

SEPTEMBER - NOVEMBER

Awards Newsletter 2019

TEXAS A&M UNIVERSITY-KINGSVILLE*



this is
YOUR TIME
TEXAS A&M UNIVERSITY-KINGSVILLE



Dear Reader,

Welcome to the first quarterly newsletter for fiscal year 2020 from the Office of Research & Graduate Studies. Through this newsletter, we recognize the new externally funded research activities of our campus community at Texas A&M University-Kingsville. We have had several successful collaborative grants funded this fall. The largest was the CREST grant which included numerous faculty in the Frank H. Dotterweich College of Engineering and the Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources. This award highlights the success we can have by working together.

To help facilitate more collaborations between faculty and our local community, we will host a networking event Feb. 13, 2020 from 3 p.m. to 6 p.m. at the Caesar Kleberg Wildlife Center. The title of the event is Speed Networking: Building Connections. Attendees will have the opportunity to initiate and build working relationships with other researchers and the Kingsville Community.

The Office of Research and Graduate Studies will also host a workshop for graduate students that will go over Dissertation and Thesis formatting guidelines. This will focus on those students who will be submitting their Dissertations or Thesis in the next year. It will be held at the early part of Spring 2020. Detailed information will be announced at a later date.

The Office of Research & Graduate Studies sends warm wishes to all for a happy holiday season. Thank you for your hard work and dedication. We look forward to working with you in 2020.

*Sincerely,
Dr. G. Allen Rasmussen*



SEPTEMBER

Assessing impacts of exceptional drought on forests in East Texas - An analysis of tree mortality using FIA data and a forest drought model

Forest Health Monitoring | U.S. Department of Agriculture (USDA) | One Year | \$26,343

Xi, W. | College of Arts & Sciences

The overall goal of this study is to investigate the short and long-term effects of drought on temporal-spatial variations of tree mortality after drought and during projected warming climate scenarios in four national forest and surrounding areas of East Texas.



Capacity building at Texas A&M University-Kingsville for OSHA electrical safety training: a pilot program

Occupational Safety and Health (SHTG) | Department of Labor (DoL) | One Year | \$78,388

Zhang, X. | Frank H. Dotterweich College of Engineering

This project will develop and provide training courses on electrical safety to TAMUK Engineering students and Kingsville small business owners.

Distribution of imported foreign plants in quarantine

Plant Protection & Quarantine (PPQ) | USDA | One Year | \$205,375

Schuster, G. | Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources

This project works with a wide variety of plants for propagation and provides American nurseries, growers, and other agricultural interests with pathogen-tested foreign plants for their increase sale, display, and evaluation.

BIGDATA: Collaborative Research: F: Efficient Distributed Computation of Large-Scale Graph Problems in Epidemiology and Contagion Dynamics

Critical Techniques, Technologies and Methodologies for Advancing Foundations and Applications of Big Data Sciences and Engineering

National Science Foundation (NSF)/UVA | One Year | \$100,790

Khan, M. | Frank H. Dotterweich College of Engineering

The goal of this project is advancing the research on parallel and distributed computation of large-scale graph problems that arise in computational epidemiology and contagion dynamics.

Ronald E. McNair Scholars Program

McNair | U.S. Department of Education (USDE) | Five Years | \$1,449,185

Martinez, M. | Academic Affairs

The McNair Scholars Program identifies, recruits and prepares outstanding students who are low income, first generation and/or under-represented in graduate education with the ultimate goal of receiving a doctoral degree.



TAMUK Citrus Centers Technical Support for CORE Programming 2019-2020

Sustainable Technical Support | Texas Citrus Producers Board (TCPB) | One Year | \$128,186

Sétamou, M. | Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources

The goal of the program is to conduct research leading to practical solutions for sustained and improved citrus production in Texas.

Viper Resource Grant at Texas A&M University-Kingsville

Animal and Biological Material Resource Centers (P40) | National Institutes of Health (NIH) | Five Years | \$2,646,605

Sanchez, E. | College of Arts & Sciences

The NNTRC's goal for this project to provide research for native venom and purified venom components, recombinant venom proteins and specialized venom research services of the highest quality to support snake venom in the U.S. and abroad.

