TIDEWATER AGRICULTURAL RESEARCH AND EXTENSION CENTER
VIRGINIA TECH

NEWSLETTER

AUGUST 2024

Photo by Sam Dean for Virginia Tech.

In This Issue

Greetings From Our Director

The Virginia Tech Tidewater Agricultural Research & Extension Center (TAREC) has for 110 years served the stakeholders of Virginia and the Mid-Atlantic region. As Director of TAREC, I have been a part of this team since 2021. In that short time, we have experienced significant changes to enhance our service to those in our community. One of those changes is to develop this newsletter with the guidance of Suzanne Pruitt, our new Communications Specialist. Our goal is to deliver this to our stakeholders quarterly. We're also developing social media (Facebook, Instagram) as well as digital content (YouTube Channel) to deliver news and information to you in a timely manner.

TAREC has a lot of new faces whom you can read about on page 6-7 of this newsletter. While we will certainly miss Dr. David Holshouser (Soybean Agronomist, Retired) and Dr. Sally Taylor (Field Crops Entomologist, now with Cotton Incorporated) the personnel changes and new faculty have certainly created a renewed energy and focus at TAREC that's a joy to be part of. (Cont'd on page 2).

MATTHEW CHAPPELL
DIRECTOR

6321 HOLLAND ROAD | SUFFOLK, VA 23434
PHONE : 757-807-6535
https://www.arec.vaes.vt.edu/arec/tidewater.html

Photo by Sam Dean for Virginia Tech.

We've also worked diligently with NC State University, Clemson University and our stakeholders to revamp the Peanut Variety Quality Evaluation program to better align with the needs of all parties involved. As part of this realignment TAREC has hired Jacob Forehand, who also serves as our new Peanut Extension Specialist. We continue to strive to become more impactful and always welcome feedback and engagement.

We certainly hope that you enjoy learning more about TAREC and the dedicated staff, students and faculty that are devoted to improving our community and the lives of our stakeholders. Please don't hesitate to contact us and we look forward to seeing you at one of our upcoming events, such as the Cotton Field Day on August 16th.

Sincerely,
Matthew R. Chappell, Director

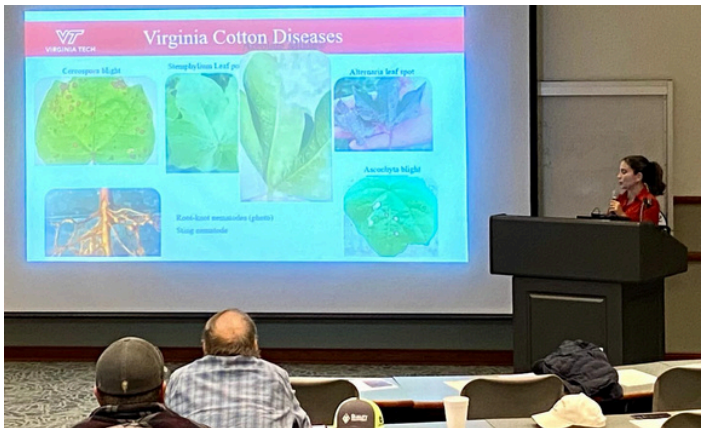
HELP US GROW...CONSIDER JOINING OUR LEADERSHIP COUNCIL!

CONTACT MATTHEW CHAPPELL FOR MORE INFORMATION : MBRIDGEM@VT.EDU

The Virginia Tech / Virginia State University delegation visited our state capitol in January to meet with members of the House Agriculture, Chesapeake & Natural Resources Committee, with the goal of highlighting the work being conducted by faculty, staff and students associated with the Virginia Agricultural Experiment Station (and specifically at ARECs).

Pictured(L to R): VCE Director Mike Gutter, VCE Associate Administrator Janine Woods, Eastern Shore AREC Director Mark Reiter, VAES Director Mary Burrows, Tidewater AREC Director Matthew Chappell, VCE Associate Director of Field Operations and Administration Lonnie Johnson, and Extension Agent Timothy Mize.

Photos courtesy of Tidewater AREC.



Plant Pathologist Mychele Batista da Silva discusses Virginia cotton diseases at the 2024 Annual Cotton Growers Meeting.

(L) TAREC Director Matthew Chappell welcomes everyone to the 2024 Peanut Growers Meeting. (R) Field Crops Agronomist Hunter Frame discusses effects of nitrogen application on peanut yield.

