

Strategic Plan

Virginia Tech's AHS Agricultural Research and Extension Center
Winchester, Virginia
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Mission Statement

The AHS 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 Vision

We define our central stakeholders as present and future fruit producers, allied agricultural industries and producer associations, students and consumers of horticultural fruits and vegetables.

We will conduct research and extension programs that are relevant to our stakeholders and have measurable impact.

We will enhance the sustainability of fruit production, with respect to enterprise profitability, environmental stewardship, and community acceptance.

We will anticipate and respond to emerging issues and opportunities that affect our stakeholders, such as climate change, invasive biotic threats, technological and market developments, regulatory structures, resource limitations, and food safety and security.

We will hire exceptional students, staff and faculty and obtain the fiscal resources to fulfill our mission.

We will be recognized as a center of excellence for fruit research, extension, and graduate student training.

We will provide research and information on fruit culture to assist established and beginning farmers with specialty crop based enterprises to be successful, productive, and innovative.

Strategic Goals

Our strategic goals address the research and extension needs of established and beginning horticultural food crops enterprises, particularly tree fruit and wine grape producers, as well as the interests of those investigating fruit production, alternative horticultural food crops, and novel fruit production systems.

Goal 1: Research issues that affect fruit production, quality, and producer profitability

Issue: Tree fruit and wine grape production are challenging enterprises in the mid-Atlantic region due to the broad complex of arthropod and disease pests, weeds, and shifting climatic conditions and population demographics. Additionally, there is mounting public and regulatory emphasis on reducing pesticide and fertilizer inputs, in part due to regulations aimed at protection of the Chesapeake Bay and its watershed. But there are also very positive benefits to be gained in terms of human health and well-being associated with a diet rich in fruits and vegetables. There is also a desire to provide local and regional producers with technical assistance to meet consumer demands, explore niche markets and to sustain family farms.

Objective 1.1: Develop fruit production systems that are productive, profitable, and resource-efficient.

Strategies:

- Evaluate the profitability of high density apple plantings, protected fruit culture, extended season systems, integrated (multiple) cropping systems, and other novel fruit production systems.
- Evaluate fruit cultivars and new rootstocks for regional climatic and market adaptation (sweet cherries, apples, apple and *Prunus* rootstocks, wine grapes).
- Evaluate plant growth regulators as means of predictably regulating tree fruit crop levels, altering crop ripening, or post-harvest storage characteristics.
- Develop and validate alternative, reduced-risk pest monitoring and management tactics via incorporation of applied arthropod ecology and behavioral manipulation techniques.
- Conduct small-plot and on-farm demonstration trials of the efficacy of pesticides and pesticide programs.
- Develop effective, economical programs for management of fruit diseases;
- Develop reliable controls for postharvest diseases of tree fruits;
- Monitor for resistance to commercial fungicides in populations of pathogenic fungi in orchards and vineyards and develop effective resistance management strategies which consider the spectrum of diseases encountered by Virginia fruit producers.
- Periodically survey stakeholders to determine research needs and continually assess research impacts.

Objective 1.2: Explore value-added, niche crops, and other means of horticultural crop diversification for producer stakeholders

Strategies:

- With additional faculty expertise described in our hiring plan, explore novel crops that could have market potential, and would help diversify regional agriculture.
- Develop regionally specific guidelines for Integrated Fruit Production (IFP), organic production, and other methods of sustainable crop production.
- Assist businesses with value-added products, such as hard-cider apple selection and non-alcoholic apple and grape juice-based beverages.

Objective 1.3: Foster collaborative ties with colleagues on campus, other ARECs, other land-grant universities, and internationally to enhance the effectiveness and efficiency of our research on production issues.

Strategies:

- Each faculty FTE will be involved with at least one multi-state research project.
- Explore comprehensive or “systems” approaches to novel crop production practices that engage diverse disciplines (e.g., engineering, horticulture, pest management, and agricultural economics).

Objective 1.4: Increase graduate student enrollment to 2 GRAs per FTE.

Strategies:

- Explore all avenues to secure graduate student funding and actively recruit highly qualified students via national and international searches.

Goal 2: Provide premier Extension resources to stakeholders

Issue: Our stakeholders can access technical information from many sources, including other land-grant universities and private consultants. Our goal is to provide unique and useful information in a coordinated, timely, and easily accessible web-based format, and to be the preferred resource for our stakeholders.

Objective 2.1: Expand Extension delivery mechanisms to facilitate diverse stakeholder access and annually assess impacts of our extension programs.

