



**HAMPTON ROADS AGRICULTURAL
RESEARCH AND EXTENSION CENTER
VIRGINIA TECH.**

Deep Roots

December 2024



Greetings From the Director

I hope everyone had a wonderful Thanksgiving holiday. With colder weather and the first frost behind us, it's beginning to feel like winter. There's been plenty happening at the HRAREC.

Construction of the Old Dominion University (ODU) greenhouse at the station is complete. This collaborative project opens doors to new research partnerships with ODU. Many thanks to ODU and the College of Agriculture and Life Sciences (CALs) at Virginia Tech for funding this greenhouse. Plans are also underway for a second greenhouse, supported by a USDA grant received by Dr. Stallknecht and myself, along with matching funds from CALs. On December 3, David Kiser, Joy Manning, and Brandon Williams from Virginia Tech Renovations visited to view the ODU greenhouse and discuss plans for the second. Contractors were also present to provide cost estimates for the project.

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The Master Gardeners held another successful Fall Gardening Festival on September 28, featuring a popular plant sale. To express our gratitude, we hosted a luncheon for volunteers on December 5, where attendees took home poinsettias from our greenhouse—pink marbled ones were the crowd favorite!

On October 29, we hosted new Cooperative Extension agent onboarding. It was a great opportunity to meet new horticulture agents and connect with current ones.

We partnered with the Eastern Shore AREC to prepare a soil pit and showcase cover crops during the International Soil

Tillage Research Organisation (ISTRO) conference, organized by Dr. Mark Reiter. Conference attendees explored rooting depths of different cover crops at our station.

In technology updates, Mark Crawford, Eddie O'Dell, and CALS IT staff collaborated with us to install a solar-powered Wi-Fi system across most of our research area. Seven stations are operational, with plans for an additional station soon.

Congratulations to Dr. Del-Pozo for receiving a Virginia Tech National Distinction Program award, recognizing his noteworthy academic accomplishments and commitment to scholarly excellence. Additionally, on November 22, HRAREC participated in the monthly AREC Seminar Series. I provided an overview of our station, and Dr. Del-Pozo presented his research. If you missed it, recordings are available at [AREC Seminar Series](#). Kudos to Dr. Matthew Chappell, Director of the Tidewater AREC, for organizing this excellent series.

We are thrilled to welcome Dr. Kristopher Criscione as our new Nursery Production Specialist, starting January 10, 2025. Dr. Criscione, who recently earned his Ph.D. at Louisiana State University, will bring valuable expertise to support Virginia's nursery industry. His office will be located on the first floor of the main building.

Lastly, we look forward to hosting the “Come to the Bay” program for commercial turf and landscape professionals on January 28-30, 2025. Registration details are available at vaturf.org. We're also exploring a similar program tailored to homeowners.

Best wishes for a joyful holiday season and a prosperous New Year!

A handwritten signature in black ink that reads "Jeff Deen".

Photo courtesy of Julie Brindley



Red-Headed Flea Beetle

Virginia Tech researchers are studying the red-headed flea beetle, a destructive nursery pest known for chewing holes in leaves and stunting plant growth. Using flightmills in the lab and mark-and-recapture methods in the field, they track the beetle's flight patterns and dispersion across nurseries.

The findings will help growers implement better Integrated Pest Management strategies, potentially reducing pesticide use. "Our goal is to provide science-based solutions that make an impact," said lead researcher Alejandro Del-Pozo, highlighting Virginia Tech's commitment to supporting the nursery industry.



The red-headed flea beetle, with its bright red head and shiny black body.

[Full Article](#)



Updates

Small Fruit Program's Published Research

Virginia Tech researchers have introduced innovative eco-friendly solutions for weed management in strawberry fields. Their study, led by Baker D. Aljawasim, Charles Johnson, Mikel Manchester, and Dr. Jayesh B. Samtani, explore alternatives to traditional chemical fumigants.

The researchers found that an eight-week combination of soil solarization (using clear plastic tarps to trap heat and kill weed seeds) and mustard seed meal (a natural byproduct from mustard plants) offered weed control comparable to chemical treatments. These methods aim to support farmers in reducing chemicals while maintaining high crop yields.



[Full Article](#)



AREC Kitten

Photo courtesy of Lelia Milner



Farm Assistant, Colby Flanagan and Research Assistant Lelia Milner recently teamed up for a heartwarming rescue at the station! Early Monday morning, Colby discovered a tiny kitten seeking shelter in the station garage and brought her inside to safety. Lelia quickly stepped in, falling in love with the kitten, and decided to give her a forever home. Now, Lelia is the proud cat mom of Petunia, the station's newest furry success story!

Photo courtesy of Dr. Chuanxue Hong

Boxwood's New Body Guard

Boxwood blight, a fast-spreading disease, has devastated boxwood production and landscapes worldwide, including 29 U.S. states. Researchers at the Hampton Roads AREC, led by Dr. Ping Kong, are exploring the potential of *Pseudomonas eucalypticola* 1021Bp, a beneficial bacteria that promotes plant growth and naturally combats the blight.

