Jeong. $37,200. April 2022 to March 2023.
- NIFA AFRI Foundation Program, "Deciphering the role of the quorum-sensing master regulator, qsmR, in social behaviors of *Burkholderia glumae* for bacterial pathogenesis in rice plants." PI: Jong Hyun Ham, Co-PI: Maheshi Dassanayake. $682,232. Jan. 1, 2022, to Dec. 31, 2025.

Faculty Activities

Visiting Scientists/Students

- Marco Gama, visiting professor, Federal Rural Universty of Pernambuco (UFRPE), Brazil. September 2021 to September 2022.

New Graduate Students

- Francisco Valle, M.S.

New Collaborations

- Dr. Shahid Mukhtar, Department of Biology, The University of Alabama at Birmingham.
- Dr. Maheshi Dassanayake, Biological Sciences, LSU.
- Dr. William Doerrler. Biological Sciences, LSU.
- Dr. Ebony Murrell, The Land Institute, Salina, Kansas.
- Dr. Young-su Seo, Pusan National University, Pusan, South Korea.
- Dr. Marco Gama, Federal Rural University of Pernambuco, Recife, Brazil.

Jeff Hoy

Invited Presentations

- Louisiana Agricultural Consultants Association (update on billet planting).

Grants and Contracts

- American Sugar Cane League. $30,000.
- Helena Chemical. $19,000.
- Certis. $19,000.
- FMC. $14,000.

Boyd Padgett

Invited Presentations

- PPCP Seminar.
- LACA Soybean Disease Update and Research Update.
- Crop Protection Network, wheat leaf and stripe rust.

Other Presentations

- Avoyelles Parish Production.
- Tri-Parish Production.
- Crop and Cattle Forum.
- Pesticide Recertification (January and November).
- OVT Meeting.

Committees

- LSU AgCenter Awards Committee.
- LA Ag Consultants Governmental Affairs Committee.
- LA Ag Executive Board.
- LA Ag Consultants Planning Committee.
- Sweet Potato Pathologist Search Committee.
- Sugarcane Pathologist Search Committee.
- USWSI Forum Poster Judge.
- Five Graduate Student Committees.
- Farm Service Agency LSU AgCenter Representative.

Grants and Contracts

- Soybean and Grain, $64,175.
- Unrestricted, $39,200.
- Smith Bucklin, $55,000.
- USDA-ARS (USWBSI), $50,868.50.

New Collaborations

- Syngenta.
- BASF.
- Bayer.
- FMC.
- USB.
- USDA-NIFA.
- USDA-ARS.

Publications

- Hollier, C.A., Padgett, G.B., and Draper, M.A. eds. Diseases of Field Crops. American Phytopathological Society, St. Paul, MN. (In press.)
- Moseley, D., Woolam, B.C., Thanos, G., Parvej, Md R., Lee, L., Reis, A., Padgett, G.B., and Manoch, K. 2022. Soybean planting dates: A historical review and current evaluation of the effects on growth, development, and yield in Central Louisiana. Louisiana Agriculture 65(2).
- Price, T., Moseley, D., Padgett, G.B., and Chen, Z. 2022. Status and latest research on managing soybean rust in Louisiana. Louisiana Agriculture 65(1): 14-15.

Faculty Activities

Trey Price

Invited Presentations

- LATMC Meeting, Marksville, Louisiana. Feb. 11, 2022. "Rice disease management considerations."
- Mississippi Crop Situation Podcast. April 5, 2022. "Wheat diseases with Trey Price."

