



**SOUTHERN PIEDMONT AGRICULTURAL
RESEARCH AND EXTENSION CENTER
VIRGINIA TECH.**

NEWSLETTER

JULY 2024



Photo by Sam Dean for Virginia Tech.

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Greetings From Our Director

Welcome to the latest and the first edition of our 2024 newsletter. We had a solid start to the season, and I am thrilled to share overviews of our programs and the exciting developments and achievements of the Southern Piedmont AREC team in the past few months.

This issue reflects the dedication and hard work of our staff, graduate students, undergraduate interns, and faculty. Their commitment to excellence drives our mission forward, ensuring we meet and exceed expectations in every aspect.

Looking ahead, our team remains committed to innovation and promoting collaboration, and we are confident that the future will offer even more opportunities for growth and success.

Thank you for your continued support and interest in what we do at the Southern Piedmont AREC!

-Arash



ARASH RASHED
DIRECTOR AND ENTOMOLOGIST

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www.arec.vaes.vt.edu/arec/southern-piedmont.html





CELEBRATING 50 YEARS OF SERVICE

Established in 1974, Southern Piedmont AREC celebrates a significant milestone throughout 2024 - a half-century of applied research and Virginia Cooperative Extension education supporting the region's integrated and diverse production systems.

Focused on aiding the 23 surrounding counties, the center incorporates the latest scientific discoveries and technological advancements into the region's production systems. Its research and Extension efforts cover tobacco, forage crops, beef cattle, and a variety of other field and specialty crops, offering research-based support and guidance for sustainable production.

As one of 11 ARECs strategically located across the commonwealth, Southern Piedmont stands out as the sole center supporting tobacco producers in the state.

The 1,180-acre farm has designated areas for crop research, grazing, certified organic land, and silvopasture. It features specialized facilities for tobacco curing, greenhouses, high tunnels, and uses innovative technologies such as automation and precision agriculture for crop evaluation.

As the center prepares for a 50th anniversary celebration event scheduled for Nov. 1, its vision for the future remains rooted in service to the agricultural sector and the residents of the commonwealth.



Photos courtesy of Southern Piedmont AREC and Sam Dean for Virginia Tech.

Scan for the full VT News article here:



[Southern Piedmont AREC 50th Anniversary](#)



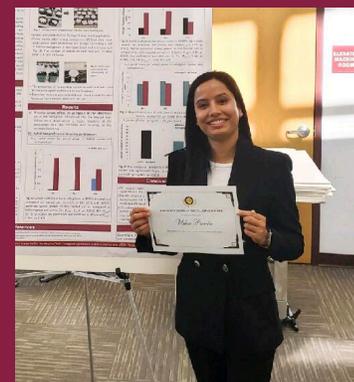


(L to R): VAES Administrative Assistant Laura Rasnick, VAES Director Mary Burrows, Southern Piedmont AREC Director Arash Rashed, Virginia Tech Provost Cyril Clarke, Jean Clarke, and VAES Associate Director Kang Xia during a tour of the Southern Piedmont AREC on January 25th.



Thank you to Walter Thompson for over 47 years of dedicated service to the Southern Piedmont AREC! We wish him all the best in his retirement.

- Arash Rashed, professor of Entomology and director of Southern Piedmont AREC, Crystal Tyler-Mackey, Extension specialist and leader, and Eric Kaufman, professor and associate department head of Agricultural, Leadership, and Community Education recently completed LEAD 21 land-grant leadership development.
- Usha Panta received the Student Research Award from and has been inducted into Virginia Tech Sigma Xi.



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.
- Atoosa Nikoukar received her Ph.D. in entomology from Virginia Tech's College of Agriculture and Life Sciences. She is working as a research scientist for the Virginia-based company Agrospheres.



Photos courtesy of Southern Piedmont AREC.

Read more about Atoosa in VT NEWS:



AG AWARENESS DAY

In April, the Southern Piedmont Agricultural Research and Extension Center conducted its 16th annual Ag Awareness Day events for 3rd and 5th graders. Over a period of five days in April, the center hosted 1,237 students from Nottoway and surrounding counties who participated in interactive learning sessions at the center.

