VIRGINIA AGRICULTURAL EXPERIMENT STATION
ALSON H. SMITH JR. AGRICULTURAL RESEARCH AND EXTENSION CENTER
VIRGINIA TECH

Virginia Cooperative Extension
Virginia Tech • Virginia State University

Building on the land-grant commitment to develop leaders, share knowledge, and invest in ecological resilience with hands-on applications to help Virginia thrive, the College of Agriculture and Life Sciences strives to enhance:

Workforce Development for Economic Prosperity. Drive economic resilience with student learning experiences, educating career-ready graduates who support Virginia's #1 industry: agriculture.

Resource Stewardship. Protect Virginia's vital natural resources through evidence-based stewardship, leaving healthier land, water, and air for future generations.

Human and Ecological Health. Improve health and resilience of people, communities, plants, and animals across Virginia from the scientific front line.

Understanding and Communication. Confront Virginia's most pressing challenges through research in agriculture, life sciences, and community engagement.

CALS supports a collaborative network of:

11 Agricultural Research and Extension Centers (AREC), 107 Virginia Cooperative Extension offices, and six 4-H educational centers throughout Virginia in cooperation with Virginia Agricultural Experiment Station and Virginia Cooperative Extension.

10 Academic Departments for 3,600 associate, undergraduate, and graduate students in 68 unique programs of study.

Over $500,000 in **public-private partnership** support annually.

LEARN MORE

cals.vt.edu

ALSON H. SMITH JR.

Agricultural Research and Extension Center

595 Laurel Grove Road, Winchester, Virginia 22602 | (540) 869-2560
arec.vaes.vt.edu/arec/alson-h-smith

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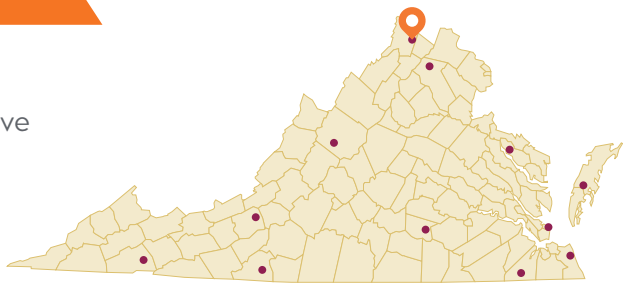
ABOUT THE ALSON H. SMITH JR. AREC

The Alson H. Smith Jr. Agricultural Research and Extension Center serve Virginia's horticultural fruit industries through research, educational programs, student training, and the development of tools and technologies that increase sustainability and resiliency of commercial producers.



RESEARCH AND EXTENSION PROGRAMS

- Tree fruit entomology
- Tree fruit and specialty crop horticulture
- Tree fruit and specialty crop pathology
- Grape pathology
- Viticulture
- Enology

INDUSTRY PARTNERS

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

FACILITIES

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

INNOVATIVE TECHNOLOGIES

- Membrane-based grapevine virus sampling kit
- Molecular tools to detect and identify major grape pathogens
- Marker-Assisted Breeding (MAB) of apple
- CRISPR/Cas9-mediated gene editing of apple
- Weather-based prediction models for managing crop load in apple
- Partial canopy rain shelters for grapevine
- Novel fungicide chemistry for grape disease management

Protecting Virginia's $64 Million Apple Industry from Frost: Research on delayed bloom technologies shows potential to prevent up to $6 million annually in frost-related losses if adopted commercially.

Understanding Invasive Pest Impacts on Wine Quality: Our research examines how spotted lanternfly infestations affect grape composition and wine chemistry – addressing a critical threat to Virginia's $8.3 billion wine industry.

LEARN MORE

bit.ly/3XOsDDS

OUR COLLABORATORS INCLUDE: USDA · Virginia Agribusiness Council · Virginia Department of Agriculture and Consumer Services

Virginia Agricultural Experiment Station is a partnership of Virginia Tech and the U.S. Department of Agriculture (USDA) and is an equal opportunity employer. For the full non-discrimination statement, please visit https://www.vaes.vt.edu/accessibility.html.

VT/0126/AREC-294