2024 Cover Crop Field Day and Soil Fertility Workshop

The 2024 Soil Fertility Workshop & Cover Crop Field Day took place on March 22nd at the Tidewater AREC. We had a full lineup of speakers (including Irrigation Specialist Julie Shortridge pictured left), field stations (including a soil pit pictured center), and a demonstration of the John Deere See and Spray technology thanks to James River Equipment (pictured right).

Photos by Suzanne Pruitt for Virginia Tech.

2024 HIGHLIGHTS

CALS New Faculty AREC Tour

The Virginia Tech College of Agriculture and Life Sciences new faculty tour included a stop at the Tidewater AREC on May 17th! Our guests joined us for lunch, followed by an afternoon visit to our plant pathology lab with David Langston, plant pathologist, and Mychele Batista da Silva, research scientist, a field session with Carrie Ortel, our soybean agronomist, and a presentation by Abhilash Chandel, precision ag specialist.

Precision Ag Technology EXPO

Photos by Suzanne Pruitt for Virginia Tech.

The inaugaral Precision Ag Technology EXPO organized by our Precision Ag Specialist, Abhilash Chandel, took place on June 28th. We are grateful to all of our sponsors, exhibitors, supporters, and visitors who joined us for the event. A huge thank you to: SoilOptix, Carolina Agronomy, LI-COR Environmental, EarthOptics, FERMATA, Virginia Soybean Association, Virginia Cooperative Extension, Ag Technology Solutions Group, Accurate Ag Drones, USDA National Institute of Food and Agriculture, NADPC, Virginia Tech Center for Advanced Innovation in Agriculture (CAIA), Virginia Tech Biological Systems Engineering.

APRES 2024 - Oklahoma City, OK

Photo courtesy of Tidewater AREC.

Pictured (L to R): Ph.D. students Keely Beard and Ranadheer Reddy Vennam, Extension Peanut Specialist Jacob Forehand, Crop Physiologist Maria Balota, Plant Pathologist David Langston, Graduate Student Pius Jjagwe, and Precision Ag Specialist Abhilash Chandel at the American Peanut Research Society Annual Meeting July 8-11.

DRONE SCHOOL 2024

This spring, the Tidewater AREC hosted international visitors for a drone school event March 25th through April 30th. Six visitors from the African countries of Ghana, Malawi, Senegal, and Uganda were on-site to learn how to use drones and aerial imaging under the instruction of Abhilash Chandel, precision ag specialist. Their goal is to utilize precision ag technology to select peanut varieties for improved resistance to diseases specific to their countries, as well as drought and heat tolerance for better yield in their environments.

Photos by Suzanne Pruitt for Virginia Tech.

The drone school was made possible by a USAID - US Agency for International Development project funded through the Feed the Future Peanut Innovation Lab. Maria Balota, crop physiologist, is the Principal Investigator (PI) on this project, which focuses on development of high-throughput phenotyping (HTP) tools for field selection of peanut disease, drought, and variety performance.

Read the full VT News article here:

SCAN ME

NEW FACES

AUGUST 2024

JACOB FOREHAND, EXTENSION PEANUT SPECIALIST

Jacob Forehand began his tenure as Tidewater Agricultural Research and Extension Center's new Peanut Extension Specialist on April 25, 2024.

In this role, Forehand will provide information to producers in the peanut growing region of Virginia, organizing field day events, and conducting applied research focusing on peanut variety evaluation across Virginia, North Carolina, and South Carolina.

CARRIE ORTEL, SOYBEAN AGRONOMOIST

Carrie Ortel began her tenure as Extension Soybean Specialist at Virginia Tech's Tidewater Agricultural Research and Extension Center on April 10, 2024.

Ortel lived in Reston, Virginia, until she started her undergraduate studies at Virginia Tech. She recently completed her Ph.D. at the University of Arkansas with a focus on nutrient management in soybean and rice rotations.

TIM BRYANT, EXTENSION ENTOMOLOGIST

Tim Bryant joined the Tidewater AREC team on Aug. 10 as the new Extension Entomologist with the goal of delivering solutions that growers can implement.

Born and raised in southeast Virginia, his academic journey has come full circle. Bryant's first experience working with row crops and insects was as a summer employee at the Tidewater AREC, following his undergraduate training in environmental horticulture at Virginia Tech.

Photos courtesy of Tidewater AREC.

NEW FACES (CONT.)