Strategies:

- Collaborate with and provide content for eXtension's Communities of Practice (e.g., eViticulture, eOrganic and eApple).
- Develop additional interactive websites including web-based decision support systems (e.g., for vineyard site exploration) and real-time content delivery (e.g., blogs and social media).
- Coordinate the distribution of written communications going to industry sub-groups, including tree fruit producers (www.VirginiaApples.org) and wine grape growers (www.VirginiaVineyardsAssociation.com).
- Work with industry associations to develop educational programs that target both potential and established fruit producers, and offer highly relevant technical information.
- Develop impact statements that record the private and public value of our extension programs.

Objective 2.2: Provide in-service training opportunities in fruit production to Cooperative Extension agents (Virginia and regionally) as well as allied industry partners.

Strategies:

- Coordinate a regional in-service wine grape canopy management training program with the Southern Region Small Fruit Consortium (Wolf, July 2013).
- Develop an in-service fruit production workshop for Virginia Cooperative Extension agents to be conducted at the AHS AREC (late-September, 2013) concentrating on tree fruit production on day 1 and wine grape production on day 2, with a module on site selection and soils common to both sections.
- Provide technical resources for Master Gardener training (e.g., resources on home grape production, updated grape disease publication, new vineyard development business plan, etc.) and for allied partners, such as Farm Credit and other lending institutions.

Objective 2.3: Participate as team members with VCE agents to develop and provide local producer meetings and workshops that are relevant to stakeholders and that foster peer-to-peer learning experiences for our clientele.

Objective 2.4: Develop and update numbered extension bulletins on specific subject areas, such as wine grape variety recommendations, sweet cherry production, and organic fruit production.

Goal 3: Provide relevant learning experiences

Objective 3.1: Develop and provide learning resources and opportunities for a range of students, from K-12 through graduate training.

Strategies:

- Develop and teach both an undergraduate and graduate level, on-line viticulture course starting spring 2013 (at least every other year).
- Provide summer internship program for undergraduate students.
- Partner with K-12 schools, such as Mt. Vista Governor's School for field trips, high school students for assistance with science fair projects, and other learning experiences.
- Recruit and advise graduate students in cooperation with on-campus departments.
- Provide guest lectures to on-campus instructional programs.
- Increase our use of distance learning technologies to contribute to on-campus classes and other remote locations.
- Engage local fruit producers to co-host work-study opportunities for aspiring student/producers

Goal 4: Public relations and outreach

Objective 4.1: Contribute to an informed citizenry that understands and values agriculture and its products; be a science-based resource for public media

Strategies:

- Regularly communicate our activities and impacts to our clientele and stakeholders. For example, we will contribute at least one article per year for use in local paper (Winchester Star or Northern Virginia Daily) regarding our activities and progress.
- Update the AHS AREC Leadership Council membership and involve the Council in our planning, activities and accomplishments.
- Promote the accomplishments and impacts of the AHS-AREC through an annual, public field day (early August).

Goal 5: Resource and technology management

Objective 5.1: Optimize the productivity of our human, financial, and physical resources through sound leadership and management practices. Interpret policy and legislation, identify opportunities, and provide training to comply with regulations that affect farm profitability and environmental quality.

Strategies:

- Acquire new technologies that enhance research/outreach capabilities.
- Upgrade the physical, information technology, laboratory, meteorological and field equipment of the AREC to meet current and future needs.
- Develop and utilize improved meteorological data acquisition, handling and decision-making tools.
- Create laboratories with shared bench space and equipment to capitalize on expensive purchases.
- Develop collaborations amongst AHS AREC faculty members as well as with other departments and institutions to maximize our research capabilities.
- Renew vineyard and orchard plantings so that they represent the current and future systems being utilized on commercial farms in Virginia.

- Reorganize office, laboratory, and storage spaces to accommodate the growing number of researchers at the AREC.
- Interpret policy and legislation, identify opportunities, and provide training to comply with regulations that affect work environment, laboratory and field safety, and environmental quality.

Goal 6: Organizational management

Objective 6.1: Foster a work environment that is creative, positive, and provides leadership for all employees to contribute to the Center's mission. Fill critically needed faculty and staff positions to address the goals of our strategic plan.

Strategies:

- Conduct periodic (e.g., monthly) staff/faculty meetings.
- Seek a future classified technical staff position in the area of analytic chemistry to serve multiple disciplines in analytical chemistry/biochemistry.
- Seek additional faculty lines (beyond current faculty positions) within the next 5 years, including:
 - Alternative horticultural crops/cropping system specialist
 - horticultural market research analyst
 - Business management specialist
- Ensure that our programs have a sufficient number of appropriately trained personnel to allow for continued high quality research and extension efforts.
- Provide opportunities for staff/faculty training/improvement opportunities (e.g., Sabbatical Leave program, software training, etc.).
- Maintain professional competency through active participation in appropriate professional societies or associations, editorial service, consultancy, and other forms of professional service.