



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

# EASTERN VIRGINIA AREC NEWSLETTER

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January 2022

Dr. Joseph Oakes  
Superintendent  
Eastern Virginia AREC



Greetings from the Eastern Virginia AREC! We hope that everyone had a successful fall planting and harvest season. Despite a dry November (less than 0.5 in.), rainfall in early October delayed our small grain planting slightly. However, warm weather throughout December boosted small grain growth and development.

Soybean state variety test data has been analyzed and a publication will be available soon. If you are interested in seeing the preliminary publication, please click the link below under 'Recent Grants & Publications'. Mark your calendars for May 19, 2022 as the Virginia Small Grain Field Day will return to EVAREC. This will be a great day as we highlight our small grains research at VT. We hope to see many of you in May!

Happy New Year!

- Joseph

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# January Research Spotlight



Four Virginia Tech researchers are joining forces to improve the efficiency and accuracy of the collection of soybean breeding plot data. Funded by the *Virginia Ag Council and Virginia Soybean Board*, the project is in its first year and will utilize remote sensing by unmanned aerial vehicles.

Dr. Joseph Oakes, superintendent of the **Eastern Virginia Agricultural Research and Extension Center**, is leading the project and will coordinate the aerial imagery collection at the Warsaw research farm. Project team member and soybean breeder Dr. Bo Zhang said she believes this project is crucial to improving the soybean breeding process. “We need more accurate results with reduced labor time in the field,” Zhang said. Rounding out the team are plant genomics and bioinformatics specialist Dr. Song Li and plant physiologist Dr. Maria Balota. The project is part of the vision of the newly formed [\*\*Center for Advanced Innovation in Agriculture \(CAIA\)\*\*](#) to explore the use of UAV sensors to automate data collection by collecting data that has traditionally been collected manually. The project team plans to develop remote sensing methods to estimate maturity data, plant height, and lodging in soybean breeding plots. Their plan is to implement these new remote sensing evaluations in the soybean breeding program and generate new user-friendly protocols for measuring maturity date, height and lodging.

This was adopted from an article describing this research in The Delmarva Farmer. To read more click here: [\*\*Researchers out to improve efficiency, accuracy of soybean breeding plot data | American Farm Publications\*\*](#)





## **Check it out!**

- The College of Agriculture and Life Sciences has recently made videos highlighting the AREC system. Click the link below to view the video which gives an overview of Eastern Virginia AREC.

[https://vtx.vt.edu/videos/k/2021/12/1\\_ezptgrz0.html](https://vtx.vt.edu/videos/k/2021/12/1_ezptgrz0.html)

## **Recent Grants & Publications**

### **Publications:**

- Sarkar, S., Cazenave, AB., Oakes, J. et al. Aerial high-throughput phenotyping of peanut leaf area index and lateral growth. *Sci Rep* 11, 21661 (2021).  
<https://doi.org/10.1038/s41598-021-00936-w>
- Virginia Soybean Performance Tests Preliminary Results. [Virginia Soybean OVT 2021 Preliminary.pdf - Google Drive](#)
- Did you miss the Virginia Soybean Field Day in September? Click below for a recap and a link to the presentations:

[Soybean Researchers Gather for Virginia Soybean Field Day | Virginia Agricultural Research and Extension Centers | Virginia Tech \(vt.edu\)](#)

## **Save the Date!**

- **April 12-13, 2022:** Agriculture & Natural Resources Summit; Richmond Marriot | Short Pump
- **May 19, 2022:** Virginia Small Grain Field Day; Eastern Virginia AREC

Eastern Virginia AREC's mission is to serve Virginia's grain and soybean industries through research and educational programs leading to improved varieties and crop management practices. Our research objectives are to support the Virginia Tech soybean and small grain breeding programs, and to conduct agronomic research that contributes to economically and environmentally sound crop production in the Commonwealth and beyond.

## A COLLABORATIVE NETWORK

The ARECs are a network of 11 centers strategically located throughout the state that emphasize the close working relationships between Virginia Agricultural Experiment Station, Virginia Cooperative Extension, and the industries they work with. The mission of the system is to engage in innovative, leading-edge research, to discover new scientific knowledge, and create and disseminate science-based applications that ensure the wise use of agricultural, natural, and community resources while enhancing quality of life.



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[www.arec.vaes.vt.edu/arec/eastern-virginia.html](http://www.arec.vaes.vt.edu/arec/eastern-virginia.html)

2229 Menokin Road  
Warsaw, VA 22572  
Phone: 804-333-3485  
[jcoakes@vt.edu](mailto:jcoakes@vt.edu)



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