Fifth graders learned the math and science of baking bread thanks to King Arthur Baking Company's Bake for Good program. Other presentations covered topics such as addressing food waste and collaborating to combat global hunger. Interactive stations featured activities like creating animal cell models, experimenting with polymers through making Oobleck, examining the layers of the earth with apples, and extracting DNA from strawberries.

Third graders had the opportunity to explore 15 unique learning stations this year. These stations involved hands-on activities such as paper making, vermicomposting (using worms for composting), interacting with simple machines, and learning how to milk dairy cows. Among the highlights of the program are the beloved farm animals, including baby chicks, sheep, and cows, which students can interact with up close, often for the first time.

Scan here to read the full article



Photos by Suzanne Pruitt for Virginia Tech.

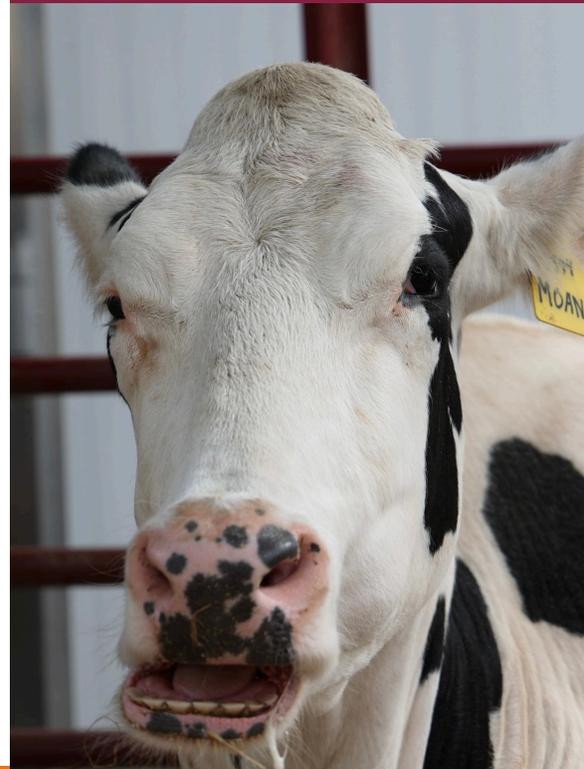


AG AWARENESS DAY

The program's success and impact would not have been achievable without the invaluable backing of an award-winning community partner and volunteer team, including King Arthur Baking Company's Bake For Good program, Society of St. Andrew - Virginia, Virginia Agricultural Experiment Station, Virginia Farm Bureau Federation, Fort Barfoot, Virginia Cooperative Extension, Nottoway FFA Chapter, Virginia Department of Forestry, Virginia Department of Wildlife Resources, Piedmont Soil & Water Conservation District, USDA Natural Resources Conservation Service, Brickland Hatchery, Rocky Hills Farm LLC, The Dairy Alliance, WestRock, Central Piedmont Master Naturalists, Richlands Dairy & Creamery, and Triple R Dairy.

Thank you!

VOLUNTEERS



Photos by Suzanne Pruitt for Virginia Tech.



SHOURISH CHAKRAVARTY, APPLIED AG ECONOMIST

Shourish Chakravarty will be joining us in August as our Applied Ag Economist. Chakravarty completed his PhD in Agricultural Economics from the Food and Resource Economics Department, University of Florida. His core research interest is in using economic tools to analyze issues in agricultural production, technology adoption, conservation practice adoption, and crop profitability. The primary objective of his research program will be to provide timely, relevant, and comprehensive research output on issues in agricultural productivity, profitability, and sustainability to farmers and agricultural stakeholders in Virginia. The key component of the program will be communicating with agricultural stakeholders to understand their issues, especially in plant commodities, and conducting research focused towards solving them.



AYODEJI BELLO, PRESIDENTIAL POSTDOCTORAL FELLOW

As a microbial ecologist, Bello is interested in soil-plant-microbe interactions and their impact on ecosystem resilience. He completed his PhD at Northeast Agricultural University (NEAU), Harbin, China, MSc at the University of Ibadan and BSc at Ladokpe Akintola University of Technology, both in Nigeria and majored in Agronomy (Soil Science).

