

Viticulture and Enology Program
Texas Cooperative Extension
Texas Agricultural Experiment Station
Texas Tech University

SERA 14 Progress Report on Research and Extension Projects 2006-2007

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Expansion of the Viticulture & Enology Research and Extension Program

Six new positions were filled in viticulture and enology in 2006-2007. Four Viticulture Extension Associates were hired with regional responsibilities that collectively cover the entire state. The West Texas region is served by Teresa Burns, headquartered at the Lubbock Agricultural Research and Extension Center. Support for growers in North Texas is provided by Fran Pontasch, located at the Stephenville Agricultural Research and Extension Center. Penny Adams, with an office at the Gillespie County Extension Office serves the Hill Country region, and Fritz Westover supports growers in the Gulf Coast region from the Harris County Extension Office. Enology research, teaching and Extension program leadership will be provided by Dr. Brent Trela, who holds a joint appointment with Texas Tech University. Mike Sipowicz, also located in Lubbock, is the new statewide Enology Extension Program Specialist providing educational programs for wineries throughout the state.

Online Viticulture Certificate Program

A Certificate Program in Viticulture was launched in 2007 through collaboration between Texas Cooperative Extension and Texas Tech University. The program

is designed for individuals with an orientation toward commercial grape production and professional work in the viticulture industry.

The curriculum consists of six courses held over a two-year period. Successful completion of the five online courses and all three sessions of the hands-on Vineyards Practices course is required to receive the Professional Certificate in Viticulture. The online portion of the program is delivered via WebCT.

The certificate program operates on a cohort basis to enhance the learning experience and facilitate networking opportunities for participants. The program is limited to 40 participants who are willing to make the commitment to move through all courses over the two-year period. The first cohort of 40 students began the program in September 2007.

Curriculum

1. Grape Biology
2. Site Assessment and Vineyard Development
3. Vine Nutrition and Water Management
4. Canopy Management and Crop Load Management
5. Disease and Insect Pest Management
6. Vineyard Practices (Winter, Summer, Pre-Harvest/Harvest)

2007 Growing Season in the Texas Hill Country

Grape growers are suffering through one of the worst growing seasons in memory and it is still not clear how much of this year's harvest will be salvaged. After escaping cold injury on Easter Sunday and the following weekend, budbreak was extremely uniform thanks to a cold extended winter season. Typical spring rains gave way to nominal fungal disease pressure through bloom but rainy, unseasonably cool temperatures continued through most of the summer. Most growers were prepared for and successfully managed black rot pressure, but downy mildew became a universal problem for grape growers across the region. Only the most diligent growers kept canopies in tact while many others lost nearly all of the canopy in their vineyards.

The season became more complicated with fruit maturation. Many white varieties such as 'Muscat Blanc' and 'Chardonnay' ruptured from excessive rains, sour rot became established and much of our white variety harvest was lost by the first of August. Rains continued, photosynthesis was continually minimized and vines were exposed to excessive moisture throughout August and early September. The result was fruit becoming physiologically mature at low sugar levels. As of early September, many reds are mature and stuck between 18° - 20° B. Rachis and pedicel integrity is failing while most winemakers are rejecting fruit or insisting on extended hang time.

Educational programming offering growers management tips and giving winemakers alternatives solutions to inferior fruit are planned for late fall of this year.

Pierce's Disease Program

Work continues on the Pierce's disease program funded by APHIS and we are shifting our research and outreach proposals from an annual to a five year process. As outreach coordinator, Jim Kamas continues to edit and produce a quarterly newsletter with Ed Hellman and Mark Black. The program website is under re-design and should be launched by the end of September and a best management practices bulletin will be developed this fall and winter.

Applied research projects include the evaluation of novel germplasm from Bruce Reisch's breeding program in Geneva, evaluating the impact of soil type on *X. fastidiosa* survival in grapevines and evaluation of eleven common rootstocks in a high disease pressure location.

A new Pierce's disease research facility was opened this past July in Fredericksburg, Texas. A research vineyard is being established at the lab as well as a secure planting location for the evaluation of advanced PD tolerant germplasm from U.C. Davis, ARS and other sources.

Grapevine Physiology

Grapevine physiology studies have been initiated to investigate the physiological basis of grapevine adaptation to hot climate. A new research vineyard was established in 2006 at the Lubbock Agricultural Research and Extension Center consisting of twenty grape cultivars planted in four, five-vine plots in a randomized complete block experimental design. The cultivars represent cool, warm, and hot-climate adapted cultivars. Data collection began in 2007 on selected cultivars with measurements of photosynthetic rate, stomatal conductance, and leaf water potential.

Other Projects

- Characterization of Texas Winegrowing Regions with GIS (projected completion in 2007)
- Grape Problem Diagnosis Website (projected completion in 2008)
- Work with community leaders to explore the feasibility of a "Center of Excellence for Wine & the Culinary Arts".

Texas Resources

Texas Winegrape Network
<http://winegrapes.tamu.edu>