



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

EASTERN VIRGINIA AREC NEWSLETTER

VOLUME III, ISSUE IV

December 2022



Dr. Joseph Oakes
Superintendent
Eastern Virginia AREC

Greetings from the Eastern Virginia AREC! We hope that everyone had a wonderful Thanksgiving as well as a successful fall planting and harvest season. Here at the center, soybean harvest has wrapped up, while mild temperatures have given wheat an early jump start.

Speaking of wheat, we hope you will mark May 18, 2023 on your calendars as we will be hosting the annual small grains field day in collaboration with the Virginia Grain Producers Association. Look for more details on this event as we get closer.

Finally, on a sad note, we are sure by now many of you are aware of the unexpected passing of Dr. Susan Duncan, Associate Director of Virginia Agricultural Experiment Station. Sue was a great supporter of Eastern Virginia AREC and instrumental in many of the technological and equipment upgrades we have received in the center in the past couple years. Read the memoriam for Sue Duncan by [clicking here](#).

- Joseph

follow us:



YouTube



Technology and Equipment Upgrades Lead to Increased Efficiency at Eastern Virginia AREC

Over the past two years, \$685,000 has been invested into technological and equipment upgrades at Eastern Virginia AREC. Nearly half a million of these upgrades came through funding from the General Assembly. These upgrades include:

- 100-foot-tall RTK GPS tower
- John Deere 5090R tractor with autosteer
- John Deere 5055M tractor with autosteer
- John Deere 6155M tractor with autosteer
- Zurn 150 Plot Combine
- Zurn D84 Plot Planter

The RTK tower enables the three new autosteer tractors to operate at sub-inch accuracy and has a range of 15-20 miles. This accuracy is critical in laying off, planting, and spraying research plots, and allows the tasks to be completed more efficiently and with less personnel. “The GPS equipment upgrades have already been a great benefit to field operations at EVAREC,” said Dr. Joseph Oakes, EVAREC Superintendent.



RTK tower – At nearly 100 feet in height, the new RTK tower at EVAREC has a range of nearly 20 miles.

“We are now able to mark off fields for planting with significantly fewer personnel and in less time. For instance, laying off a field for small grain headrow planting would normally take 5-6 people for 6+ hours. However, by using an autosteer tractor, one person was able to complete this task in only 4 hours.” The autosteer tractor also ensures that all research plots are planted straight and are the same distance apart, which prevents overlap or underlap of fertility



Headrows - Field marked off for head row planting with autosteer tractor



Planting - Dr. Nicholas Santantonio planting wheat research plots with the new autosteer tractor

applications to research plots.

The purchase of a Zurn 150 plot combine has created many efficiencies at harvest by reducing the time and labor required to harvest research plots and send data to collaborators. “The Zurn is equipped with a HarvestMaster weighing system that records plot weight, moisture, and test weight as the plots are being harvested,” said Oakes. “Previously, every small plot on the station would have to be bagged and taken into the seed lab to be weighed and run through a moisture meter. You can imagine the time and

personnel involved in transporting 8,000 bags from the field to the lab and then having to weigh each one. This is a process that would generally take 10+ people nearly two weeks to complete after harvest. Now, the data is available immediately to us right after harvest, the data can be exported from the computer on the combine, and sent to our collaborators and stakeholders as soon as a test is harvested. The Zurn can also be operated by a single individual, as opposed to our older combines which required at least 3 people per combine in order to catch plots in the bag, fold bags, and transport, etc.”

“We are extremely grateful to our colleagues in CALS and to the General Assembly for funding these much needed technological and equipment upgrades at EVAREC,” said Oakes. “From an equipment and technology standpoint, we are on par with our peer research station around the country, which not only benefit the faculty and staff at EVAREC, but our collaborators and stakeholders as well.”



Zurn - Zurn 150 plot combine

Recent Publications

Publications:

- R. Longest, M. Broaddus, C. Stafford, S. Romelczyk, T. Clarke, C. Gregg, S. Rutherford, F. Hobbs, T. Jones, P. Davis, A. Ching, J. Oakes, W. Thomason. 2022 Virginia On Farm Wheat Test Plots. https://www.pubs.ext.vt.edu/content/dam/pubs_ext_vt_edu/spes/spes-422/SPES-422.pdf [Wheat Test Plots \(vt.edu\)](#)
- W. Thomason, N. Santantonio, J. Mott, C. Bishop, E. Rucker, T. Custis, H. Frame, K. Jones, J. Oakes, M. Vaughn, N. Jones, W. Brooks, J. Light, B. Clark, G. Lilliard. Small Grains in 2022. https://www.pubs.ext.vt.edu/content/dam/pubs_ext_vt_edu/spes/spes-420/SPES-420.pdf



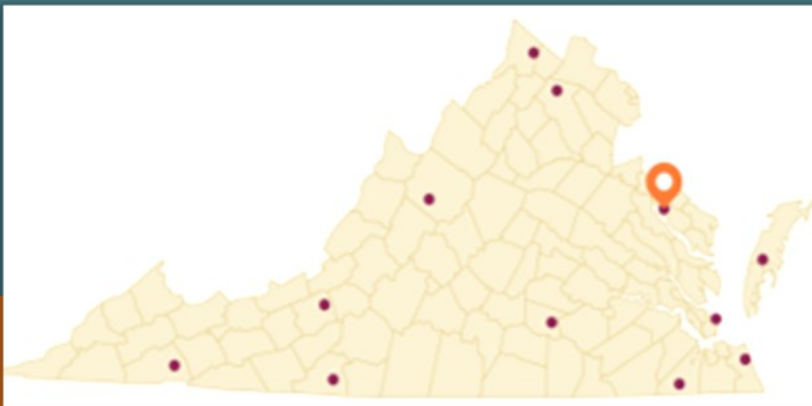
VIRGINIA AGRICULTURAL EXPERIMENT STATION
EASTERN VIRGINIA AGRICULTURAL
RESEARCH AND EXTENSION CENTER
VIRGINIA TECH.



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.



Eastern Virginia Agricultural Research
and Extension Center

2229 Menokin Road
Warsaw, VA 22572
Phone: 804-333-3485
jcoakes@vt.edu

www.arec.vaes.vt.edu/arec/eastern-virginia.html