ALSON H. SMITH JR.
Agricultural Research and Extension Center

Sherif Sherif (center, in blue) at an in-orchard meeting in Washington, Virginia, showcases how the pollen tube-growth model can be used for crop load management under organic systems.

The AREC's grape pathology lab is developing a web-based decision support system for grape pest management called GrapeIPM.org. This mobile-ready system allows grape growers and other users to access this information from anywhere. A user can set up multiple vineyards and blocks to input site-specific information, including fungicide inventory, spray plan/records, disease observations, and more.

This system helps growers make decisions on their pesticide application by providing: guidance in pre-season fungicide application-planning based on the AREC's pesticide database; reminders of in-season actions; a personal fungicide inventory for planning; recordkeeping on fungicide application and other viticulture-related information; printouts for EPA reports and for Worker Protection Standard postings; and, daily weather and disease-risk information based on user input and nearby weather stations. In order to keep our objectives simple, we are currently focusing on disease management. Over the next several years, the system will be expanded to include other pesticide uses. The development of GrapeIPM.org has been supported by the Virginia Wine Board and the USDA NIFA Extension Implementation Program and was officially released to growers in 2018.

PARTNER WITH US
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"We recently detected the samurai wasp in northern Virginia. The wasp is an effective biocontrol agent for the brown marmorated stink bug, an invasive agricultural pest. We hope to reduce stink bug populations by releasing samurai wasps widely in Virginia."

CHRIS BERGH
PROFESSOR OF ENTOMOLOGY

"Dr. Wolf and his team's technical contributions to the Virginia Vineyards Association meetings have been invaluable. The team also provided me with instructional materials to teach aspiring agricultural high-school students the basics of vineyard management. Some of those students are now working in local vineyards."

FRANCOISE SEILLIER-MOISEIWITSCH
PROPRIETOR
REVELATION VINEYARDS

ALSON H. SMITH JR. AREC AT A GLANCE

DISCIPLINES

- Entomology
- Pathology
- Pomology
- Viticulture

INNOVATIVE TECHNOLOGIES

- Membrane-based grapevine virus sampling kit
- Molecular tools to detect and identify major grape pathogens
- High Resolution Melting (HRM) analysis
- Marker Assisted Breeding (MAB) of apple
- CRISPR/Cas9-mediated gene editing of apple
- Weather-based prediction models for managing crop load in apple

FACILITIES

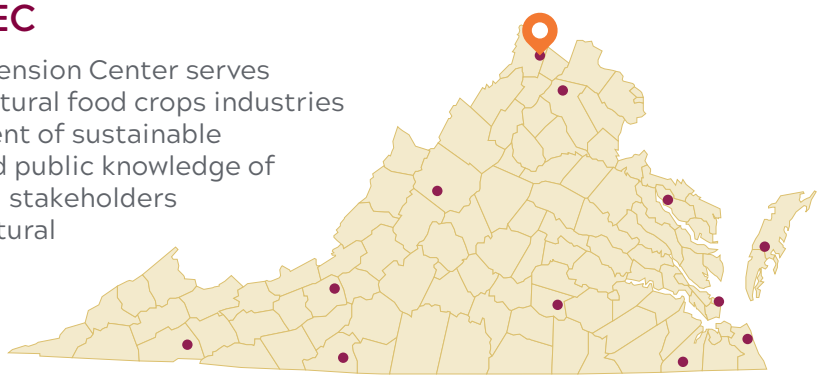
- 124 acres on the farm with over 40 field plots
- 6 modern labs
- 24,500 square foot complex
- 100 person auditorium

INDUSTRY PARTNERS

- Virginia Agribusiness Council
- Wine Industry
- Apple Industry
- Virginia Department of Agriculture and Consumer Services

ABOUT THE ALSON H. SMITH JR. AREC

The Alson H. Smith Jr. Agricultural Research and Extension Center serves Virginia's commercial fruit and value-added horticultural food crops industries through research, educational programs, development of sustainable production systems and technologies, and increased public knowledge of horticultural opportunities and benefits. Our central stakeholders are current and future fruit producers, allied agricultural industries, producer associations, students, and research and Extension colleagues.



A COLLABORATIVE NETWORK

The ARECs are a network of 11 centers strategically located throughout the state that emphasize close working relationships between Virginia Agricultural Experiment Station, Virginia Cooperative Extension, and the industries the 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.

VIRGINIA AGRICULTURAL EXPERIMENT STATION
VIRGINIA TECH

Virginia Cooperative Extension
Virginia Tech • Virginia State University

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