Other Presentations

- Richland Parish Grower Meeting, Rayville, Louisiana. Jan. 20, 2022. Disease update.
- Concordia Parish Grower Meeting, Vidalia, Louisiana. Feb. 7, 2022. Crop disease management update.
- Franklin Parish Grower Meeting, Winnsboro, Louisiana. Feb. 22, 2022. Disease update.
- Wheat and Oat Field Day, Macon Ridge Research Station, Winnsboro, Louisiana. April 20, 2022. Fusarium head blight nursery.
- Furrow Irrigated Rice/Soil Heath Field Tour, Northeast Research Station, St. Joseph, Louisiana. Aug. 11, 2022. Pathology – blast.
- MSSB Meeting, Jonesboro, Arkansas. Jan. 31, 2022. Enhanced pest control systems for mid-south soybean production.
- Price, P., M. Purvis, and D. Ezell. 2021. Seven seasons of foliar fungicide trials in Louisiana cotton. Proc. Beltwide Cotton Conference, San Antonio, Texas. Jan. 4-6, 2022. 259-265.
- Price, P. and B. Padgett. 2022. On-going fungicide and growth regulator research in Louisiana peanut. Proc. American Peanut Research and Education Society (APRES). Dallas, Texas. July 12-14, 2022.

Awards and Honors

- Southern Soybean Disease Workers. Distinguished Service Award, 2022.

Committees

- Corn Disease Workers Group.
- LACA Planning Committee.
- LACAA, Agronomy and Pest Management Committee.
- National Cotton Council, CLRDV Working Group.
- National Cotton Council, Cotton Disease Loss Committee.
- National Cotton Council, Nematode Committee.
- National Cotton Council, Seedling Disease Committee.
- NCERA 137 Committee, Soybean Disease Working Group.
- NCERA 184 Committee, Wheat Disease Working Group.
- Southern Soybean Disease Workers, Soybean Disease Loss Committee, Treasurer.

Grants and Contracts

- United Soybean Board, "Developing practical solutions for taproot decline (TRD) management." $150,000.
- USDA-NPMTI, "Development of prediction tools for diseases and mycotoxins affecting corn to better inform management decisions and Louisiana cotton disease predictive tool development." $95,000.
- LSGRPB, "Identifying and Refining Varietal, Cultural, and Chemical Management Strategies for Important Biotic and Abiotic Soybean Issues." $75,325.
- Louisiana Rice Board, "Evaluation of fungicides on important rice diseases under upland conditions." $35,000.
- National Peanut Board, "Investigating fungicide and plant growth regulator efficacy in Louisiana peanut." $12,000.
- LSGRPB, "Cultivar evaluation, fungicide efficacy, emerging diseases, and novel fungicide application methods in corn and wheat." $15,960.
- LSGRPB, "Reaction of selected grain sorghum hybrids to fungicide application." $2,000.

Jonathan Richards

Invited Presentations

- Plant and Animal Genome XXIX, Jan. 8, 2022. "The Genome Architecture and Diversity of Effector Loci in *Cercospora janseana*."
- Plant and Animal Genome XXIX, Jan. 12, 2022. "Mapping Narrow Brown Leaf Spot Resistance in Modern U.S. Rice Breeding Germplasm."

Other Presentations

- Plant Health 2022. Hot Topic: USDA Funding Panelist.
- Phragmites Summit, Jan. 14, 2022. "Population Genetics and Transcriptional Responses to Environmental Stresses in *Phragmites australis*."

Faculty Activities

Committees

- Assistant/Associate Professor of Quantitative Genetics Search Committee.
- Assistant/Associate Professor of Plant Immunity Search Committee
- Faculty Advisor, PPCP Graduate Student Association.
- Courses and Curricula Committee, Plant Pathology and Crop Physiology.
- Graduate Student Recruiting Committee (chair), Plant Pathology and Crop Physiology.
- Social Activities Committee, Plant Pathology and Crop Physiology.
- PPCP Newsletter/Website/Social Media Committee.
- APS Southern Division Awards Committee.