RAHUL RAMAN, POSTDOCTORAL ASSOCIATE - PLANT PATHOLOGY

ASHLEY TURNER, ADMINISTRATIVE SPECIALIST

ERIN MYERS, TECHNICIAN - SOYBEAN AGRONOMY

ANDREW THOMPSON, TECHNICIAN - CROP PHYSIOLOGY

STUDENT SPOTLIGHT

EMMA NIELAND

The Plant Pathology program at TAREC welcomes a new graduate student, Emma Nieland. Emma graduated in May of 2023 with a B.S. degree in Microbiology from Iowa State University and began her coursework at Virginia Tech last Fall. She will be working on cucurbit anthracnose through a USDA SCRI grant titled “SAM: Sustainable Anthracnose Management for Watermelon and Cucumber Growers in the Eastern U.S.”. Anthracnose causes severe losses in Southampton County watermelons each year and is their most yield limiting factor. In addition to her graduate work, Emma supports all aspects of the Plant Pathology program, including plant diagnostics.

STUDENT SPOTLIGHT

AMINATA SARR

Aminata Sarr is a visiting Ph.D. student from the International Institute for Water and Environmental Engineering in Burkina Faso, Senegal. After researching university programs in Europe, Asia, and the United States, Sarr’s interest in the work of Precision Ag Specialist Abhilash Chandel led her to Virginia Tech . Sarr joined Dr. Chandel’s lab in March of this year, beginning as a participant in the 6 week Drone School program. Her current work is focused on the development of and Internet-of-Things integrated platform for farm-level agro-climate monitoring and data management. When her tenure ends on November 15th, she plans to continue in the research field at her home university, in research institutes or in a postdoctoral role.

CELEBRATIONS

AUGUST 2024

CONGRATS, GRADS!

Eli Hoar completed his master's degree in entomology from Virginia Tech's College of Agriculture and Life Sciences. He has recently moved to Missouri to work as an agronomic research specialist for Bayer.

Richard Tyler Niblett received his Ph.D. in animal sciences from Virginia Tech's College of Agriculture and Life Sciences. He will be joining Texas Tech University as Assitant Professor of Practice in Swine Production this month.

Eli Hoar

Richard Tyler Niblett

Photos courtesy of Tidewater AREC.

EXPENDITURES, GRANTS AND PROJECT FUNDING

- FY 2024 Research Expenditures: $1.46 Million
- FY2024 Research Awards (new grants): $2.27 Million
- 88 funded projects (including companies sponsoring variety /chemical trials).

2024 PUBLICATIONS

- For a link to 2024 Extension and Research Publications, please visit: https://www.arec.vaes.vt.edu/arec/tidewater/2024-publications.html
- Or scan the QR code for a link to the full list

VIRGINIA AGRICULTURAL EXPERIMENT STATION
TIDEWATER AGRICULTURAL RESEARCH AND EXTENSION CENTER
VIRGINIA TECH

RESEARCH & EXTENSION

Photos courtesy of Tidewater AREC.

CROP PHYSIOLOGY

The overall goal of the crop physiology research is to improve production systems' sustainability in Virginia and mid-Atlantic region. This is being accomplished through research addressing abiotic stress adaptation of field crops and development of high-throughput phenotypic methods, and participation in nationally recognized Multi-State Hatch projects, S 1069 and S 1079.

Team:

- Maria Balota - Crop Physiologist
- Rahul Raman - Postdoctoral Associate
- Ranadheer Reddy Vennam - Ph.D. Student
- Keely Beard - Ph.D. Student
- Andrew Thompson - Technician

SCAN FOR MORE INFORMATION

https://bit.ly/cropphysiology

FIELD CROPS AGRONOMY

The research goal of the field crops agronomy program is to develop cultural practices and identify varieties that enhance farm sustainability through increased productivity, production cost control, and reduction or elimination of environmental impact.

Team:

- Hunter Frame - Field Crops Agronomist
- C. Brandt Tate - Ph.D. Student
- Unius Arinaitwe - Ph.D. Candidate
- Billy Taylor - Lead Technician

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https://bit.ly/fieldcropsagronomy

RESEARCH & EXTENSION

ENTOMOLOGY

The Tidewater AREC entomology program focuses on arthropod pest management in soybean, cotton, peanut, corn, and small grains.

