



**TIDEWATER AGRICULTURAL  
RESEARCH AND EXTENSION CENTER  
VIRGINIA TECH.**

# NEWSLETTER

DECEMBER 2024



## Greetings From Our Director

As we approach the end of 2024, I am delighted to share with you the latest edition of our Tidewater Agricultural Research and Extension Center (TAREC) newsletter.

In this edition, you will find updates on our recent research, including a study by Lexi Clapp on the blood chemistry of male pigs and its impact on their mortality rates. We also celebrate the induction of Professor Mark Estienne into the Livestock Hall of Fame and the recognition of Professor David Langston with the Andy Swiger Land Grant Award.

Additionally, we provide insights into the successful 2024 PVQE Field Day, which brought together industry leaders and researchers to share the latest developments in peanut cultivation. Our team's participation in the ASA, CSSA, SSSA International Annual Meeting in San Antonio, Texas, is also featured, showcasing the global impact of our work.

Your continued support and engagement are invaluable to us, and we look forward to collaborating with you in 2025. Wishing you a joyful and safe holiday season!

-Matthew

## In This Issue

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<https://www.arec.vaes.vt.edu/arec/tidewater.html>





Photo by Marya Barlow.

Mario Ferruzzi became the 12th dean of Virginia Tech's College of Agriculture and Life Sciences on October 15, bringing over twenty years of expertise in agriculture, food and nutrition science, leadership, and collaboration to the position.

Read more about Dean Ferruzzi's background in agriculture and his vision for the college's future in this recent article from VT News:

<https://bit.ly/marioferruzzi> 

## STUDENT SPOTLIGHT: ALEXIS CLAPP

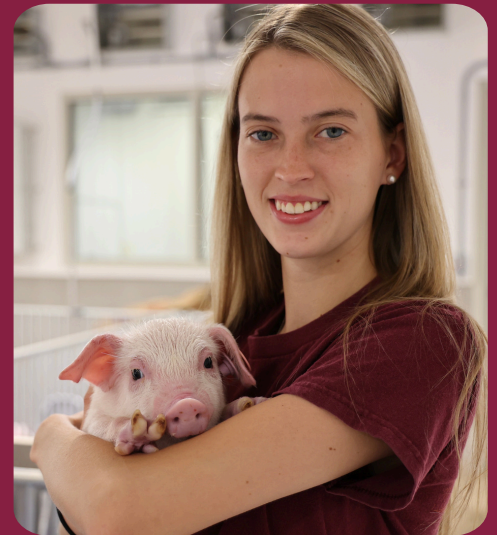
In research at the Tidewater Agricultural Research and Extension Center (AREC), Lexi Clapp discovered that variations in male pigs' blood chemistry may contribute to their higher mortality rates.

Clapp analyzed records collected at the Tidewater AREC during 2023 and found, consistent with other studies, a statistically significant effect of sex on pre-weaning death loss, with deaths of male piglets almost twice that of females.

Hematology and blood chemistry values play an important role in assessing the health and productivity of farm animals. Clapp hypothesized that hematology and blood chemistry value differences in male versus female pigs may predispose them to pre-weaning death.

During Clapp's research this past summer, blood samples were collected from 17 similar birth-weight pairs of newborn male and female pigs. She discovered that, compared with female newborn pigs, male pigs had significantly fewer red blood cells, less hemoglobin, a lower hematocrit, and lower concentrations of total protein, albumin, and bilirubin.

These results suggest that altered hematology and blood chemistry values may contribute to the increased death loss observed in male pigs and could contribute basic information that will lead to future intervention strategies.



Photos by Suzanne M. Pruitt.

Read the full VT News article here: <https://bit.ly/48iX0GZ> 



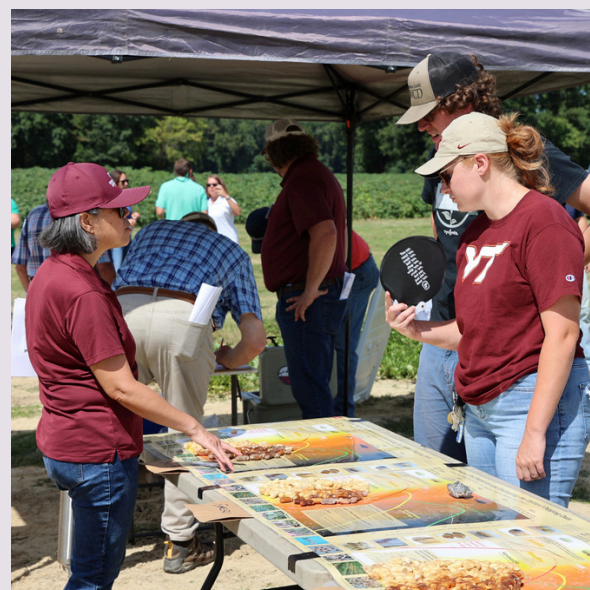
## 2024 PVQE FIELD DAY

The 2024 PVQE field day was held at the Slade Farm in Williamston, North Carolina on September 11, 2024.