Grants and Contracts

- USDA-AFRI Foundational and Applied Science Program, "Narrow brown leaf spot resistance in rice: enhancing breeding strategies through fine mapping and dissection of quantitative resistance." PI: Jonathan Richards. Co-PIs: Adam Famoso, Brijesh Angira and Niranjan Baisakh. $500,000. 2021-2024.
- USDA-AFRI Foundational and Applied Science Program, "The ecological and genetic drivers of adaptation in a generalist leaf pathogen in North America." PI: Jonathan Richards. Co-PI: Vinson Doyle. $240,656. 2022-2024.
- COA Enhancement of External Competitive Funding Program, "Genomic resources for functional and evolutionary dissection of the fungal hemibiotrophic lifestyle in the genus *Cercospora*." PI: Jonathan Richards. Co-PI: Vinson Doyle. $28,551. 2022-2023.
- Louisiana Soybean and Grain Promotion Board, "Evaluation of Soybean Germplasm for Novel Sources of Resistance to Frogeye Leaf Spot and Assessment of Pathogen Race Structure in Louisiana." PI: Jonathan Richards. Co-PI: Trey Price. $15,025. 2022.
- USDA-APHIS, Cooperative Agreement, "Integrating the effects of environmental stressors, above and belowground interactions, and plant genetics to understand Roseau cane die-off and restoration." $303,290 ($1,611,263 project total). 2021-2023.
- USDA-APHIS, "Roseau Cane Die-Back: Multidisciplinary Approaches to Address Plant Decline and Opportunities for Restoration." PIs: Rodrigo Diaz, Jonathan Richards, Vinson Doyle, James Cronin, Tracy Quirk, Xuelian Meng, Kory Konsoer, Andrew Nyman, Matthew Hiatt, Ehab Meselhe, Allison Mead, Kevin Hu and Yadong Qi. $101,646 ($1,611,263 project total). 2022-2024.
- Louisiana Board of Regents Departmental Enhancement, "Acquisition of a Laser Induced Breakdown Spectroscopy Instrument for Fundamental and Applied Research in the Agricultural Sciences." PI: Achim Hermann. CoPIs: Maheshi Dassanayake, Sara Thomas-Sharma, Aaron Smith, Jonathan Richards and Sibel Bargu. $190,611. 2022.
- Louisiana Rice Research Board, "Applied Molecular Breeding." PI: Brijesh Angira. Co-PIs: Adam Famoso and Jonathan Richards. $61,015. 2022.
- Louisiana Soybean and Grain Promotion Board, "Foliar treatment of micronutrient deficiency: addressing yield gap and disease pressure in field crop productions in Louisiana." PI: Brenda Tubaña. Co-PIs: Steve Harrison and Jonathan Richards. $29,000. 2022.
- Louisiana Soybean and Grain Promotion Board, "Characterizing the production and spread of inoculum and infection strategies for Cercospora Leaf Blight and Purple Seed Stain pathogens." PI: Vinson Doyle. Co-PIs: Trey Price, Sara Thomas-Sharma and Jonathan Richards. $23,550. 2022.

Visiting Scientists/Students

- Francella Arce, visiting scholar, Zamorano University.
- Asher Tarun, postdoctoral research associate.
- Casey Butler, research associate.

New Graduate Students

- Alejandra Vargas, master's student.

New Collaborations

- Susan McCouch and Kelly Robbins, Cornell University, rice genomics and diversity.
- Felipe Dalla Lana, narrow brown leaf spot diversity and resistance.

Raj Singh

Invited Presentations

- Southern Plant Diagnostic Network annual meeting, virtual. Nov. 2, 2022. "Louisiana State Plant Health Highlights."

