

# Deep Roots



### **Greetings From the Director**

On May 29, we hosted Dr. Mario Ferruzzi, Dean of the College of Agriculture and Life Sciences, and Associate Dean for Research Dr. Mary Burrows. Their visit coincided with our Spring Advisory Board meeting, allowing stakeholders and board members to meet the new Dean.

On April 23, the station held an appreciation luncheon for the Master Gardeners and other volunteers. They've done an excellent job planting annual flower trials and maintaining the perennial gardens and arboretum. We do not have dedicated funding for these demonstration gardens so we developed a campaign to support them. Donations continue to come in–thank you to all who contributed. The Virginia Beach Master Gardeners also hosted a successful plant sale on May 3-4, and I was able to donate a number of plants.

Recent personnel updates: Dr. Xiaoping Li left his postdoc

01/16

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position with Dr. Chuan Hong in May to begin a new role at Penn State. Ms. Alecia Fischman started as a research technician with Dr. Kristopher Criscione in March. Dr. Baker Aljawasim completed his Ph.D. under Dr. Jayesh Samtani's direction in May.

Several faculty received honors this spring. Dr. Chuan Hong was named a Fellow of the American Phytopathological Society. Dr. Jayesh Samtani received two awards from the American Society for Horticultural Science.

In April, we hosted educational events including a soils program by the Virginia Association of Wetland

Professionals and a soils lab for Virginia Wesleyan University students. On May 17, the station welcomed the Mid-Atlantic Chapter of the International Society of Arboriculture.

Dr. Samtani's Berry Field Day on June 4 drew about 65 attendees. Faculty and students from Blacksburg and the Alson H. Smith Jr. AREC in Winchester presented berry research, and attendees sampled strawberries, blackberries, and kombucha.

Looking ahead: The Demonstration Garden Open House is June 21 (Saturday morning)! Turfgrass Field Day will take place June 26. We're also hosting three undergraduates for five weeks through the REEL Fellowship Program, and offering a tour on July 1 for the 2025 REEL cohort.

Atlas will build our second new greenhouse, supporting Dr. Eric Stallknecht's work. Staff also improved container research areas for Dr. Kris Criscione and Dr. Alejandro Del Pozo.

Seven new solar WiFi stations now serve most research plots. A refillable water station was added to reduce plastic waste. The cooler replacement project is on hold due to asbestos, but a contractor is lined up. Two barn cats now help with rodent control-please don't try to pet them.

We held another kickball game on June 6. Once again, Turf/Weed Science edged out Entomology 7-6. A rematch is planned.

Thank you for supporting our station. Hope to see you at HRAREC this summer!

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## A Message From Dr. Criscione

Hello everybody!

I would like to introduce myself again- my name is Dr. Kristopher Criscione, I am the new Nursery Production Specialist here at the Hampton Roads AREC.



I started this position in January and have been busy building the research program. My goal for this position is to help improve production in the nursery and greenhouse industry through more efficient and sustainable growing practices.

My background is in managing the container rootzone (plant roots, potting soils, irrigation, and their interaction). In view of this, I took my research program in this direction. Specifically, my goal is to find ways we can better grow our container roots. Not to just produce more roots, but rather, produce more efficient roots.

There is little research in horticulture that has focused on engineering our root systems to stimulate more fibrous feeder roots (you know, the ones that absorb all the water and

fertilizer we apply). Although we can't really see the whole root system well, its health is directly related to the success of a plant.

I'd like to share some of the work we've been doing at the Hampton Roads AREC related to managing plant roots. A big part of the program is helping growers achieve better rooting or "fill" containers faster with slow-growing systems using plant growth regulators. We're also gaining insight into how irrigation management can shape root systems.





Another goal is to better understand how roots affect the way potting soils hold air and water-key elements for healthy plant growth. We're also exploring whether we can engineer potting soils to extend hydration windows, especially for water-stressed plants. If any of this work interests you-or if you're curious about other research areas-I'd love to connect. Please don't hesitate to reach out. Email me <u>Here</u>.

## **Updates**

## New Research Finds Relief From Boxwood Blight

New research from a team of plant pathologists led by Chuanxue Hong at Virginia Tech's Hampton Roads Agricultural Research and Extension Center and Jay Pscheidt at Oregon State University suggests that the solution may lie in a fungicide treatment method known as "drenching."

This approach dramatically reduces the amount of labor and materials needed to treat infected plants, marking a significant advancement in sustainable horticultural practices.