Lab and greenhouse studies show that 1021Bp effectively suppresses harmful fungi, enriches soil, and protects boxwoods from infection. The team has also identified a dozen similar bacteria with plans to combine them into powerful solutions for growers, offering safer and eco-friendly alternatives.



Dr. Ping Kong, Research Scientist in Plant Pathology and Principle Investigator on the *Pseudomonas eucalypticola* 1021Bp study.

[Full Article](#)



Updates

Dr. Criscione Start Date

Dr. Kris Criscione has successfully defended his dissertation and will officially join our team as the Nursery Production Specialist on January 10. We're thrilled to welcome him and can't wait to see the impact he'll make!



IPM Conference

Dr. Alejandro Del-Pozo, Dr. Chuanxue Hong, and Dr. Jeffrey Derr shared their expertise at the Integrated Pest Management (IPM) Conference held at the Hotel Roanoke on November 6-7. A special thanks to Virginia Cooperative Extension for organizing this event!



Cutting Chemical Fumigation

Our AREC research has been published in the November issue of Fruit Growers News. PH.D. Candidate Baker Aljawasim and Dr. Jayesh Samtani have conducted studies using Anaerobic Soil Disinfestation to explore a natural method that allows strawberry growers to eliminate chemical fumigants.



[Full Article](#)

Updates

New Greenhouse Complete



A new greenhouse at the Hampton Roads AREC has been completed through a collaboration with Old Dominion University. This state-of-the-art facility will enhance research capabilities and support innovative agricultural studies.

Master Gardener Fall Festival



The Fall Festival on September 28 drew over 1,000 attendees. Master Gardeners provided sustainable gardening tips, Water Stewards informed the public about ways to protect our waterways, Tree Stewards taught the importance of trees. Visitors enjoyed vermiculture demos, mason bee giveaways, and plant and rain barrel sales. A kids' area featured games and insect ID. We hope to see you next year!



Updates

ISTRO Demonstration

During the International Soil and Tillage Organization hosted by the Eastern Shore AREC participants explored a soil pit highlighting the root systems of cover crops at the Hampton Roads AREC. This demonstration showcased how cover crops enhance soil health, structure, and sustainability in modern agriculture.



Welcoming New Agents

We hosted our new Agriculture and Natural Resources Extension Agents to provide a look at the center's research. The tour fostered connections between agents and researchers, equipping them with valuable insights to better serve their local communities.

Small Farm Tour

We are grateful for the opportunity to share our research and connect with some of our Virginian farmers during the annual Small Farm Conference. We love collaborating directly with our growers and invite them to continue using VT as a resource. Thanks to Virginia Cooperative Extension for including us and organizing such a great conference!



Legislative + Farm Bureau

On December 12, our station hosted the Legislative meeting conducted by the Farm Bureau. Twenty two individual attended this meeting, where current issues facing farmers were discussed.

Updates

December 2024



Holiday Celebrations

Master Gardeners

We recently hosted a holiday party to honor our Master Gardeners. With festive cheer and delicious food, we celebrated their hard work and dedication. We also distributed poinsettias as a token of our appreciation. Thank you, Master Gardeners, for your invaluable contributions, you truly make a difference to our community and station.



Faculty, Staff, and Students

In addition, the Hampton Roads AREC gathered for their own holiday celebration. The event featured a gift exchange, Mission BBQ, and a visit from our incoming Production Specialist, Dr. Kris Criscione. It was a wonderful opportunity to connect, reflect on the year's successes, and look forward to exciting developments in 2025.



Congrats to Dr. Del-Pozo

Dr. Alejandro Del Pozo received an award from Virginia Tech's National Distinction Program. This program provides recognition to faculty who have achieved noteworthy academic accomplishments which promote a culture of scholarly excellence that supports the University's commitment to global distinction.



Upcoming Events

**28-30
JAN**

Come to the Bay Commercial Turfgrass Workshop

The Hampton Roads AREC, in partnership with Virginia Turfgrass Council, hosts the annual Come to the Bay Workshop! Join industry professionals for educational classes, pesticide recertification and networking opportunities.

[Register Here](#)



Virginia Tech's Giving Day 2025

This 24-hour fundraiser is your opportunity to make an impact. This 24-hour event helps support the Hampton Roads AREC's demonstration gardens, maintained by Master Gardeners to inspire sustainable practices and a love for horticulture. Go to this website and select Hampton Roads AREC in the drop down.