During his time with the Zeng Lab at Southern Piedmont AREC, he is investigating how management practices alter soil core microbiota and their association with crop health and soilborne diseases.



Scan to read more about Bello:



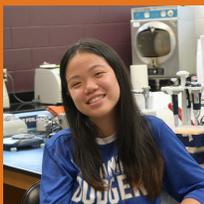
Photos courtesy of Southern Piedmont AREC.



Caroline Avery,
Agronomy Intern



Robert Hite,
Agronomy Intern



Jennifer Nguyen,
Entomology Intern



Liv Erickson,
Plant Pathology
Intern



Samantha Ferrer,
Plant Pathology
Intern



Denis Sarisoy,
Plant Pathology
Intern



Sid Sachan,
Agronomy Program



Raiya Rashed,
Lab Program



Noah Cole,
Field Crew



Paul Carter,
Agronomy Technician



Patrick Cocker,
Field Crew



Nathan Kemp,
Field Crew



Pradyumna K. Ramgopal,
Entomology Intern

Photos courtesy of Southern Piedmont AREC.

FARM UPDATES



Upgrades & Repairs Completed:

- Old trailers demolished
- Repairs to tobacco barns
- New storage building
- Packhouse bathroom air conditioning
- Greenhouse controls upgrade 4 sections, with wet wall and swamp cooler in 2 sections

Upgrades & Repairs Planned:

- LED lights in all buildings
- Pond stand pipe repairs

Photos by Margaret Kenny.





The red morph of green peach aphid (aka tobacco aphid) is the most common aphid found in tobacco. Photo courtesy of SPAREC Entomology Lab.

ENTOMOLOGY

Research projects at the Southern Piedmont Entomology Laboratory consider organismal ecology in evaluating and maximizing the effectiveness of integrated pest management of insect pests and vector-borne plant diseases in Virginia crops. We are currently using small grains, tobacco, and cotton as our model systems.

Team:

- Arash Rashed - Principal Investigator
- Hadi Farrokhzadeh - Visiting Scholar
- Shirin Parizad - Ph.D. Student
- Usha Panta - Ph.D. Student
- Jennifer Nguyen - Summer Intern
- Pradyumna K. Ramgopal - Summer Intern

PLANT PATHOLOGY

Our lab integrates the latest technologies to address applied and basic questions in plant pathology, with the goal of helping growers optimize their profits while promoting sustainable agricultural practices.

Team:

- Yuan Zeng - Principal Investigator
- Priyanka Gangwar - Postdoctoral Fellow
- Ayodeji Bello - Presidential Postdoctoral Fellow
- Kamal Chhetri - Ph.D. Student
- Jiayu Dong - Ph.D. Student (starting 8/24)
- Emma Raimondi - M.S. Student (starting 8/24)
- Liv Erickson - Summer Intern
- Samantha Ferrer - Summer Intern
- Denis Sarisoy - Summer Intern



Yuan Zeng collects data in the field.
Photo courtesy of Zeng Lab.

EXTENSION AGRONOMY

The agronomy research led by Carol Wilkinson encompasses improving plant disease resistance, improving cultural practices to enhance sustainability and profitability, specialty crop production systems. Research focus: tobacco, corn and soybeans, mung beans, and hazelnuts.

Team:

- Carol Wilkinson - Extension Agronomist
- Paul Carter - Technician

Pictured: Hazelnut trees (top) and mung beans (middle). Photos courtesy of Carol Wilkinson.



IN THE NEWS

A project led by Virginia Tech researchers aims to replenish and maintain a sustainable pipeline of native seeds for the southern portion of Virginia, also known as Southside, by partnering with underserved farmers from the region. Southern Piedmont AREC Director Arash Rashed is a co-PI on the project, which is backed by a grant of nearly \$700,000 from the Natural Resources Conservation Service's Equal Conservation Opportunities program. The aim is to expand conservation assistance to farmers who are new to farming, low income, socially disadvantaged, or military veterans. The Natural Resources Conservation Service is part of the U.S. Department of Agriculture.