Team:

- Tim Bryant - Extension Entomologist
- Sean Malone - Lead Technician
- Gwenyth Gregory - Field Technician
- Evelyn Clark - Field Technician

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https://bit.ly/3X5IKNy

READ MORE ABOUT SPOTTED LANTERNFLY IN VIRGINIA

PVQE

The Tidewater AREC is the base location for the peanut variety and quality evaluation (PVQE) program. This is a multi-state program that evaluates new cultivars and breeding lines of Virginia market-type peanut for agronomic production, processing and food chemistry characteristics. The program involves production test sites in Virginia, North Carolina and South Carolina, which constitute the principle region for production of Virginia market-type peanuts.

Team:

- Jacob Forehand - Extension Peanut Specialist
- Zoe Dunlow - Lead Technician
- Fitz Cherry - Technician

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https://bit.ly/3SQZ6ax

Photos courtesy of Tidewater AREC.

RESEARCH & EXTENSION

SCAN FOR MORE INFORMATION

PLANT PATHOLOGY

The Tidewater AREC Plant Pathology Program focuses on the development of practical, deployable disease and nematode management strategies and information on diseases and plant-parasitic nematodes that affect the Commonwealth's stakeholders whose livelihoods are affected by successful production of corn, cotton, peanuts and soybeans.

Team:

- David Langston - Plant Pathologist
- Mychele Batista da Silva - Research Scientist
- Linda Byrd-Masters - Lead Technician
- Rachel Miller - Technician
- Matthew Wilkins - Technician
- Carlie McCullough - Technician
- Emma Nieland - Graduate Student

https://bit.ly/46K93w1

SCAN FOR MORE INFORMATION

Photos courtesy of Tidewater AREC.

https://bit.ly/3WPK3yK

PRECISION AGRICULTURE & DATA MANAGEMENT

The overall goal of this research program is to develop scientifically sound engineering solutions for precision crop management against the evident climate change. The central focus is to realize "farms of the future" with advanced remote sensing of crop and its environment, internet-of-things enabled edge and cloud computing tools to implement management decisions in real/near real time for a range of field and specialty crops.

Team:

- Abhilash Chandel - Precision Ag Specialist
- Sathish Raymond - Ph.D. Student
- Pius Jjagwe - Ph.D. Student
- Aminata SARR - Visiting Ph.D. Student
- Chijioke Nkwocha - Ph.D. Student

SOYBEAN AGRONOMY

The Virginia Integrated Soybean Extension and Research program conducts applied research intended to support the success of Virginia soybean farmers. Soybeans rank the highest among all crop commodities grown in Virginia, with statewide extension efforts to share research results with stakeholders.

Team:

- Carrie Ortel - Extension Soybean Agronomist
- Chris Buck - Lead Technician
- Erin Myers - Technician
- Ronald Daughtrey - Technician

Photos courtesy of Tidewater AREC.

SCAN FOR MORE INFORMATION

https://bit.ly/3WMVszB

SWINE PHYSIOLOGY, REPRODUCTION, & MANAGEMENT

The program is directed at solving problems in the Virginia and U.S. swine industries with applied and basic research approaches in topics related to improved reproduction efficiency of boars and sows in artificial insemination breeding systems, housing and management of breeding females, estrus synchronization, and nutritional approaches to improve reproduction

Team:

- Mark Estienne - Extension Swine Physiologist
- Kim Williams - Lead Technician
- Tyler Niblett- Technician
- Marguerite Cross - Technician
- Alexis Clapp - Student Intern

Photos by Suzanne Pruitt for Virginia Tech.

SCAN FOR MORE INFORMATION

https://bit.ly/3AARTVt

EVENTS

TIDEWATER AGRICULTURAL RESEARCH AND EXTENSION CENTER
VIRGINIA TECH

THANKS TO EVERYONE WHO CAME OUT FOR THE 2024 VIRGINIA COTTON GROWERS FIELD DAY AND TIDEWATER AREC PEANUT TOUR ON AUGUST 16TH!










YOU'RE INVITED!

Wednesday, 10 AM - 1 PM

PVQE Field Day - Williamston, NC

JOIN RESEARCHERS FROM VIRGINIA TECH AND NORTH CAROLINA STATE UNIVERSITY FOR A FIELD TOUR AND DISCUSSION OF PEANUT CULTIVAR TRIALS AND OTHER PEANUT RESEARCH IN NORTH CAROLINA. FREE LUNCH PROVIDED AT NOON.

SEPT 11 2024

SCAN HERE FOR MORE EVENT DETAILS AND A LIST OF 2024 STATEWIDE AREC FIELD DAYS

6321 HOLLAND ROAD | SUFFOLK, VA 23437

PHONE : 757-807-6535