Industry and crop updates were shared by Ashley Colins, CEO of North Carolina Peanut Growers Association, Inc.; Caitlin Joyner, Executive Director of Virginia Peanut Growers; and Lance Grimes, NC Cooperative Extension agent.

Research updates were delivered by specialists from North Carolina State University and Virginia Tech including: Assistant Professor Abhilash Chandel, Assistant Professor LeAnn Lux, Professor David Langston, Professor David Jordan, Assistant Professor Tim Bryant, and Virginia Tech Extension Peanut Specialist, Jacob Forehand. Breeder updates given by Associate Professor Jeff Dunne.

Thank you to lunch sponsors AgCarolina and Severn Peanuts!



## David Langston



Professor David Langston was honored on September 17th at the annual CALS Faculty & Staff picnic in Blacksburg. He received the Andy Swiger Land Grant Award in recognition of his accomplishments in teaching, research, and extension which contribute to enhanced production and profit in agriculture.

He is pictured here with Mary Burrows, VAES Director, and Alan Grant, retired Dean of the College of Agriculture and Life Sciences. Read more about all of the award recipients here: <https://bit.ly/3CxFLFN>

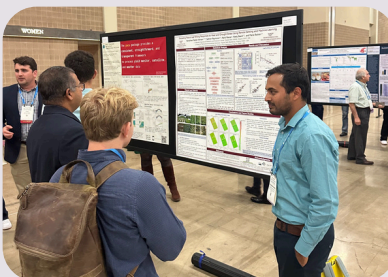
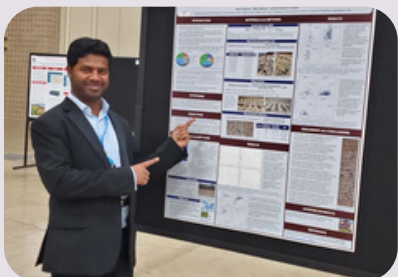
## Mark Estienne



Photos by Suzanne M. Pruitt for Virginia Tech.

Professor Mark Estienne was inducted into the Livestock Hall of Fame at the Alphin-Stuart Livestock Arena in Blacksburg on October 25th. His research in swine reproductive physiology has not only addressed relevant industry issues but also enhanced pork production on a national and international scale. Estienne has received Outstanding Service Awards from the Lower Shore Pork Producers, Maryland Pork Producers, and Virginia Pork Industry Association. He was nominated by the Virginia Pork Council. Read more here: <https://bit.ly/LivestockHallFame>

## 2024 ASA, CSSA, SSSA International Annual Meeting - November 11 - 13



The Virginia Tech Tidewater AREC team was well-represented in San Antonio, Texas during the ASA, CSSA, SSSA International Annual Meeting. Pictured here left to right are: Postdoctoral Associate Rahul Raman, who was elected as the 2025 Leader of the Evapotranspiration Measurement and Modeling Community and 2025 Secretary of the Association of Agricultural Scientists of Indian Origin (specialty group) of the American Society of Agronomy; Ph.D. student Keely Beard; Ph.D. student Ranadheer Reddy Vennam (2nd place winner in the Precision Agriculture System community Ph.D. student poster competition); and Ph.D. student C. Brandt Tate. Not pictured, but also in attendance was Soybean Agronomist Carrie Ortel. Photos courtesy of meeting participants.



Top row, left to right: Cotton harvest 2024; Precision Agriculture graduate students Sathish Raymond Sahayaraj, Chijioke Nkwocha, and Pius Jjagwe; Soybean Agronomist Carrie Ortel in the field with technician Ronald Daughtrey · Bottom row, left to right: PVQE team in the field at Tidewater AREC; Ph.D. student C. Brandt Tate; and Crop Physiology technician Andrew Thompson harvesting peanuts.

## LAB WORK

Visiting scholar Aminata Sarr plans to use skills acquired from Virginia Tech's Tidewater AREC Precision Agriculture & Data Management Lab to improve farm profitability and sustainability in her home country of Senegal. Aminata joined us in March and left on November 15th to return to the International Institute for Water and Environmental Engineering in Burkina Faso, where she will complete her Ph.D. early next year. She will be greatly missed here but we can't wait to see what amazing things she will accomplish in the future!