Faculty Activities

- Fall Garden Show, LSU AgCenter, New Orleans, Louisiana. Oct. 8, 2022. "Bacterial Leaf Scorch."
- North Louisiana Professional Landscape Workshop, Louisiana Tech University, Ruston, Louisiana. Oct. 6, 2022. "Plant Diseases in Louisiana Landscapes."
- Landscape LSU AgCenter Ornamental and Turfgrass Recertification Program, Lafayette, Louisiana. Oct. 5, 2022. "Ornamental and Turfgrass Disease Identification and Management."
- Louisiana Master Gardener Training, Minden, Louisiana. Sept. 22, 2022. "Basics of Plant Pathology and Plant Diagnostics."
- Louisiana Master Gardener Training, Covington, Louisiana. Sept. 14, 2022. "Basics of Plant Pathology and Plant Diagnostics."
- Louisiana Master Gardener Training, Lafayette, Louisiana. Aug. 31, 2022. "Basics of Plant Pathology and Plant Diagnostics."
- St. Tammany Summer Garden Seminar, Madisonville, Louisiana. July 8, 2022. "Common Plant Health Problems in Landscapes and Gardens."
- Mayhaw Growers Association Annual Meeting, Alexandria, Louisiana. June 25, 2022. "Management of Fireblight and Rust Diseases in Commercial Mayhaw Production."
- Louisiana Department of Agriculture and Forestry CAPS Annual Meeting, Baton Rouge, Louisiana. June 15, 2022. "New Plant Diseases Detected in Louisiana."
- LSU AgCenter Citrus Symposium, Violet, Louisiana. May 28, 2022. "Citrus Clean Plant Network."
- Southern Plant Board Annual Meeting, Oklahoma City, Oklahoma. May 2-4, 2022. "Boxwood Dieback; A New Emerging Disease in the United States."
- National Plant Diagnostic Network Annual Meeting, Davis, California. April 26-30, 2022. "Plant Doctors and Publishing."
- LSU AgCenter North Shore Garden Show, Covington, Louisiana. April 22, 2022. "Top Five Home Garden Diseases and their Management."
- LSU AgCenter Ornamental and Turfgrass Recertification Program, Alexandria, Louisiana. April 14, 2022. "Ornamental and Turfgrass Disease Identification and Management."
- Spring Garden Show, New Orleans, Louisiana. April 2, 2022. "Why is my Palm Dying?"
- Southwest Louisiana Garden Conference and Expo, Lake Charles, Louisiana. March 25, 2022. "Recognizing and Managing Diseases in Home Vegetable Garden."
- Landscape Pest Management Workshop, Hammond, Louisiana. Feb. 17, 2022. "Are you Applying Right Chemical for the Right Disease?"
- Louisiana Master Gardener Training, Bossier City, Louisiana. Feb. 10, 2022. "Basics of Plant Pathology and Plant Diagnostics."
- Southwest Louisiana Landscape Management Workshop, Lafayette, Louisiana. Jan. 11, 2022. "Disease Identification and Management in Louisiana Landscape."
- Louisiana Master Gardener Training, Raceland, Louisiana. Jan. 20, 2022. "Basics of Plant Pathology and Plant Diagnostics."

Other Presentations

- Plant Disease Management and Control PLHL 4001, Plant Pathology and Crop Physiology, Baton Rouge, Louisiana. March 23, 2022. "Disease Diagnosis and Pathogen Detection Methods – II."
- Plant Disease Management and Control PLHL 4001, Plant Pathology and Crop Physiology, Baton Rouge, Louisiana. March 21, 2022. "Disease Diagnosis and Pathogen Detection Methods – I."

Awards and Honors

- 2021 Extension Excellence Award for Excellence in Planning, Implementing, and Evaluating Extension Educational Programs, LSU AgCenter.
- 2021 Denver T. and Ferne Loupe Extension Team Award for Excellence in Planning, Implementing and Evaluating Extension Education Programs in Home Turfgrass Management, LSU AgCenter.

Committees

- LSU AgCenter Ganelle Bullock and Outstanding Associate Awards Selection Committee.
- LSU AgCenter Annual Conference Planning Committee.
- National Plant Diagnostic Network (NPDN) Annual Meeting Program Committee.
- LSU AgCenter and COA Annual Awards Committee.
- NACAA Southern Region Agronomy and Pest Management Professional Development Committee, vice chair.
- Southern Hemp IPM Working Group, member.