## Updates

### **Berry Field Day**

From field tours to kombucha tasting, our Berry Field Day was packed with flavor, research, and fun. Thanks to everyone who joined us to explore the latest in berry production and innovation!





### Annual Kickball Game



The turfgrass team defended their title in the annual kickball game, taking on the entomology crew and securing the trophy for a second year in a row. A rematch is set for August!

## Congratulation Dr. Aljawasim



Congratulations to Dr. Baker D. Aljawasim on earning his Ph.D. from Virginia Tech's School of Plant and Environmental Sciences, where he conducted research at the Hampton Roads Agricultural Research and **Extension Center. His** dissertation, titled "Innovative Approaches for Detection and Management of Fruit Diseases," focused on enhancing disease detection and management strategies in strawberries, with an emphasis on anthracnose fruit rot. Dr. Aljawasim's work contributes to the resilience and productivity of small fruit crops, supporting sustainable practices for growers and researchers alike.

## Updates

### **Our New Mouse Traps**



To help control rodents that can interfere with important research projects, we welcomed a team of barn cats to the station. These working felines serve as a natural form of pest management, helping to reduce populations of rats and mice around storage areas, greenhouses, and research plots.

### **Spring Plant Sale**

May 3 and 4 the Virginia Beach Master Gardener's held their biggest Spring Plant Sale yet! Families lined up early with wagons ready to dividing and conquering this plant sale. Now time to start preparing for the fall plant sale!



## New Extension Project



Dr. Laurie Fox was a technical advisor for a new 5,000 square foot pollinator garden at the Naval Station in Norfolk! Working with James Micalizzi, Natural Resources Manager for the naval station, around 40 Navy volunteers planted over 4,000 native perennial plants in late February. This garden will serve as a template for other facilities wanting to add pollinator support to their grounds.







## Updates

## Advisory Board Meeting

Thank you to everyone who took the time to attend the advisory board meeting on June 3. And a Special thanks to Dean Mario Ferruzzi and Associate Dean Mary Burrows for taking the time to tour our station. It was a pleasure hosting everyone!





## MAC-ISA Meeting

Arborists from across the region gathered at the station for an in-depth meeting sponsored by the Mid-Atlantic Chapter of the International Society of Arboriculture to discuss tree health, pest management, and urban forestry practices.

## Congratulations Dr. Hong

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Dr. Chuanxue Hong has been named a 2025 Fellow of the American Phytopathological Society (APS), one of the society's highest honors. He was recognized for his impactful work on Phytophthora research and boxwood blight management, which has greatly benefited the nursery industry and extension programs.





## **Updates**



### Is Year-Round Green Grass Possible in VB?

Researchers Adam Nicholes and Dr. Jeffrey Derr have been leading a study that explores if two grasses with opposite growing seasons work together for a year-round green lawn. Since 2017, the turfgrass maintenance and weed science team has been studying "Bluemuda," a blend of bermudagrass and Kentucky bluegrass. The combination takes advantage of each grass's seasonal strengths to reduce reseeding needs while maintaining a dense, uniform appearance. The project offers a promising, low-maintenance solution for homeowners and athletic field managers in the Mid-Atlantic looking to break away from traditional turf systems.







## **Upcoming Events**



### Garden Open House

The Master Gardener Open House is happening this weekend at the Hampton Roads AREC! Visitors are invited to tour the research gardens, learn from local experts, and enjoy hands-on, family-friendly activities.



June

21

9AM - 12PM



09/16

### Turfgrass Field Day

Join us for the 15th annual Turfgrass Field Day! This event is geared toward commercial turf managers and will feature field tours, demonstrations, and expert-led sessions on topics ranging from pest management to sustainable practices.



June



7:30AM - 4:00PM

## Spotlights

#### Master Gardener - Kevin Finnerty

Before becoming a dedicated Master Gardener, Kevin's path was quite unique. Originally from New Dersey and one of twelve siblings, he served four and a half years in the Navy, including two years on a fleet tug in Hawaii towing vessels across the Pacific. After training as a dental technician in San Diego and North Carolina, he went on to dental school at Chapel Hill and eventually opened his own practice. Inspired by his patients who were Master Gardeners, he applied for the program just before the pandemic and quickly immersed himself, accumulating over 1,200 volunteer hours in three years. His experience managing a dental practice has translated into strong leadership within the Master Gardener community, where he continues to grow and give back.