Read more here: <https://bit.ly/aminatasarr>



Graduate student Emma Nieland is working on USDA SCRI grant-funded project to determine the efficacy of various fungicides on anthracnose in watermelons. In addition to her graduate work, she supports all aspects of the plant pathology program, including plant diagnostics. Left to right: in the lab at Tidewater AREC, anthracnose symptoms on plant, preparing to spray in the field, and lesions on watermelon.

Photos courtesy of Emma Nieland.

Chris Buck is a vital part of our soybean agronomy program. No stranger to farming, he grew up on his family's nearby farm where they raised corn, peanuts, wheat, soybeans, and rye seed for cover crops.

Over the years, Buck has worked for Smithfield Packing Company, Newport News Shipbuilding, retired from a 30 year career at Lipton Tea, and continues to operate his own grounds maintenance business.

With a desire to get back to his farming roots, he joined the Tidewater AREC team in April of 2023, working with Professor David Holshouser, who retired later that year. Now, under the program leadership of Soybean Agronomist Carrie Ortel, the team has completed the 2024 soybean research harvest.



## OVT AND ON-FARM VARIETY TRIALS

Preliminary yield data will be added to our website as it is available.



FOR COTTON OVT  
AND ON-FARM TRIALS  
YIELD DATA,  
PLEASE VISIT:



<https://bit.ly/cottonOVT24>



FOR SOYBEAN OVT  
AND ON-FARM TRIALS  
YIELD DATA,  
PLEASE VISIT:



<https://bit.ly/soybeanOVT24>

# SELECTED PUBLICATIONS

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Bryant, T. B., Greene, J. K., Reisig, D., & Reay-Jones, F. P. F. (2024). Grower perceptions and adoption of IPM and non-Bt refuge in field corn: A survey in North and South Carolina. *Journal of Integrated Pest Management*, 15(1), Article 4. <https://doi.org/10.1093/jipm/pmad030>

Chandel, A., Jjagwe, P., Langston, D. 2024. [Drone imaging to evaluate impact of nematodes on soybean yield](#). *Virginia Cooperative Extension*. BSE-362NP

Ortel, C.C. Roberts, T.L., Popp, M., Ross, W.J., Slaton, N.A., & Parvej, M.R. (2024). Economic considerations of in-season potassium applications to soybean using payoff matrices. *Agronomy Journal*. <https://doi.org/10.1002/agj2.21726>


Ortel, C.C., Roberts, T.L., Purcell, L.C., Ross, W.J., Hoegenauer, K.A., Followell, C.A., & Victorio Pessotto, M. (2024). Interaction of drought stress and potassium deficiency on soybean vigor and leaf temperature. *Agrosystems, Geosciences, & Environment*. <https://doi/10.1002/agg2.20576>



## ENTOMOLOGY NEEDS ASSESSMENT SURVEY

This survey will help us identify research needs, better understand how to communicate the results of that research with stakeholders, and demonstrate the value of Extension programs for Virginia farmers.

We appreciate your time and feedback:

<https://bit.ly/3Zbf56L> 



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

 **Virginia Cooperative Extension**  
Virginia Tech • Virginia State University



WE TRULY APPRECIATE EVERY ITEM THAT WAS DONATED DURING OUR HURRICANE RELIEF SUPPLY DRIVE IN OCTOBER! WITH THE HELP OF YOUR GENEROUS DONATIONS, WE WERE ABLE TO DELIVER A TRUCK FULL OF MUCH-NEEDED SUPPLIES TO WESTERN VIRGINIA COUNTIES AFFECTED BY HURRICANE HELENE.



## HAPPY RETIREMENT, RONALD DAUGHTREY!

Mr. Ronald Daughtrey truly embodies the Virginia Tech spirit of *Ut Prosim* and we extend heartfelt gratitude for his many years of dedicated service to the Tidewater AREC faculty, staff, students, and stakeholders.

The soybean agronomy team pictured left to right: Technician Erin Myers, Lead Technician Chris Buck, Ronald Daughtrey, and Extension Soybean Specialist Carrie Ortel.



## DID YOU KNOW?

Virginia Tech has 11 Agricultural Research and Extension Centers (ARECs) across Virginia which play a pivotal role in connecting the university to local communities around the state. Have you wondered what research and outreach is happening at ARECs across the state?

The AREC Seminar Series is a place to find out more about the research and Extension programs happening at ARECs across Virginia. The series aims to promote collaborations between the ARECs, with each seminar being recorded and shared.

<https://bit.ly/arecseries>



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