- Southeastern US Vegetable Extension Working Group.
- The Southern Region Small Fruit Consortium Steering Committee.
- Plant Disease Journal, senior editor.
- Plant Health Progress Journal, senior editor.
- NDPN Accreditation Committee.
- Citrus Clean Plant Network Tier II Governing Body.
- Louisiana Citrus Growers Association, board member.
- Chair, Professional Excellence Recognition Committee, Louisiana County Agricultural Agents Association.
- LSU COA Scholarship Committee.
- LSU AgCenter Horticulture Extension Committee.
- LSU AgCenter Industrial Hemp Working Group.
- LSU Plant Pathology and Crop Physiology (PPCP) Course and Curricula Committee.
- LSU PPCP Graduate Student Admissions Committee.
- LSU PPCP Award and Publicity Committee.
- LSU PPCP Promotion and Tenure Committee.

Grants and Contracts

- The Continental USA, Hawaii and Puerto Rico Citrus Clean Plant Network, National Clean Plant Network, USDA-NIFA, $42,883. 2022
- Southern Plant Diagnostic Network, National Plant Diagnostic Network for the Food and Agriculture Initiative, USDA-NIFA, $39,500. 2022
- The U.S. Army Corps of Engineers, Engineer Research and Development Center, "Development of *Septoria villarsiae* for Biological Control of Nymphoides peltate." $100,000. May 1, 2021, to April 20, 2026.
- USDA-LDAF-Specialty Crop Block Grant Program, "To Develop an Effective Management Program for Fireblight and Rust Diseases in Mayhaw Production." 10/01/2020 to 05/31/2023, $44,500. Oct. 1, 2020, to May 31, 2023.
- USDA-LDAF-Specialty Crop Block Grant Program, "Evaluation of a plant-based antimicrobial formulation on control of damping-off and other diseases in vegetable seedlings" with H. Kirk-Ballard and Z. Liu. $32,086. Oct. 1, 2020, to Sept. 30, 2022.

Visiting Scientists/Students

- Leticia Almeida, Federal University of Lavras, Brazil. Sept. 1, 2021, to March 15, 2022.
- Jennifer Blanchard, School of Plant, Environmental, and Soil Sciences, LSU AgCenter. Summer 2022.
- Toni Cortez, School of Plant, Environmental, and Soil Sciences, LSU AgCenter. Summer 2022.

New Collaborations

- University of Florida. TomSPOT: an integrated toolbox for managing tomato bacterial diseases in North America.

Sara Thomas-Sharma

Invited Presentations

- APS student committee, early career professional talk. March 28, 2022. "Building a mission-oriented research program in field crop pathology."
- 2022 LACA meeting. "Cercospora leaf blight of soybean: Using the disease cycle to target disease management."

Poster Presentations

- Thomas-Sharma, S., Galagedara, N., Doyle, V.P., Price, T., Padgett B., Setiyono, T., Connor, L., Dhakal, R. Why should I care about epidemiological research? Translating spore peaks into grower profits in Cercospora leaf blight of soybean. Phytopathology.
- Rodriguez-Herrera, K., Price., P., Doyle, V.P., Moseley, D., Thomas-Sharma, S. Exploring the genetic diversity of *Rhizoctonia solani* AG1-IA causing soybean aerial blight to screen for cultivar resistance. Phytopathology.
- Galagedara, N., Doyle, V.P., Price, P., Robertson, C.L., Pavur, M., Padgett, B., Thomas-Sharma, S. Detection of airborne inoculum of Cercospora leaf blight of soybean to better understand epidemiology and improve disease management. Phytopathology.
- Coasta De Novaes, M. I., Robertson, C. L., Shah, D. A., Tubana, B., Thomas-Sharma, S. Understanding cercosporin production: Insights into fundamental biology and fungal-plant interactions. Phytopathology.
- Bellelo, G., Galagedara, N., Doyle, V. P., Thomas-Sharma, S. Within-field variability of spore counts of *Cercospora* cf. *flagellaris*, the cause of Cercospora leaf blight of soybean. Phytopathology.
- Gil, J., Rodriguez, K., Spurlock, T., Szarka, D., Castroagudin, V., Thomas-Shatma., S., Correll, J., Rojas, A., 2022. Genetic diversity of *Rhizoctonia*

solani AG-1 associated with different plant hosts. Phytopathology.