Building Capacity: Proactive Integrated Pathways of Excellence for Seamless Transition of Engineering Minority Students (PIPE for STEMS)

Improving Undergraduate STEM Education: Hispanic-Serving Institutions (IUSE: HSI) | NSF | Five Years | \$2,392,470

Alam, M. | Frank H. Dotterweich College of Engineering

The proposed project is modeled to provide sustained inspiration and seamless transition for underserved students into engineering programs at TAMUK.



Riverby Ranch Evaluation Plot and Restoration Research

Resource Environmental Solutions, LLC | Three Years | \$150,574

Smith, F. | Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources

This projects develops research plots and conduct research and demonstrations plantings throughout the 3,500 acres of proposed grassland restoration at Riverby Ranch.

Collaborative Research, AGEP Transformation Alliance: Texas A&M Systems Model for URM Success at the Dissertation and Early... Pathway to the Professoriate

AGEP | NSF | Five Years | \$563,084

Challoo, L. | College of Education and Human Performance

The core goal of this research project is investigating Texas A&M System Research Model as a model to inform and guide long-term changes in the dissertation and early career stages at the personal, interpersonal, organizational, community, and policy levels. In doing so, this helps provide an intentional and structured experience that encourages and support URM STEM scholars in pursuit of their academic careers.

Joint Admission Medical Program 2020 (JAMP)

JAMP | Texas Higher Education Coordinating Board (THECB) | One Year | \$12,726

Winterbottom, J. | Academic Affairs

The PI recruits and matriculate eligible students for admission to the program. Moreover, they provide academic counseling to the participating student, provide study materials for admission to professional schools, and provide the funds for the student to travel to required conferences throughout the state.

The George O. Coalson's Annotate Bibliography of South Texas Historical Resources

TexTreasures Grant Program | Texas State Library and Archives Commission | One Year | \$25,000

Thacker, D. | Academic Affairs

The funds for this project are to process and preserve the Dr. George O. Coalson Annotated Bibliography of South Texas Historical Resources. It entails, transcribing entries in the collection, searching for reference materials, and writing an annotation for each entry put into the database.



START NOW: Student Training in Agricultural Research Techniques by Novel Occupational Workshops

HSI | USDA-HSI-NIFA | Five Years | \$2,000,000

Nelson, S. | Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources

The goal of this project is to empower underrepresented students through excellence in the plant and soil sciences and to build careers addressing the NIFA Priority Science Areas.

White-tailed Deer Population Parameters and Large Mammal Surveys on East Foundation Properties

East Foundation | One Year | \$86,417

DeYoung, R. | Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources

The project will incorporate radio-collared deer and mark-resight analyses to improve population estimates derived from aerial surveys.

The Texas Citrus Clean Plant Program 2019-2020

National Clean Plant Network (NCPN) | USDA-APHIS-PPQ | One Year | \$160,513
da Graca, J.

Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources
The National Clean Plant Network helps fund the citrus growers of Texas to conduct research by various ways of diagnostic testing, infrastructure maintenance, and improvement of the certified pathogen-free collection.

Testing of tools and techniques for invasive Rose-ringed Parakeet damage reduction on Kauai

Wildlife Services National Wildlife Research Center (WSNWRC) | USDA
One Year | \$126,715

Anderson, C.

Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources
This research project evaluates the most effective means of controlling the invasive rose-ringed parakeet population in Kauai. We are researching whether fertility control, direct population control, or hazing are effective in reducing population size as well as impacts to farms and urban areas. The results of this research will be utilized by the United States Department of Agriculture to direct future population management programs.

Detection surveys and eradication of the invasive Diaprepes Root Weevil (Diaprepes abbreviatus) in South Texas

Implementation Plan for Section 10007 | USDA-APHIS-PPQ
Five Years | \$172,540

Setamou, M.

Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources
The goal of this project is to conduct detection surveys in groves and residential sites around the currently known Diaprepes infestations, and enhance its rapid mitigation through deployment of black plastic woven mesh.

Citrus Commodity Pest Survey FY 2019-2020

Citrus Commodity | USDA-APHIS | One Year | \$536,840
da Graca, J.

Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources
The project entails conducting surveys for exotic pests and diseases of citrus throughout the state. Suspect disease samples are tested in the Citrus Center diagnostic lab by PCR then sent to a USDA ID lab for confirmation.

SALE, Inc. Scholarships 2019-2020

SALE | San Antonio Livestock Exposition (S.A.L.E.) | One Year | \$40,000
Hewitt, D.

Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources
The funds provided by SALE are utilized to support graduate student research activities in many ways, such as, field work, data analysis, writing reports, giving presentations, and publishing results of their research findings.

Citrus Germplasm Safekeeping Program FY 2019-2020

Citrus Germplasm | USDA-APHIS | One Year | \$88,056
da Graca, J.

Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources
This project supports the use of infected budwood for the backup of budwood from the certified pathogen-free germplasm collection.

The Texas Citrus Budwood Certification Program 2019-2020

Budwood Certification Program | TCPB | One Year | \$139,213
da Graca, J.

Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources
This project supplies the Texas citrus industry with certified disease-free budwood to aid in their specific research agenda.

CREST Center for Sustainable Water Use (CREST-SWU)

Centers of Research Excellence in Science & Technology (CREST) | NSF
Five Years | \$5,000,000

Clapp, L. | Frank H. Dotterweich College of Engineering

The project will establish a Center for Sustainable Water Use for integrating academic researchers, regional stakeholders, and regulatory policy experts to holistically develop and assess alternative management strategies for attaining sustainable water use in South Texas, particularly from the perspective of the water, energy and food security nexus.

A scalable bioassay for culturing Clas and high-throughput screening of novel antimicrobials for HLB management

Emergency Citrus Disease Research & Extension (ECDRE) | AgriLife/USDA - NIFA
Two Years | \$109,065

Ancona, V.

Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources
The PI evaluates the identified antimicrobials in both greenhouse and field conditions for their effectiveness in reducing Huanglongbing (HLB) symptoms and bacterial titers. In addition, the PI conducts outreach and educational activities to introduce the developed technologies to citrus growers in Texas.

Estimating White-Tailed Deer Population Sizes Using Unmanned Aerial Vehicles (UAVs)

Dallas Safari Club Foundation | One Year | \$25,000

Foley, A.

Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources
This funding will be used to assist on a project based out of South Texas evaluating the use and accuracy of unmanned aerial vehicles (UAVs) to conduct population estimate surveys of white-tailed deer.

OCTOBER

Coastal Prairies Native Seed Project Program Support

The Trull Foundation | One Year | \$5,000

Jobs, D. | Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources

The Coastal Prairies Native Seed Project will make equipment purchases, which aid in their ability to conduct research. Also, it will help the CPNSP team by performing evaluations as the project continues to develop and grow.

Collect, development, and release of native seed resources for Texas

CESU | USDA-NRCS/CESU | Three Years | \$365,000

Smith, F. | Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources

This project performs research, develops and promotes native plants and seed sources for Texas.

Aspects of Hunting on Northern Bobwhite Quail Populations: Temporal and Spatial Analyses

East Foundation | One Year | \$70,673

Brennan, L. | Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources

The goal of this project is to develop a scientific basis for sustaining wild quail populations exposed to an annual harvest in semi-arid, sub-tropical environments.

Coastal Bend Regional History Day 2020

Coastal Bend Community Foundation (CBCF) | One Year | \$6,000

Plant, J. | College of Arts and Sciences

The purpose of this program is to provide funding for the Coastal Bend Regional History Day, which benefits the students from ESC2 schools in various counties, such as, Aransas, Jim Wells, Kleberg, Nueces, and San Patricio.

Showcases of Electric Power Technologies for Underserved Youth in South Texas

Nueces Electric Charities, Inc. | One Year | \$15,000

Zhang, X. | Frank H. Dotterweich College of Engineering

The main goal for this project is to develop tabletop models and simulation platforms. By doing so, the PI will interact with high school students, so they can learn more about modern electric power apparatus, system, and market.

Alkek Captive Ungulate Support

Albert & Margaret Alkek Foundation | One Year | \$10,000

Hilton, C. | Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources

The Alkek Captive Ungulate Facility is designed to serve the research and teaching mission of CKWRI and TAMUK. For this project, this facility will provide and maintain a captive herd of white-tailed deer for research purposes.

Research, Education and Financial Literacy Excellence for Minority-focused Engagement

Office of Postsecondary Education (OPE): Minority Science and Engineering Improvement Program (MSEIP) | USDE

One Year | \$749,196

Li, H. | Frank H. Dotterweich College of Engineering

The overarching goals of the REFLEX-ME program are to enhance the TAMUK engineering and science students' interest and performance in their curricula and preparedness for future careers. In addition, to improve the TAMUK engineering and science students' professional development, understanding, and responsibility of financial literacy.