#### Staff - Patricia Richardson

With a background rooted in molecular biology and microbiology from the University of Florida, Patricia has spent over two decades at the Hampton Roads AREC, focusing on small fruit pathology. Since joining the area in 2000, she has been instrumental in developing research programs on strawberries and blueberries, including pioneering work on disease management and pathogen detection. Her commitment to sustainable practices is evident in efforts to reduce synthetic pesticides and promote natural controls, helping growers adapt to evolving challenges like new diseases and climate impacts. Known for her hands-on approach and strong grower relationships, she finds rewarding the direct impact her work has on the local agricultural community. As she prepares for retirement, she hopes her legacy will support ongoing research and future specialists in the lab.

## June Turf Tips FOR HOMEOWNERS

Jeffrey Derr and Adam Nichols

#### Tall Fescue:

Watch for brown patch disease in hot, humid weather. Use fungicides with azoxystrobin (like Scotts DiseaseEX) preventatively and avoid overwatering. If desired only apply low nitrogen rates (<0.5 lb/1,000 sq ft/month). Apply your second crabgrass preventer if using a split program. Treat crabgrass, broadleaf weeds, and yellow nutsedge as needed—try halosulfuron for nutsedge and fenoxaprop for bermudagrass control.

To prevent annual bluegrass (Poa), apply crabgrass preventers such as pendimethalin or prodiamine in mid to late August. These products can prevent fall overseeding, so choose based on your lawn goals.

#### Warm-Season Grasses (Bermuda, Zoysia, St. Augustine, Centipede):

Fertilize and perform cultural practices like aeration and dethatching. Seed bermuda, zoysia, or centipede in early summer and plug bare spots. Apply crabgrass preventers in August to control annual bluegrass, but not on newly seeded turf.



#### General Tips:

Spot treat yellow nutsedge with halosulfuron. Use quinclorac products for crabgrass in tall fescue, bermuda, and zoysia—but avoid on St. Augustine and centipede. For broadleaf weeds, use a 3-way amine herbicide; in tall fescue, products with triclopyr work best. Avoid triclopyr on warm-season grasses. Always read product labels to ensure safety for your grass type. 

## June Turf Tips FOR COMMERCIAL

Jeffrey Derr and Adam Nichols

#### Tall Fescue:

Watch for brown patch disease during hot, humid weather. Use preventative fungicides with azoxystrobin (e.g., Heritage, Headway). Avoid frequent irrigation and apply nitrogen sparingly if desired (<0.5 lb/1,000 sq ft/month). Apply the second crabgrass preventer if using a split program. Treat crabgrass, broadleaf weeds, and yellow nutsedge as needed with herbicides like quinclorac (for crabgrass), halosulfuron (for yellow nutsedge) or triclopyr (for tough broadleaf weeds). For bermudagrass control, use Acclaim Extra, Turflon Ester, Pylex or a combination of these.

#### Annual bluegrass (Poa):

Apply crabgrass preventers such as pendimethalin or prodiamine in mid-late August. Use separate herbicide and fertilizer applications for best rates. Overseeding is limited after application.

#### Warm-Season Grasses (Bermuda, Zoysia, St. Augustine, Centipede):

Fertilize, dethatch, aerate, and move plugs to fill bare spots. Seed bermuda, zoysia, and centipede in June-July. Control crabgrass with Drive (quinclorac) or

Manuscript. Use Recognition + Fusilade for crabgrass and bermuda suppression in St. Augustine and zoysia. Control sedges with a selective systemic herbicide. Apply 3- or 4-way broadleaf herbicides (amine formulations). Avoid triclopyr on warm-season turf.

#### General:

Use quinclorac for crabgrass in tall fescue, bermuda, and zoysia—avoid on St. Augustine and centipede. Always follow product labels carefully.







Welcome to

#### **Rooted in History: Station Fun Facts**

#### YSpinach, Kale & Cold Temps

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Back in 1925, researchers at the station selected Virginia Savoy spinach and a hardy curly leaf kale that could survive temperatures as low as 16°F. They distributed 300 pounds of seed to local growers!

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#### 🍠 A Sweet Virginia Original

The 'Baker' Sweet Potato was developed right here in Virginia Beach. Known for its soft, moist orange flesh, it's sweeter than most varieties-even more so after curing!

#### 🖺 Welcome to Hokie Nation

In 1985, the station officially became part of Virginia Tech, shifting oversight from the Governor's Office to the College of Agriculture and Life Sciences.

# 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 Specialist



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