- Rodriguez-Herrera, K., Thomas-Sharma, S., Doyle, V.P., Price., P. 2022. Development of a greenhouse protocol to screen soybean for aerial blight resistance. Phytopathology. 112: S2.10.

Awards and Honors

- Lafayette Frederick Diversity in Mentoring Award 2022, APS.

Committees

- Council for Diversity, Inclusion, Equity, and Change Invitation, LSU AgCenter and College of Ag, member.
- PPCP, Virology, Faculty Search Committee, member.
- PPCP, Space Committee, member.

Grants and Contracts

- LSU AgCenter, Diversity Mini-grant, "Building LSU-SU bridges: An internship opportunity for students at Southern University." $2,000.
- USB, "Develop and deliver best management practices and soybean cultivars to minimize yield and quality losses from Cercospora leaf blight" with D. Moseley, P. Chen, B. Padgett, T. Price, A. Reis, T. Allen, J. Rupe and A. Rojas. Co-PI: $30,000. Oct. 1, 2022, to Sept. 30, 2023.
- Louisiana Board of Regents, Department Enhancement proposal, "Acquisition of a Laser Induced Breakdown Spectroscopy Instrument for Fundamental and Applied Research in the Food and Agricultural Sciences" with A. Hermann, A. Smith, M. Dassanayake, S. Bargu and J. Richards. $190,611. June 1, 2022, to May 31, 2023.
- LSGRPB, "Characterizing the production and spread of inoculum and infection strategies for Cercospora leaf blight and purple seed stain" with V.P. Doyle, T. Price and J. Richards. $25,000. April 1, 2022, to March 30, 2023.
- LSGRPB, "Evaluation of fungicide application timing and cultivar resistance for management of Cercospora leaf blight on soybean" with V. Doyle, T. Price, B. Padgett and L. Conor. $47,500. April 1, 2022, to March 30, 2023.
- LSGRPB, "Redesigning fungicide control strategies for Cercospora leaf blight of soybean" with V. Doyle and T. Price. $15,534. April 1, 2022, to March 30, 2023.
- Southern IPM Center, "Developing cultivar resistance as a management tool against aerial blight on soybean" with V. Doyle and T. Price. $29,994. March 1, 2022, to June 30, 2023.

Undergraduate Student Grants

- COA Undergraduate Research Grant, "Within-field variability of spore counts of *Cercospora cf. flagellaris*, the cause of Cercospora leaf blight of soybean" with G. Bellelo. $6,900. 2022.
- LSU Discovery grant, "The role of lipid droplet modifying chemicals on cercosporin production" with T. Cortez and C. Landry. $1,500. 2022.

Visiting Scientists/Students

- Alejandra Vargas, Intern from UNA, funded through mini-grant obtained by Rodrigues-Herrera, K. from DIEC, LSU Agcenter, UNAs at LSU Association Visiting Scholar Program.

New Graduate Students

- Stephanie Ramos, M.S.
- Sergio Perez, Ph.D. (No longer in program.)

New Collaborations

- Dr. Lawson Connor (University of Arkansas), project to study socioeconomics of fungicide applications.
- Dr. Tri Setiyono (SPESS, LSU), project to study weather effects on CLB spore dynamics.

Tristan Watson

Invited Presentations

- Louisiana Sweet Potato Association Educational Program. Jan. 19, 2022. "Nematode management in sweetpotato."
- LSU AgCenter Pesticide Applicator Recertification for Categories 1 (Ag Pest Control) and 10 (Demonstration and Research). Jan. 27, 2022. "Nematode management."
- Louisiana Agricultural Technology and Management Conference. Feb. 10, 2022. "Nematode management in cotton."
- Louisiana Agricultural Technology and Management Conference. Feb. 10, 2022. "Nematode management in soybean, corn and sweetpotato."