**19-20
Feb**

[Giving Day Website](#)



Spotlights

Master Gardener

A jack-of-all-trades, Melanie Sweeny has worked in archaeology, pottery design, landscape design, and water aerobics. Gardening, however, holds special meaning. Melanie's journey to becoming a Master Gardener one of resilience and renewal. Long interested in the program, she embraces living in the present struggled with the administrative hurdles of signing up. A cancer diagnosis in 2019 became the turning point. Encouraged by her husband, she pursued her dream, and signed up after completing chemotherapy in June 2020. Melanie credits the program's sense of purpose and community with helping her combat seasonal affective disorder. **"Creating something beautiful is what draws me in," said Melanie** This year she's coordinating the plants for the biggest event of the year, the spring plant sale. Melanie's journey reminds us of the transformative power of growth—in both life and the garden. We're honored to have her in our community!



Staff

Thomas Wilchynski has been the Safety and Mechanical Manager at the Hampton Roads AREC for 20 years, bringing enthusiasm, competence, and exceptional skill to the Hampton Roads AREC. Before joining the team, he worked as a Master ASE-certified Auto/Heavy Truck mechanic. Growing up in a family-owned industrial machinery business, he gained hands-on experience repairing vacuum condensate return systems for steam boilers. He's known for his versatility, tackling challenges across mechanical, electrical, and environmental health and safety concerns. Thomas also assists faculty with a wide range of research needs. He never hesitates to assist when asked for advice or when presented with unique and challenging dilemma. **"This is a changing environment which you as an individual must adapt to. Constantly updating your skills to meet your new challenges,"** said Thomas.



Turf Tips

DEC. EDITION

Brought to you by Jeffrey Derr and Adam Nichols

As temperatures drop, warm-season turf species enter dormancy, and tall fescue growth slows, but there are still important winter turf management tasks to address.

Soil Testing and Fertilization:

Winter is an excellent time for soil testing. If soil pH is below 6.5, lime can be applied now. Testing also determines phosphorus and potassium levels to guide 2025 fertilizer needs. Fertilize tall fescue in December only if fall applications were insufficient, using reduced rates. Opt for nitrogen sources like ammonium, nitrate, or IBDU, as they don't rely on microbial activity. Avoid fertilizing warm-season grasses, including bermudagrass, zoysia, St. Augustine, and centipede, during winter.

Broadleaf Weed Control:

Control small winter weeds such as common chickweed, henbit, and lawn burweed now, as they're harder to manage in spring. Use triclopyr-based or 3-way/4-way herbicides with dicamba on tall fescue. Ester formulations like Turflon Ester or Speedzone work well in winter, with less drift risk to dormant trees and shrubs. Be cautious to avoid herbicide drift onto pansies, winter vegetables, and evergreen ornamentals. These herbicides can also be used on bermudagrass and zoysia. In St. Augustine, homeowners can use atrazine, while commercial applicators may use Recognition plus Turflon Ester.

Annual Bluegrass Management:

Annual bluegrass in tall fescue is challenging for homeowners, with selective products available for commercial applicators in spring. Bermudagrass and zoysia offer options like Revolver, Monument, and Katana, which also manage ryegrass. Dormant glyphosate applications on bermudagrass in January are effective but should not be done during early green up to prevent injury.

Preemergence Crabgrass Control:

Apply a product such as prodiamine (e.g., Barricade) in winter for early crabgrass prevention, with a follow-up in spring. Winter applications also target Japanese stiltgrass. Avoid crabgrass preventer/fertilizer combinations on tall fescue to prevent over-fertilization.

Frost Traffic:

Avoid walking on frost-covered cool-season grasses like tall fescue to prevent blade damage. Proactive care now ensures healthier turf next season.

This article is a summary. Click below to read the full article.

READ MORE



DID YOU KNOW?



Welcome to Our Fun Facts Sheet

1

During World War II, several staff members left the Station for military service—6 in 1942 and 8 in 1943. The soils department was especially impacted, as its entire team was called to serve.

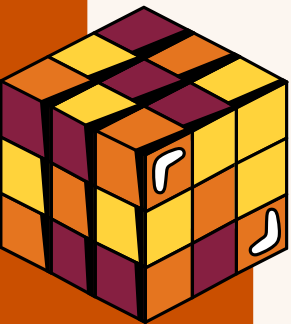
2

With key fertilizers like ammonium nitrate redirected to the war effort, the Station innovated by researching alternatives like cottonseed and soybean meal and optimizing fertilizer use through band placement to conserve materials.

3

The Station played a major role in supporting local Victory Garden efforts, answering gardener inquiries, publishing timely vegetable-growing advice in the *Virginian Pilot*, and creating instructional pamphlets for distribution through Norfolk Garden Clubs.

HISTORY EDITION



Meet the Faculty



Dr. Jeffrey Derr
Director
Weed Scientist



Dr. Alejandro Del-Pozo
Entomologist



Dr. David Sample
Biological Systems Engineer



Dr. Laurie Fox
Horticulture Associate



Dr. Chuanxue Hong
Plant Pathologist



Dr. Eric Stallknecht
Greenhouse Specialist



Dr. Jayesh Samtani
Small Fruits Specialist



Dr. Kris Criscione
Nursery Production
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