Enhancing Computer Literacy in the Coastal Bend Communities

Coastal Bend Community Foundation (CBCF) | One Year | \$9,900

Oh, J. | Frank H. Dotterweich College of Engineering

TAMUK faculty and students will conduct computer trainings, including Microsoft Word, Excel, PowerPoint and other computer related trainings, at the city and county libraries in six cities of four counties to increase the computer literacy among the coastal bend citizens, especially families with children and elderly.

Managing White-tailed Deer Density on Federal Land Adjacent to Falcon Reservoir to Control Cattle Fever Ticks

Agricultural Research Basic and Applied Research | U.S. Department of Agriculture - ARS | One Year | \$571,800

DeYoung, R. | Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources

The goal for this research project is to evaluate white-tailed deer reduction and treatment during hunting season to eradicate cattle fever ticks on Federal land at Falcon Reservoir.

Field Evaluation of the Remotely Activated Sprayer for Eradication of Cattle Fever Ticks (CFT) on Nilgai

Agricultural Research Basic and Applied Research | U.S. Department of Agriculture - ARS | One Year | \$480,800

DeYoung, R. | Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources

This is an ongoing research project, which will continue large-scale deployment of sprayers and determine efficacy of entomopathogenic nematodes to eradicate cattle fever ticks on nilgai. Additionally, the personnel on this project will test new treatment locations including food plots and mobile water troughs.

Bobwhite Response To Cattle Grazing and Rangeland Management on Sweden Ranch

Greater Houston Community Foundation | Two Years | \$167,729

Ortega, J. | Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources

The purpose of this research is to provide scientific knowledge and develop recommendations on how to manage the bobwhite habitat utilizing cattle grazing as a tool.



NOVEMBER

Supporting Ocelot Recovery

East Foundation | One Year | \$84,787

Tewes, M. | Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources

The purpose of this research project is to determine the role of vertical and horizontal cover as related to the movement decisions and patterns of ocelots on a micro-spatial scale. The research will use high-frequency, high-resolution spatial data to obtain insights, for the first time, how ocelots use their territories to maximize survival and reproduction.

Assisted Reproduction in Ocelots

East Foundation | One Year | \$34,912

Hilton, C. | Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources

This research project will perform genetic augmentation of an Ocelot population using demographic and assisted reproductive strategies, which is essential for recovery of endangered ocelots. These research efforts should also provide a strong basis for establishment of a new ocelot population in South Texas.

Kansas P-Index Revision, Evaluation, and Impact Assessment

Natural Resources Conservation Services (NRCS) | KSU / U.S. Department of Agriculture (USDA) | Three Years | \$10,000

Bhandari, A. | Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources

The main goal of this research is organizing and supplying APEX model outputs for runoff, phosphorus, and sediment losses to determine different management combinations of cropping system, fertilizer rates, soil test P values, and fertilizer management options.

NRCS On-Site Training and Career Opportunities for Hispanic and Other Students

NRCS | USDA | Three Years | \$15,000

Machado, T. | Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources

The purpose of this project is to provide students more research opportunities and pursue future jobs with NRCS. With the funds, the PI will send ten students to NRCS locations across the country for summer career experience opportunities over a nine week period. Additionally, ten students (five from TAMUK and five from UPR) will be selected to attend educational tours and on-site training for two weeks in locations of Puerto Rico and Texas. These two different strategies will be compared to determine if one method increases the odds that a student will pursue a job with NRCS.



Bobwhite Response To Cattle Grazing and Rangeland Management on Sweden Ranch

Greater Houston Community Foundation | Three Years | \$167,729

Ortega, J. | Dick and Mary Lewis Kleberg College of Agriculture and Natural Resources

The effect of cattle grazing on bobwhite habitat in this region is unknown. This research will provide scientific knowledge to develop recommendations to manage bobwhite habitat using cattle grazing as a tool.

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Did you know?

The Office of Research & Graduate Studies has an internal proposal submission guideline of 10-5-2? Please check out our website at <https://www.tamuk.edu/osr/index.html> to learn more about this process.

Hosted by Office of Research & Graduate Studies



SPEED NETWORKING: *Building Connections*

February 13, 2020
3 P.M. – 6 P.M.
Caesar Kleberg Wildlife Center

*For more information contact:
Lizette Gonzales at 361-593-2455*