Faculty Activities

- Lamb Weston 2022 Sweetpotato Grower Meeting. March 29, 2022. “Louisiana nematode update.”
- Avoyelles Parish Rolling Ag Field Tour. Aug. 10, 2022. “Soybean nematode variety trial at Hargis Farms.”
- LSU AgCenter Sweetpotato Research Station Field Day. Aug. 18, 2022. “Nematode management strategies.”
- Louisiana Master Gardener Appreciation Day 2022. Sept. 16, 2022. “Plant-parasitic nematodes: a gardener’s hidden enemy.”
- LSU AgCenter Statewide ANR Agent Training - IPM School. Nov. 30, 2022. “Nematode management.”
- Louisiana Sweet Potato Association Educational Program. Dec. 8, 2022. “Updates on nematode management in sweetpotato.”
- LSU AgCenter Annual Conference. Dec. 13, 2022. “Guava root-knot nematode.”

Other Presentations

- Beltwide Cotton Conference, San Antonio, Texas. Jan. 5, 2022. “Influence of cotton host resistance and winter cover crops on reniform nematode population dynamics and estimated lint yield.”
- National Sweetpotato Convention, Las Vegas, Nevada. Jan. 30, 2022. “SweetARMOR: sweetpotato advanced resistance and management for RKN.”
- National Sweetpotato Collaborators Group meeting, New Orleans, Louisiana. Feb. 12, 2022. “Integrated nematode management: a Louisiana perspective.”
- International Nematology Congress, Juan-les-Pins, France. May 5, 2022. “Detrimental impact of soil fumigants on nematode suppressiveness.”
- Society of Nematologists Conference, Anchorage, Alaska. Sept. 27, 2022. “Screening for reniform nematode resistance in commercially available soybean varieties planted in Louisiana.”

Awards and Honors

- Organization of Nematologists of Tropical America, vice-president elect.
- Nematropica, senior editor.
- Plant Disease Management Reports, section editor.
- Journal of Cotton Science, section editor.

Committees

- Society of Nematologists, Regulatory Committee, chair.
- IR-4 Project, Louisiana state liaison.
- PPCP Awards Committee, chair.
- PPCP Graduate Admissions Committee, member.
- PPCP Graduate Student Association, faculty advisor.
- National Cotton Council: Nematode and Seedling Disease Committee, member.

Grants and Contracts

- Louisiana Soybean and Grain Research and Promotion Board. “Host status of resistant soybean varieties to geographically diverse root-knot nematode populations in Louisiana.” $15,708. 2022-2023.
- Louisiana Soybean and Grain Research and Promotion Board. “Evaluation of reniform nematode resistance in soybean varieties planted in Louisiana.” Co-PIs: Trey Price and David Moseley. $30,416. 2022-2023.
- American Sugarcane League. “Establishment of an integrated nematode management program for sugarcane.” $11,000. 2022-2023
- Louisiana Sweetpotato Commission. “Evaluation of nematicides for reniform nematode management on sweetpotato.” $4,000. 2022-2023.
- Cotton Incorporated - Louisiana State Support Committee. “Cotton host resistance and nematicides as tools for nematode management in Louisiana.” $6,500. 2023.
- Syngenta Industry Trials. $23,000.
- Bayer Industry Trial. $5,000.
- HumaGro Industry Trials. $5,500.
- Concept AgriTek Industry Trial. $2,500.
- Marrone BioInnovations Industry Trial. $6,000.

Visiting Scientists/Students

- Ingrids Mata, Zamorano visiting student. January 2022 to June 2022.
- Jessica Fonseca, UNA visiting student. June 2022 to August 2022.
- Nydia Melgar, UNA visiting student. June 2022 to November 2022.
- Elisa Guardado, UNA visiting student. June 2022 to November 2022.
- Arnold Martinez, UNA visiting student. November 2022 to April 2023.

New Graduate Students

- Iris Mercedes Aguilar. January 2022.
- Lucy Kiarie. August 2022.
- Jhonson Leonard. August 2022.

PPCP Awards Recognition and Crawfish Boil

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Matt Lee, Interim LSU Vice President for Agriculture
Louisiana State University Agricultural Center
Louisiana Agricultural Experiment Station
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