Pictured (bottom): Project lead, Assistant Professor Leighton Reid of the College of Agriculture and Life Sciences. Photo by Jordan Coscia for Virginia Tech.



Scan to read
the full article



During 2024, the Southern Piedmont AREC's Applied Forages, Crop Production, Entomology, Plant Pathology, and Tobacco Agronomy programs have secured funding from federal, State (including commodity board funds), and private industry totaling more than \$1,594,000 to support their research on various aspects of tobacco, forages, native grasses, soybean, cotton, corn, and wheat production.

PUBLICATIONS

RESEARCH (SELECTED):

Yari, S.*, Hajiqanbar, H., Fathipour, Y, Farazmand, A. & **A. Rashed**. 2024. Damage caused by Tetranychus urticae and Frankliniella occidentalis on rose plant: Effect of different initial population densities. Arthropod-Plant Interactions, 18: 117-127.

Rashed, A. & W. van Herk. 2024. Pest Elaterids of North America: New Insights and Opportunities for Management. Annual Review of Entomology, 69: 1-20.

Wenninger, E.J. & **A. Rashed**, 2024. Biology, ecology, and management of the potato psyllid, Bactericera cockerelli (Hemiptera: Triozidae), and zebra chip disease in potato. Annual Review of Entomology, 69: 139-157.

EXTENSION (SELECTED):

Zeng, Y. & Reed, T.D. 2024. Disease and Nematode Management in Field Crops - Tobacco. Virginia Cooperation Extension. ENTO-566-C.

Pfeiffer, D.G. Rice, K.B., & **Zeng, Y.** 2024. Horticultural & Forest Crops - Commercial Small Fruit: Diseases and Insects. Virginia Cooperation Extension, 456-017.

Zeng, Y. 2024. 2024 Flue-cured Tobacco Production Guide - Disease Management, 47-66. Virginia Cooperation Extension, 436-048.

Reed, T.D., Rashed, A., Zeng, Y. 2024. 2024 Flue-cured Tobacco Production Guide. 132 Pp. Virginia Cooperative Extension, 436-048.

Malone, S., **Rashed, A.**, Taylor, S. 2024. Insect Control in Field Crops: Small grains. Field Crops 2024 Pest Management Guide, 4:41-46. Virginia Cooperative Extension, 456-016.

Payne, K. and Taylor S. 2024. Forages: Alfalfa and other legumes. In Field Crops 2024 Pest Management Guide, 4:3-12. Virginia Cooperative Extension, 456-016.

Payne, K. and Taylor S. 2024. Insect Control in Field Crops: Orchardgrass, Timothy, and Bermudagrass. In Field Crops 2024 Pest Management Guide, 4:13-18. Virginia Cooperative Extension, 456-016.

UPCOMING EVENTS



SOUTHERN PIEDMONT AGRICULTURAL
RESEARCH AND EXTENSION CENTER
VIRGINIA TECH



Thursday, beginning at 4:30 PM

Crop Field Day

Field crops research tour will follow dinner. Learn about tobacco, corn, and soybean variety trials, pest management, soil testing, and more!

JULY

25

2024



Saturday, 9 am - 2 pm

Family & Farm Day

Bring the family and join us for a day of fun, hands-on activities about VA agriculture!

SEPT

14

2024



Thursday, Time TBA

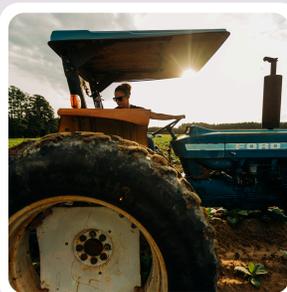
Forage & Livestock Field Day

Save the date! Details to be announced.

SEPT

19

2024



Friday, Time TBA

50th Anniversary Celebration

Join us for a golden anniversary event honoring 50 years rooted in service. Details forthcoming.

NOV

01

2024

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



www.arec.vaes.vt.edu/arec/southern-piedmont.html/events



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